

**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 12.1

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## **Oracle E-Business Suite Integrated SOA Gateway User's Guide, Release 12.1**

### **Part No. E12064-06**

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# Preface

## Intended Audience

Welcome to Release 12.1 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.

## Deaf/Hard of Hearing Access to Oracle Support Services

To reach Oracle Support Services, use a telecommunications relay service (TRS) to call Oracle Support at 1.800.223.1711. An Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process. Information about TRS is available at <http://www.fcc.gov/cgb/consumerfacts/trs.html>, and a list of phone numbers is available at <http://www.fcc.gov/cgb/dro/trsphonebk.html>.

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## Structure

- 1 Introduction to Oracle E-Business Suite Integrated SOA Gateway**
- 2 Understanding Service Enablement**
- 3 Navigating Through Oracle Integration Repository**
- 4 Working with Native Services and Integration Interfaces**
- 5 Working With Composite Services**
- 6 Working with Custom Integration Interfaces and Services**
- Glossary**

## Related Information Sources

This book is included on the Oracle E-Business Suite Documentation Library, which is supplied in the Release 12.1 Media Pack. You can download soft-copy documentation as PDF files from the Oracle Technology Network at <http://www.oracle.com/technology/documentation/>. The Oracle E-Business Suite Release 12.1 Documentation Library contains the latest information, including any documents that have changed significantly between releases. If substantial changes to this book are necessary, a revised version will be made available on the "virtual" documentation library on My Oracle Support (formerly Oracle*MetaLink*).



If this guide refers you to other Oracle E-Business Suite documentation, use only the latest Release 12.1 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. The Oracle E-Business Suite Documentation Library is also available on My Oracle Support and is updated frequently.
- **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 Alert User's Guide**

This guide explains how to define periodic and event alerts to monitor the status of your Oracle E-Business Suite data.

#### **Oracle E-Business Suite Concepts**

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12, 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 CRM System Administrator's Guide**

This manual describes how to implement the CRM Technology Foundation (JTT) and use its System Administrator Console.

#### **Oracle E-Business Suite Desktop Integration Framework Developer's Guide**

Oracle E-Business Suite Desktop Integration Framework is a development tool that lets you define custom integrators for use with Oracle Web Applications Desktop

Integrator. This guide describes how to define and manage integrators and all associated supporting objects, as well as how to download and upload integrator definitions.

### **Oracle E-Business Suite Developer's Guide**

This guide contains the coding standards followed by the Oracle E-Business Suite development staff. It describes the Oracle Application Object Library components needed to implement the Oracle E-Business Suite user interface described in the *Oracle E-Business Suite User Interface Standards for Forms-Based Products*. It provides information to help you build your custom Oracle Forms Developer forms so that they integrate with Oracle E-Business Suite. In addition, this guide has information for customizations in features such as concurrent programs, flexfields, messages, and logging.

### **Oracle E-Business Suite Flexfields Guide**

This guide provides flexfields planning, setup, and reference information for the Oracle E-Business Suite implementation team, as well as for users responsible for the ongoing maintenance of Oracle E-Business Suite product data. This guide also provides information on creating custom reports on flexfields data.

### **Oracle Application Framework Developer's Guide**

This guide contains the coding standards followed by the Oracle E-Business Suite development staff to produce applications built with Oracle Application Framework. This guide is available in PDF format on My Oracle Support and as online documentation in JDeveloper 10g with Oracle Application Extension.

### **Oracle Application Framework Personalization Guide**

This guide covers the design-time and run-time aspects of personalizing applications built with Oracle Application Framework.

### **Oracle E-Business Suite Installation Guide: Using Rapid Install**

This book is intended for use by anyone who is responsible for installing or upgrading Oracle E-Business Suite. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle E-Business Suite Release 12, or as part of an upgrade from Release 11i to Release 12. The book also describes the steps needed to install the technology stack components only, for the special situations where this is applicable.

### **Oracle Application Server Adapter for Oracle Applications User's Guide (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.

Please note that the user's guide can be found in the following documentation libraries:

- As part of the Oracle Application Server in 10g, *Oracle Application Server Adapter for Oracle Applications User's Guide* is available in the Oracle Application Server 10g Documentation Library.
- As part of the Oracle Fusion Middleware and SOA Suite in 11g, *Oracle Fusion*

*Middleware Adapter for Oracle Applications User's Guide* is available in the Oracle Fusion Middleware 11g Documentation Library.

### **Oracle E-Business Suite System Administrator's Guide Documentation Set**

This documentation set provides planning and reference information for the Oracle E-Business Suite System Administrator. *Oracle E-Business Suite System Administrator's Guide - Configuration* contains information on system configuration steps, including defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help. *Oracle E-Business Suite System Administrator's Guide - Maintenance* provides information for frequent tasks such as monitoring your system with Oracle Applications Manager, administering Oracle E-Business Suite Secure Enterprise Search, managing concurrent managers and reports, using diagnostic utilities including logging, managing profile options, and using alerts. *Oracle E-Business Suite System Administrator's Guide - Security* describes User Management, data security, function security, auditing, and security configurations.

### **Oracle E-Business Suite User's Guide**

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

### **Oracle E-Business Suite User Interface Standards for Forms-Based Products**

This guide contains the user interface (UI) standards followed by the Oracle E-Business Suite development staff. It describes the UI for the Oracle E-Business Suite products and how to apply this UI to the design of an application built by using Oracle Forms.

### **Oracle Diagnostics Framework User's Guide**

This manual contains information on implementing and administering diagnostics tests for Oracle E-Business Suite using the Oracle Diagnostics Framework.

### **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 e-Commerce Gateway Implementation Manual**

This guide describes implementation details, highlighting additional setup steps needed for trading partners, code conversion, and Oracle E-Business Suite. It also provides architecture guidelines for transaction interface files, troubleshooting information, and a description of how to customize EDI transactions.

### **Oracle Report Manager User's Guide**

Oracle Report Manager is an online report distribution system that provides a secure and centralized location to produce and manage point-in-time reports. Oracle Report Manager users can be either report producers or report consumers. Use this guide for information on setting up and using Oracle Report Manager.

### **Oracle iSetup Developer's Guide**

This manual describes how to build, test, and deploy Oracle iSetup Framework interfaces.

### **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 Web Applications Desktop Integrator Implementation and Administration Guide**

Oracle Web Applications Desktop Integrator brings Oracle E-Business Suite functionality to a spreadsheet, where familiar data entry and modeling techniques can be used to complete Oracle E-Business Suite tasks. You can create formatted spreadsheets on your desktop that allow you to download, view, edit, and create Oracle E-Business Suite data, which you can then upload. This guide describes how to implement Oracle Web Applications Desktop Integrator and how to define mappings, layouts, style sheets, and other setup options.

### **Oracle Workflow Administrator's Guide**

This guide explains how to complete the setup steps necessary for any product that includes workflow-enabled processes. It also describes how to manage workflow processes and business events using Oracle Applications Manager, how to monitor the progress of runtime workflow processes, and how to administer notifications sent to workflow users.

### **Oracle Workflow Developer's Guide**

This guide explains how to define new workflow business processes and customize existing Oracle E-Business Suite-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

### **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 Workflow API Reference**

This guide describes the APIs provided for developers and administrators to access Oracle Workflow.

### **Oracle Workflow Client Installation Guide**

This guide describes how to install the Oracle Workflow Builder and Oracle XML Gateway Message Designer client components for Oracle E-Business Suite.

### **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.

### **Oracle XML Publisher Report Designer's Guide**

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Using Microsoft Word or Adobe Acrobat as the design tool, you can create pixel-perfect reports from the Oracle E-Business Suite. Use this guide to design your report layouts.

This guide is available through the Oracle E-Business Suite online help.

### **Oracle XML Publisher Administration and Developer's Guide**

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Outputs include: PDF, HTML, Excel, RTF, and eText (for EDI and EFT transactions). Oracle XML Publisher can be used to generate reports based on existing Oracle E-Business Suite report data, or you can use Oracle XML Publisher's data extraction engine to build your own queries. Oracle XML Publisher also provides a robust set of APIs to manage delivery of your reports via e-mail, fax, secure FTP, printer, WebDav, and more. This guide describes how to set up and administer Oracle XML Publisher as well as how to use the Application Programming Interface to build custom solutions.

This guide is available through the Oracle E-Business Suite online help.

## 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.

## 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.

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# Introduction to Oracle E-Business Suite Integrated SOA Gateway

## Oracle E-Business Suite Integrated SOA Gateway Overview

Building on top of Oracle Fusion Middleware and service-oriented architecture (SOA) technology, Oracle E-Business Suite Integrated SOA Gateway (ISG) provides a customer-focused robust communication and integration infrastructure between independently managed components and loosely coupled applications. This infrastructure not only allows greater and effective business integration between heterogeneous applications, but also facilitates the development and execution of complex business processes into highly flexible and reusable Web services. With this standardized and interoperable Web service platform, Oracle E-Business Suite Integrated SOA Gateway provides a powerful framework that accelerates dynamic business processes and service integration between applications over the Web.

Oracle E-Business Suite Integrated SOA Gateway is a complete set of service infrastructure. It supports almost all integration interface types and services invoked within Oracle E-Business Suites no matter if they are Oracle seeded integration interfaces or custom ones, if they are native packaged interfaces or the services that are orchestrated using native services. With this pre-built, reusable business services and service-oriented components, Oracle E-Business Suite Integrated SOA Gateway provides a capability of allowing various users to perform different tasks and to monitor and manage service integration throughout the entire service deployment life cycle.

For example, integration developers can perform end-to-end service integration activities including creating and annotating custom integration interfaces, orchestrating discrete Web services into meaningful end-to-end business processes, defining Web service invocation metadata, and testing the Web service invocation.

Application users can then browse through and search on available integration interfaces and services regardless of custom or Oracle packaged one, as well as view each interface details through the centralized repository.

Integration repository administrators can take further actions on transforming native interfaces into Web services, and then deploying the services for public use and access. The administrators are also responsible for enforcing service related securities, monitoring and managing the entire integrated service deployment life cycle to ensure smooth service integration between applications.

With pre-built, reusable business services and an essential service-oriented framework allowing service generation, deployment, invocation, and management, Oracle E-Business Suite Integrated SOA Gateway is the intrinsic part of Oracle E-Business Suite for service enablement. It not only enables services within and beyond Oracle E-Business Suite, but also facilitates dynamic business execution through a seamless service integration and consumption over the internet.

For more information on implementing and administering Oracle E-Business Suite Integrated SOA Gateway and performing end-to-end integration activities, see *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide* and *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide* for details.

## Major Features

Oracle E-Business Suite Integrated SOA Gateway contains the following features:

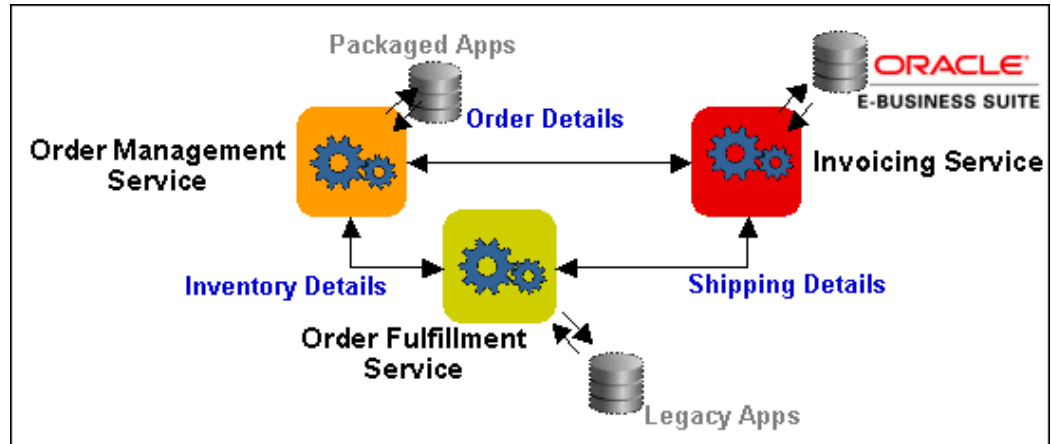
- Provide robust, consistent integration framework with extensive infrastructure based on SOA principles
- Integrate loosely coupled and heterogeneous applications
- Contain pre-built and reusable business services
- Provide native service enablement capability within the Oracle E-Business Suite
- Use native services as building blocks to create composite services
- Support annotated custom integration interfaces from Oracle Integration Repository
- Enforce function security and role-based access control security to allow only authorized users to execute administrative functions
- Support multiple authentication types for inbound service requests in securing Web service content and authenticating Web service operations
- Provide centralized, user-friendly user interface for logging configuration
- Enable Web service invocation from Oracle E-Business Suite
- Audit and monitor Oracle E-Business Suite service operations from native SOA Monitor



## Business Process Scenario

Oracle E-Business Suite Integrated SOA Gateway provides a seamless integration between various applications. Take the most common business process such as Order-to-Receipt as an example to further explain how discrete web services can be orchestrated into a standards-based manner and more meaningful end-to-end business flow.

***Order-to-Receipt Business Flow Between Applications***



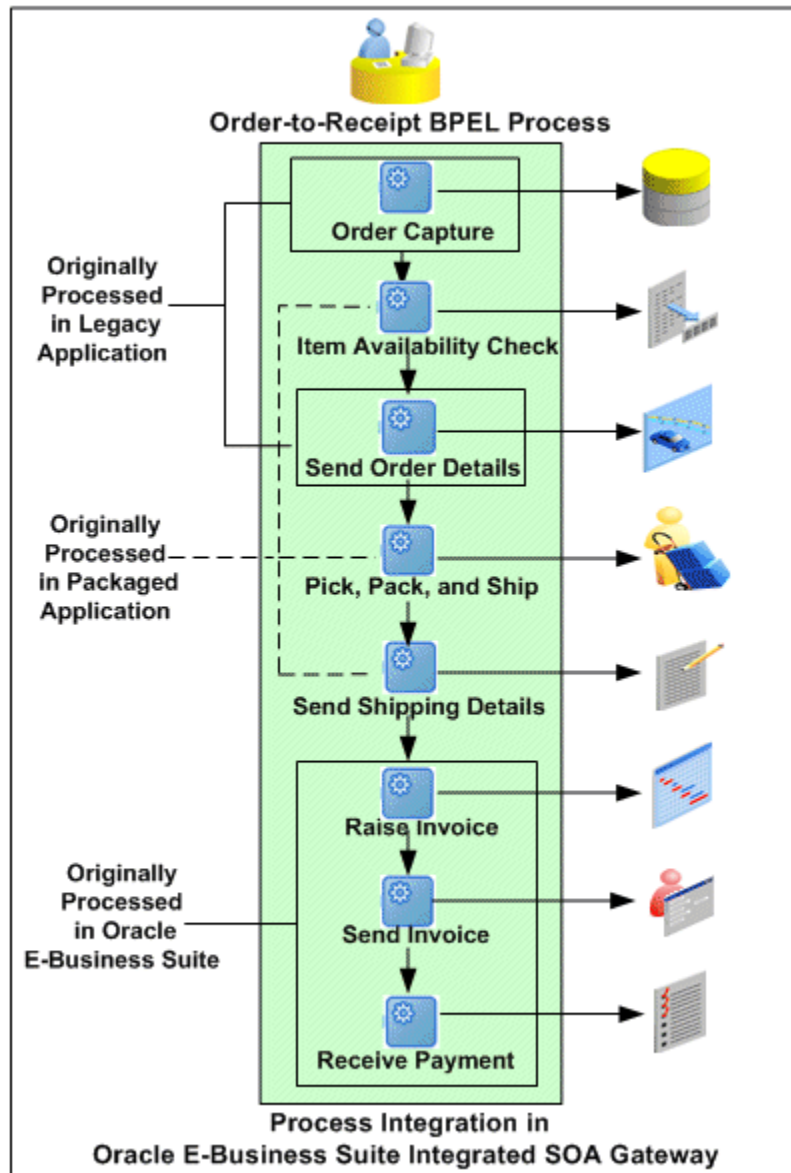
The packaged application is used to capture the order. The legacy application is used to fulfill (pick and ship) the order. Oracle E-Business Suite is used to invoice the customer.

- Sales Order Entry: Packaged Application
- Item Availability Check: Legacy Application
- Pick, Pack and Ship : Legacy Application
- Invoicing and A/R: Oracle E-Business Suite

A complete Order-to-Receipt business flow may require to integrate with each of the above applications at different points. With Oracle E-Business Suite Integrated SOA Gateway, the public integration interfaces of E-Business Suite can be exposed as standard Web services.

Each individual business process mentioned here managed by packaged application, legacy application, and Oracle E-Business Suite can be orchestrated using Oracle BPEL Process Manager (PM) to streamline the Order-to-Receipt business process.

### *Process Integration Within Oracle E-Business Suite Integrated SOA Gateway*



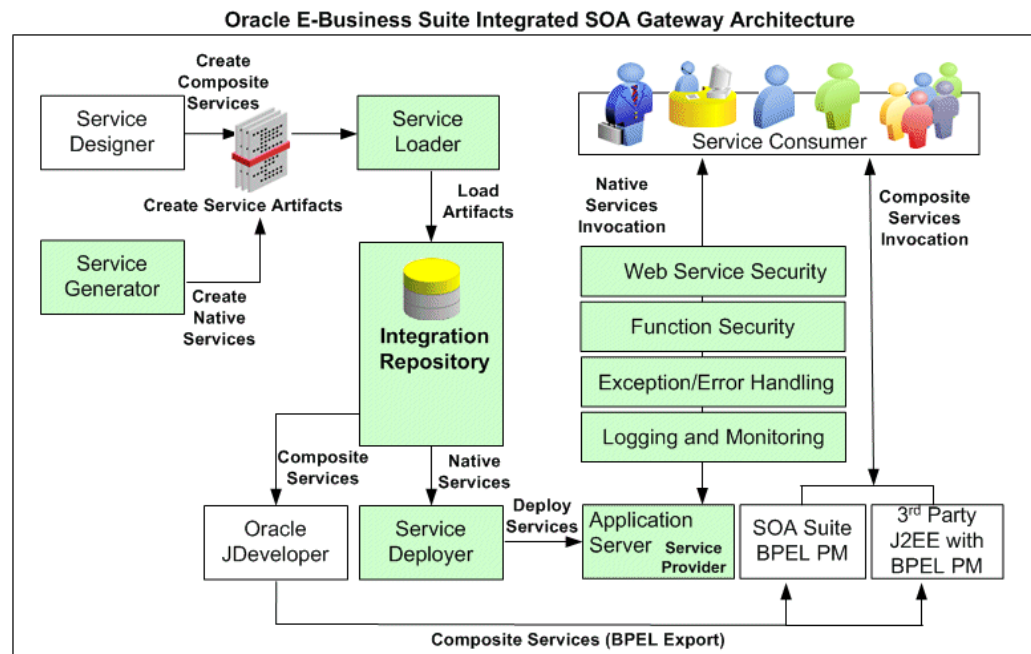
## **Oracle E-Business Suite Integrated SOA Gateway Architecture Overview**

Oracle E-Business Suite Integrated SOA Gateway employs essential key components that enable service integration at design time and run time, and ease the service management throughout the entire service integration and deployment life cycle.

The seamless integration between each component forms the Oracle E-Business Suite Integrated SOA Gateway architecture.

The following diagram illustrates the integration architecture flow between each

component:



All the native packaged public integration interfaces are published in the Oracle Integration Repository by default. Integration repository administrators can then transform these native integration interfaces into Web services through service generator. Service loader uploads service artifacts to Oracle Integration Repository. Service deployer deploys service artifacts from the Integration Repository to the application server where services can be exposed to customers through service provider.

Service provider identifies and processes inbound SOAP requests from service consumers, reinforces function security and Web service security, as well as passes all SOAP request and response messages to SOA Monitor (if the monitoring feature is enabled) for further monitoring SOAP messages to ensure the seamless service invocations throughout the entire service life cycle.

For composite services, system integration developers orchestrate composite services using Oracle JDeveloper. Service loader then uploads these service artifacts to Oracle Integration Repository. Users granted with the Download Composite Service privilege can further download the BPEL files to their local directories. Integration repository developers can open the downloaded BPEL files in Oracle JDeveloper, modify and deploy them if needed. Oracle BPEL Process Manager (BPEL PM) or 3rd party J2EE BPEL PM will then pick up deployed composite services which can be invoked from the Oracle E-Business Suite.

**Note:** Unlike native services that they are deployed directly from the Oracle Integration Repository user interfaces, composite services are

typically not deployed within Oracle E-Business Suite like those of other service enabled interface types. For example, a composite service - BPEL type can be deployed to a BPEL server in Oracle SOA Suite BPEL PM (Process Manager) or a third party BPEL PM in a J2EE environment. This deployed composite service - BPEL project can interact with Oracle E-Business Suite and update the data if necessary.

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# Understanding Service Enablement

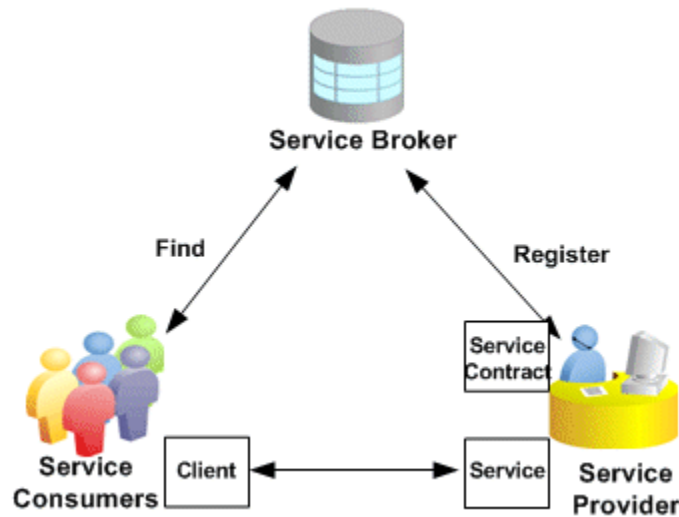
## Service Enablement Overview

Service enablement is a key requirement for developing manageable, profit-generating *Web services*. For example, if you are a service provider, service enablement enables you to dynamically provision new Web services and meter the use of those services. If you are a Web site hoster, service enablement helps you to host multiple customers across a shared infrastructure, and also helps you to set and monitor service level agreements with those customers.

**Note:** Web services are Web-based applications that provide a standard means of interoperating between different software applications, running on a variety of platforms or frameworks. Web services have an interface described in a machine-processable format called WSDL (Web Services Description Language). Other systems interact with the Web service in a manner prescribed by its description using SOAP (Simple Object Access Protocol) messages, typically conveyed using HTTP with an XML serialization in conjunction with other Web-related standards.

The common service-oriented architecture used in enabling Web services is illustrated in the following diagram:

## Service-Oriented Architecture



A *service provider* is the primary engine underlying the Web services. It describes its Web services using WSDL and actually provides or implements the business functionality of various types. The WSDL definition is published to a service broker.

A *service broker* describes the service's location and contract. It is responsible for ensuring the service information is available to any potential service requestor, consumer, or called Web service client.

A *service consumer* or Web service client issues one or more queries to the service broker to locate a service and determine how to communicate with that service.

WSDL and SOAP are the communication vehicles facilitating the services. Part of the WSDL provided by a service provider is passed to the service consumer in specifying what the requests and responses are for the service provider. The service consumer sends SOAP messages as service requests to the service provider. The service provider then provides the expected SOAP responses back to the service consumer to complete the requests.

### Service Enablement and Oracle E-Business Suite Integrated SOA Gateway

Service enablement is the essential feature within Oracle E-Business Suite Integrated SOA Gateway. It provides a mechanism that allows native packaged integration interface definitions residing in Oracle Integration Repository (the service broker) to be transformed into Web services described in WSDL code. Additionally these services can be further deployed to Oracle Application Server allowing more consumptions over the Web.

For example, PL/SQL integration interface definitions can be service enabled within Oracle E-Business Suite, and then deployed as Web services. Third party clients can discover them and initiate transactions with Oracle E-Business Suite.

For more information about services, refer to the *Oracle Application Framework Developer's Guide*, available from My Oracle Support Knowledge Document 1087332.1, Oracle Application Framework Release Notes for Release 12.1.3.

## Common Terms Used in the Service-Oriented Architecture

The following concepts or terminologies are commonly used in service-oriented architecture.

### Service Provider

The primary engine underlying the Web services capability is *Service Provider*. To support all published integration interface types and services in Oracle E-Business Suite Integrated SOA Gateway, an enhanced Web Service Provider called *SOA Provider* is particularly used here to achieve the necessary functionality of a service provider plus additional features in supporting various interface types.

### Service Consumer

The service consumers or Web service clients are the parties that use or consume the services provided by a service provider.

The consumer locates entries in the service broker using various find operations and then binds to the service provider in order to invoke one of its Web services.

### Service Broker

Service broker plays an important role in the service-oriented architecture. The service broker is responsible for making the service interface and implementation access information available to any potential service requestor. The scope of a service broker can be decided based on the business needs. For example, a public registry or broker is available through the Internet, while a private broker is only accessible to a limited audience such as users of a company intranet.

A service broker is the key component of any SOA-based infrastructure which enables service providers to advertise their service offerings, allows service consumers to find, access, and invoke services that meet defined criteria, as well as provides critical features for SOA governance.

### Web Services Discovery

Web services provide access to software systems over the Internet using standard protocols. Therefore, there exists at least a Web service provider that publishes certain services such as computer repair services, and a Web 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)

Simple Object Access Protocol (SOAP) is a protocol for exchanging XML-based messages over networks, normally using HTTP/HTTPS.

SOAP forms the foundation layer of the Web services stack, providing a basic messaging framework upon which abstract layers can be built.

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

## Web Services Description Language (WSDL) and its Structure

WSDL is a format for describing a Web Services interface. It is a way to describe services and how they should be bound to specific network addresses.

WSDL has three parts:

- Definitions

Definitions are generally expressed in XML and include both *data type* definitions and *message* definitions that use the data type definitions. These definitions are usually based upon some agreed upon XML vocabulary which could be within an organization or between organizations.

- Operations

Operations describe actions for the messages supported by a Web service. Operations are grouped into *port types*. Port types define a set of operations supported by the Web service.

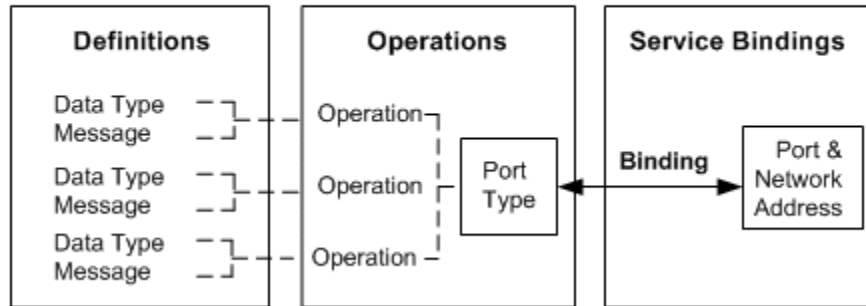
- Service bindings

Service *bindings* connect port types to a *port*. A port is defined by associating a network address with a port type. A collection of ports defines a *service*. This binding is commonly created using SOAP.

The following figure shows the relationship of the basic parts of WSDL:



### WSDL Basic Parts Relationship Diagram



## Web Service Security

Web service security (WS-Security) is a communication protocol providing a means for applying security to Web Services. It describes enhancements to SOAP messaging to provide quality of protection through message integrity, message confidentiality, and single message authentication.

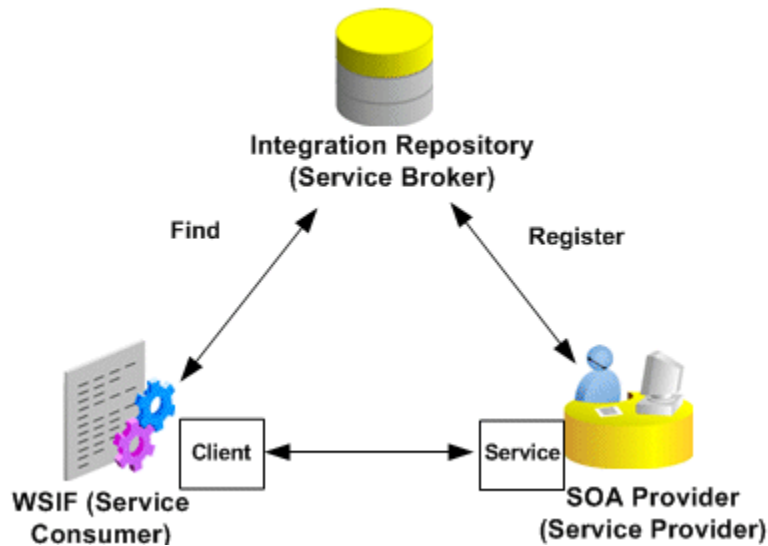
In addition, WS-Security describes how to attach signature and encryption headers to SOAP messages. It also describes how to attach security tokens to the messages to reinforce security rules and guard Web service content from unauthorized access.

## Service-Oriented Architecture in Oracle E-Business Suite

To allow pre-built and reusable business services available to customers and let customers dynamically interact between applications, Oracle E-Business Suite Integrated SOA Gateway, building on the principle of service-oriented architecture, allows service enablement within the Oracle E-Business Suite. As a result, integration interface definitions that have been used internally within an organization are now Web available.

The following diagram illustrates the essential SOA components in enabling services within Oracle E-Business Suite:

## Service-Oriented Architecture in Oracle E-Business Suite



In this diagram, SOA Provider is the service provider used in enabling services. Oracle Integration Repository plays a role as a service broker. The Web service invocation framework (WSIF) serves as a service consumer to issue a request through the invocation of a Web services from Oracle E-Business Suite.

### SOA Provider

SOA Provider is an enhanced service provider particularly in supporting additional interface types for service enablement.

**Note:** In Release 12.0, Oracle E-Business Suite is service partially enabled using Web Service Provider to enable XML Gateway Map and Business Service Object (formerly known as Service Bean) interface types. For backward compatibility, Oracle E-Business Suite Integrated SOA Gateway continues to support the Release 12.0 based Web Service Provider service enablement, plus additional interface types using SOA Provider to enable services.

At run time, SOA Provider references integration services and data from Oracle Integration Repository in processing inbound SOAP request messages that invoke Web services and sends the SOAP response out.

### Web Service Invocation Framework

To invoke integration services from Oracle E-Business Suite, Oracle E-Business Suite Integrated SOA Gateway uses service invocation framework, leveraging Oracle Workflow Java Business Event System (JBES) and a seeded Java rule function, to allow any WSDL-described service to be invoked.

For more information about how to set up and invoke a Web service through the

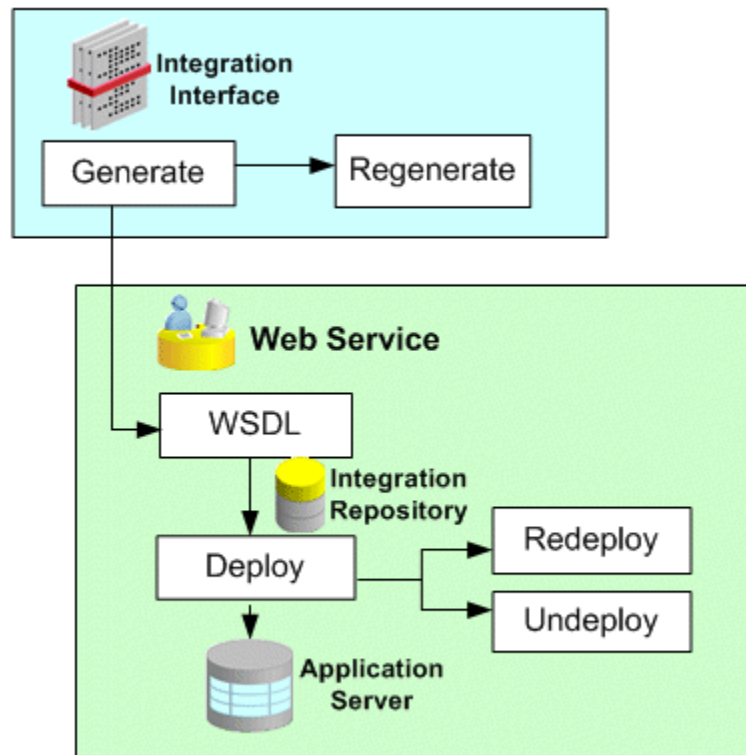
invocation framework, see *Implementing Service Invocation Framework, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide* and *Oracle Workflow and Service Invocation Framework Overview, Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

### Oracle Integration Repository

Oracle Integration Repository, 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 provides a comprehensive, consistent browsing view of the interface mechanism which lets you easily discover and search on the business interface from the catalog. Additionally, users with administrator role can generate Web services by transforming interface definitions to a machine-processable format that complies with Web standards using WSDL. Once a Web service is successfully generated, the service can be deployed to the Oracle Application Server.

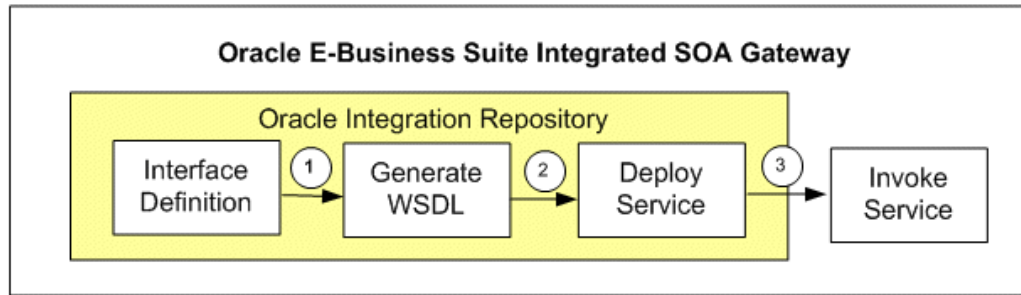
The Web service generation and deployment process flow can be illustrated in the following diagram:

#### Service Generation and Deployment Process Flow



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

### Service Enablement Functional Process Flow



1. An integration repository administrator transforms the integration interface definitions resided in Oracle Integration Repository into Web services in WSDL URLs.

You can view the WSDL sources in the Web Service region. See: *Reviewing Web Service WSDL Source*, page 4-9.

2. An integration repository administrator then deploys Web services.

How to generate and deploy Web services, see: *Performing Additional Web Service Activities*, page 4-13.

3. Web services representing in WSDL URLs can be invoked from any Web service clients.

In addition to transforming interface definitions into Web services and deploying them, integration repository administrators can access the SOA Monitor user interface to monitor and manage all SOAP messages in and out from the SOA Provider (if the SOA monitoring feature is enabled). This allows any operation error if occurred during the message exchanges to be identified and audited. The administrators can search and view SOAP request and response message details, and take necessary actions if needed to expedite the interaction between services and consumers. For more information on how to use SOA Monitor, see *Monitoring and Managing SOAP Messages Using SOA Monitor*, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

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# Navigating Through Oracle Integration Repository

This chapter covers the following topics:

- Oracle Integration Repository Overview
- Getting Started
- 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 services or Web services and allowing services or Web service clients to make use of the services provided from the 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 business consumption.

Oracle Integration Repository, an integral part of Oracle E-Business Suite, is the repository to serve this purpose. It contains numerous interface endpoints exposed by applications throughout the entire Oracle E-Business Suite and is an essential component within Oracle E-Business Suite Integrated SOA Gateway. This centralized repository not only provides a complete catalog of Oracle E-Business Suite's business interfaces, but also provides a comprehensive, consistent browsing view of the interface mechanism. You can use this tool to easily discover and search on business interfaces, regardless of custom or Oracle packaged ones, from the catalog for integration with any system, application, or business partner.

A business interface is a collection of functions provided for transferring data from one computerized system to another to achieve a specific goal. An Oracle E-Business Suite application might include one or more business interfaces, which enable you to use

other Oracle software or third party programs to transfer data to or from the application, or to invoke some aspect of the application's functionality.

Interfaces can be used from application-to-application (A2A), or from business-to-business (B2B). An example of a B2B transaction would be something like that a purchase order acknowledgement interface receives an acknowledgement from a trading partner in response to an outbound purchase order request or change.

Oracle business interfaces are built using a variety of technologies, with each technology appropriate to different environments and tasks. These constitute the available *interface types*. For example, a business interface can be based on a PL/SQL package. PL/SQL is an interface type that you can find it through the Integration Repository and then locate various PL/SQL based business interfaces grouped by product family.

**Note:** Oracle Integration Repository supports the following integration interface types which can be categorized as follows:

- Service enabled
  - 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 which is not supported for service enablement.

- Business Service Object (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.

- Subscription model

- Business Event
- XML Gateway Map (outbound)
- Composite services - BPEL
- Non-service enabled public interfaces
  - Open Interface Tables
  - Open Interface Views
  - EDI Interface

Detailed information on each interface type, see *Interface Types*, page 3-11.

## Major Features

- A unified repository from which all integration interface types are exposed.
- Updates are automated and documented.
- Catalog is searchable on keywords and navigable by product family.
- A powerful user interface to help you find the data you are looking for from the repository.
- It supports composite services containing a collection of native interfaces.
- It enforces security rules to allow only authorized users to perform administrative tasks such as generate and deploy Web services.

## Getting Started

### Accessing Oracle Integration Repository

You can invoke the repository like any other Oracle E-Business Suite application, provided that you are logged in as a user with sufficient permissions. From the Navigator menu, select the **Integrated SOA Gateway** responsibility, then click the **Integration Repository** link that appears.

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 with 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 Web Services (WSDL)	No	No	Yes
Deploy/Redeploy Web Services	No	No	Yes
Undeploy Web Services	No	No	Yes
Subscribe to Business Events	No	No	Yes
Create Grants	No	No	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 appropriate 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 an appropriate 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 with the Download Composite Service privilege through a permission set. For more information on how to manage security through roles, see



Users with the Integration Repository Administrator role can find the Administration link from the Navigator menu after logging on with the Integrated SOA Gateway responsibility. This Administration link contains the following two links allowing you to perform additional administrative functions outside the Integration Repository user interface:

- **SOA Monitor:** This link allows the administrators to access the SOA Monitor user interface where the administrators can monitor and audit all SOAP messages in and out through SOA Provider and view the message details.

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

- **Log:** This link allows the administrators to access the centralized Log configuration user interface where the administrators can enable and configure log setups.

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 Oracle Integration Repository

Oracle Integration Repository has two main user interfaces: The Browse interface, page 3-6 (the default) and the Search interface, page 3-8.

Following are links to some of the commonly requested information about using Oracle Integration Repository:

- Included interface types, page 3-11
- Integration standards, page 3-16
- Searching for a specific interface, page 3-8
- Information included for each interface, page 4-1

## Discovering and Reviewing Interfaces

### Browsing the Integration Interfaces

The Browse interface appears by default when you invoke Oracle Integration Repository. You can also access it by clicking the **Browse** button 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 3-11.

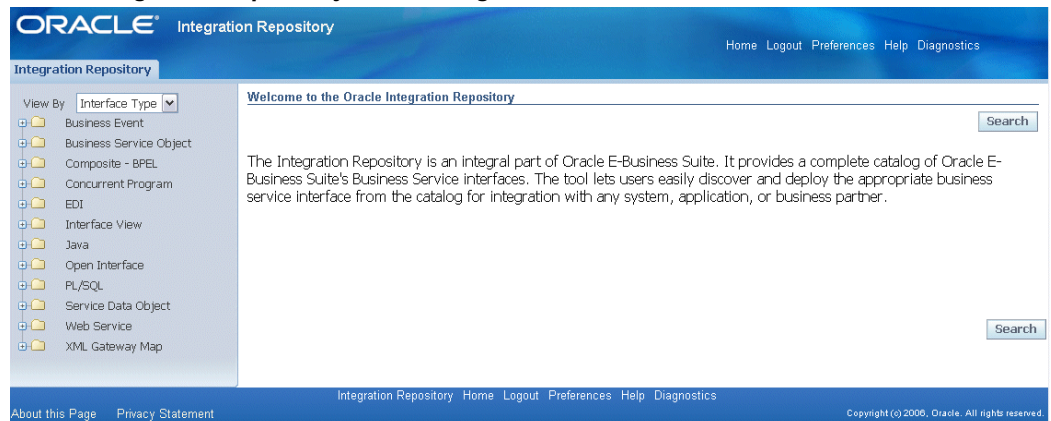
- **Integration standard**

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

For more information, see *Integration Standards*, page 3-16.

If you don't have this information, you'll find it more effective to conduct a search, page 3-8.

## Oracle Integration Repository Browse Page



You browse the interfaces 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 on the list.

### Browsing by Product Family

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

For example, Financials > Payables > Payables Invoice.

Select a business entity, page 3-6 to view the interfaces that comprise it. Note that a business entity can include multiple interfaces of different types owned by different products. For example, the business entity "Payables Invoice" includes the following:

- Create Credit Card Issue Invoice open interface from Internet Expenses
- Invoice open interface from Payables
- Invoice Notification XML Message from Supply Chain Trading Connector

### Browsing by Interface Type

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

For example, Web Service > 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 the **Search** button anywhere in Oracle Integration Repository to access the main Search page.

### Oracle Integration Repository Search Page

ORACLE<sup>®</sup> Integration Repository

Home Logout Preferences Help ContactAdmin Personalize Page Diagnostics

Integration Repository

Search

Interface Name Internal Name

Product Family Applications Technology Interface Type All

Product XML Gateway Business Entity

Hide More Search Options

TIP Select Category before a Category Value

Category All

Category Value

Interface Source All

Status All

Web Service Status All

Standard Specification

Scope All

Go Clear All

Export

Name	Internal Name	Product	Type	Source	Status	Description
<a href="#">Confirmation Message</a>	ECX:CBODI	XML Gateway	Web Service	Oracle	Active	ECX_CBODI_OAG72_IN_CONFIRM map annotation public description.
<a href="#">Confirmation Message</a>	ECX:CBODI	XML Gateway	XML Gateway Map	Oracle	Active	ECX_CBODI_OAG72_IN_CONFIRM map annotation public description.
<a href="#">ECX_CBODI_OAG62_IN map</a>	ECX:CBODI	XML Gateway	XML Gateway Map	Oracle	Active	ECX_CBODI_OAG62_IN Map annotation public description.
<a href="#">XML Gateway Message Delivery</a>	ECX_ERRORLOG	XML Gateway	PL/SQL	Oracle	Active	This interface contains routines to track and report message delivery data.
<a href="#">XML Gateway Transformation</a>	ECX_STANDARD	XML Gateway	PL/SQL	Oracle	Active	The interface contains generic routines to be used by activity functions.

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

**Note:** Before entering search criteria in the Search page, you will find the default value 'All' automatically displayed in the Product Family, Product, Interface Source, 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 also be found in the Category, Status, Web Service Status, Standard, and Scope fields while clicking the **Show More Search Options** link.

- **Interface Name**
- **Product Family**
- **Product**
- **Internal Name**, page 4-3
- **Interface Type**, page 3-11
- **Business Entity**, page 3-6

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

- **Category and Category Value**

Used to qualify product-specific features or to categorize a subtype of an interface. You can 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' is a subtype of Java interface.

When Interface Subtype category is selected, the Java APIs for Forms is automatically selected as the Category Value.

- **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 with this interface source type.
- **Custom** - This indicates annotated custom integration interfaces. Custom integration interfaces are displayed along with Oracle interfaces from the browser tree.

- **Status**

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

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

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

- **Web Service Status**

If an integration interface is exposed or generated as a Web service, then the Web service can be further deployed from Oracle Integration Repository to the application server.

Use the Web Service Status field to search by different stages of Web services during the service generation and deployment life cycle.

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

- All (default) - This displays all interfaces regardless of the interface types whether they are 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 generated and deployed.

For more information, see Common Information on Web Services, page 4-7.

- **Scope**

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

- **All (default)** - All integration interfaces regardless of public, internal, or private interfaces.
- **Public** - These interfaces can be used by anyone.
- **Internal To Oracle** - These interfaces 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.

This type of interface can only be accessed by users with the integration developer role and the integration repository administrator role.

- **Private To Application** - These interfaces are available for business integration only within the application itself. They will not be used by any other applications outside the application that the interface belongs to.

For example, if an interface with this 'Private to Application' type belongs to Purchasing application, then it will not be used by any other applications within Oracle E-Business Suite but Purchasing.

This type of interface can only be accessed by users with the integration developer role and the integration repository administrator role.

- **Standard and Standard Specification**

For more information, see Integration Standards, page 3-16.

After selecting your criteria, click **Go** to launch the search and see a list of the available interfaces that meet the criteria. To save the list of interfaces to a CSV file, click **Export**.

To review the details of an interface, click the interface name on the list.

## 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 services are formed or established, Oracle Integration Repository supports the following interface types:

- **Native Services**

Native services are native packaged integration interfaces. This type of service includes the following native interfaces:

- **PL/SQL**

- XML Gateway
- Concurrent Programs
- Business Events
- Open Interface Tables/Views
- EDI
- Business Service Object (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 Java interface.

- **Composite Services**

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

The only available composite service type in this release 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 source files can be uploaded and displayed along with Oracle interfaces through the Integration Repository browser tree based on the interface types they belong to.

To easily differentiate them from Oracle interfaces, 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.

## Business Events

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. The Business Event System consists of an Event Manager and workflow process event activities. The Event Manager lets you register subscriptions to significant events; event activities representing business events within workflow processes let you model complex business flows or logics within workflow processes.

When a local event occurs, the 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.

**Note:** Users with Integration Repository Administrator role can have the privilege to subscribe to a business event in the Business Event Details page. See *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide* for details.

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

## XML Gateway Message Maps

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

Oracle XML Gateway consumes events raised by the Oracle E-Business Suite and subscribes to inbound events for processing. XML Gateway 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 supports both Business-to-Business (B2B) and Application-to-Application (A2A) initiatives. XML Gateway message maps (or just *XML Gateway 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 the Integration Repository information provided about XML Gateway maps, see XML Gateway Map Information, page 4-17.

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

## PL/SQL Procedures and Functions

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

For the Integration Repository information provided about PL/SQL, see PL/SQL Information, page 4-22.

## Concurrent Programs

In Oracle E-Business Suite, concurrent processing simultaneously executes programs running in the background with online operations to fully utilize your hardware capacity. A concurrent program runs as a concurrent process and is executed by the Concurrent Manager. Functions performed by concurrent programs are typically data-intensive and long-running, such as posting a journal, populating an interface table, and generating an EDI flat file.

For the Integration Repository information provided about Concurrent programs, see Concurrent Program Information, page 4-45. For more information about concurrent programs, refer to the *Oracle E-Business Suite System Administrator's Guide - Configuration*.

## Open Interface Tables

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

For the Integration Repository information provided about open interface tables, see Open Interface Information, page 4-47.

## Interface Views

Interface views are database objects that make data from Oracle E-Business Suite products available for selection and use by destination applications.

For the Integration Repository information provided about interface views, see Interface View Information, page 4-50.

## EDI Message Transactions

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, speed data processing, and ensure accuracy. 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. It is designed with an open and flexible architecture for easy integration with trading partners or EDI translators. When used for EDI solutions, e-Commerce Gateway integrates with EDI translators to provide specific EDI standard formats and versions. Oracle e-Commerce Gateway is a file-based integration layer between Oracle E-Business Suite and any other external application.

For the Integration Repository information provided about EDI messages, see EDI

Message Information, page 4-51.

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

## Java

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

### 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 SOA Provider.

For the Integration Repository information provided about Java, see Java Information, page 4-25.

## Business Service Objects

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.

It is the tool by which Oracle E-Business Suite employs *service oriented architecture* (SOA) and *Web services* to facilitate integration with each other and with third party trading partners.

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. Oracle Integration Repository includes it on lists of interface types, so you can browse or search for business service object interface based on the service data objects that they use.

## Web Services

To enhance the robust integrations between Oracle E-Business Suite, packaged applications, and legacy systems, all interface types stored in the Integration Repository can be exposed as Web services, which are defined with Web Services Description Language (WSDL) content appropriate to the interface types.

**Note:** Although a Web service does not by itself constitute a business interface, Oracle Integration Repository includes it on lists of interface

types, so you can browse or search for the interface types based on the Web services that expose them.

For more information about Web services, see *Understanding Web Services*, page 2-1.

## Composite Services

A composite service consists of a collection of native packaged public interfaces or called native services that belong to a specific product or product family and are available in the Integration Repository.

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

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

For more information about composite services, see *Working with Composite Services*, 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



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## Working with Native Services and 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

The details page of each integration interface type contains the following two types of information:

- Interface detail information

This interface detail information includes a header region with general information, a description region, a source region, and an interface methods or procedure and functions region.

Integration repository administrators can perform additional administrative tasks including generating a Web service for a selected interface type if the type has a Web service enabled, subscribing to a business event, and creating security grants for appropriate users.

For more information on interface details, see Common Information on Interface Details, page 4-3.

- Interface Web service information

Once an integration interface definition is transformed into a Web service representing in WSDL format, then the Web Service - SOA Provider region by default appears in the details page if it is not an interface type of XML Gateway Map or Business Service Object. The Web Service Status field is also marked as 'Generated' to indicate that the status of this Web service.

If a generated Web service has been successfully deployed by the administrator, then 'Deployed' appears in the Web Service Status field along with the selected authentication type(s) in read-only mode. Users with administrator privileges can redeploy or undeploy the service again if needed.

For more information on Web services, see Common Information on Web Services, page 4-7.

**Interface Details Page**

ORACLE<sup>®</sup> Integration Repository

Home Logout Preferences Help Diagnostics

Integration Repository

Integration Repository >

XML Gateway : INBOUND: Process Purchase Order XML Transaction

Browse Search Printable Page

Internal NameONT:POI

TypeXML Gateway Map

ProductOrder Management

StatusActive

Business EntitySales Order

StandardOAG 7.2 Process\_PO\_007

Standard ReadyROSETTANET:02.02.00:PIP3A4-Request Purchase Order

ScopePublic

Interface SourceOracle

Full Description

This is the message map to support the inbound Process PO (Purchase Order Processing) XML transaction which, through the population of data in the header and line open interface tables, allows users to create sales orders in the Order Management system. The OAG name for this message is PROCESS PO.

Web Service - SOA Provider

Web Service StatusDeployed

WSDLView WSDL

\* Authentication Type

☐ Username Token

☒ SAML Token (Sender Vouches)

Source Information

Source Filepatch/115/xml/US/ONT\_3A4R\_OAG72\_IL.xgm

Source Version120.3

Source ProductONT

Methods

Name	Internal Name	Status	Description
POI	POI	Active	Process transaction.

Browse Search Printable Page

About this Page Privacy Statement

Integration Repository Home Logout Preferences Help Diagnostics

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



**Important:** Information specific to Web services is discussed under Understanding Service Enablement, page 2-1.

Information specific to composite services is discussed under Working with Composite Services, page 5-1.

## Common Information on Interface Details

Each interface information page includes a header region with general information about the interface. 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><b>Note:</b> For Java service interfaces, this is called <b>Qualified Name</b>, and includes the full Java package name and the class name.</p>
Type	<p>The interface type, page 3-11.</p> <p><b>Note:</b> This field does not appear for Java service interfaces.</p>
Product	<p>The Oracle E-Business Suite product that supplies the interface.</p>
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 using 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> <p><b>Note:</b> This field does not appear for Java service interfaces.</p>

Field	Notes
Status	<p>Valid status codes are:</p> <ul style="list-style-type: none"> <li>• <code>Active</code></li> <li>• <code>Deprecated</code> - this interface should not be used, but it will be supported until obsolete.</li> <li>• <code>Obsolete</code> - the interface is no longer supported.</li> <li>• <code>Planned</code> - This interface will be activated at a future date.</li> </ul>
Scope	<p>The scope can be one of the following:</p> <ul style="list-style-type: none"> <li>• <code>Public</code></li> <li>• <code>Internal To Oracle</code></li> <li>• <code>Private To Application</code></li> </ul> <p>For more information, see <b>Scope</b> on the Oracle Integration Repository Search page, page 3-10.</p>
Interface Source	<p>The only available interface source in Oracle Integration Repository is Oracle native packaged integration interfaces.</p> <p><b>Interface Source</b> on the Oracle Integration Repository Search page, page 3-9.</p>
MetaLink	<p>Included for any interface that has a related My Oracle Support (formerly Oracle<i>MetaLink</i>) Knowledge Document. Click the link to log in to My Oracle Support and view the Knowledge Document. A valid user name and password is required to access My Oracle Support.</p>
Documentation	<p>Included for any interface that has related online documentation. Click the link to view or download the documentation.</p>
Online Help	<p>Provided for any interface that has related Oracle E-Business Suite online help. Click the link to view online help for the interface.</p>

Each interface information page also includes a Source Information region that contains the following fields:

Field	Notes
Source File	The source code file for this interface, and its location in the file system.
Source Version	<p>The version of the source file. The first portion of the number corresponds to the base release version of Oracle E-Business Suite and the second portion is the version of the file. For example, 120 . 8 is Oracle E-Business Suite 12.0, and 8 indicates that this is the 8th version of the file.</p> <p><b>Note:</b> 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>
Source Product	<p>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><b>Tip:</b> This field shows the product shortname. You can learn the corresponding full product name by choosing the <b>System Administration</b> responsibility from the Navigator menu, then selecting <b>Oracle Applications Manager &gt;License Manager &gt;Reports &gt;Licensed Products</b>. On the product list that appears, you can filter the results for any product abbreviation (shortname) or license status.</p>

Integration repository administrators or only users granted with the integration repository administrator role can find the following buttons available in the interface details page:

**ORACLE** Integration Repository Home Logout Preferences Help Diagnostics

Integration Repository **Administration**

Integration Repository >

PL/SQL Interface : User

Browse Search Printable Page

View Log Regenerate WSDL

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](#)

**Full Description**

Table Handler to insert or update data in FND\_USER table.

**Web Service - SOA Provider**

Web Service Status **Generated**  
 WSDL [View WSDL](#)

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

**Deploy**

**Source Information**

**Procedures and functions**

Select Object and **Create Grant**

Select All | Select None

Select	Details	Name	Internal Name	Status	Description
<input type="checkbox"/>	<a href="#">Show</a>	<a href="#">Change User Name</a>	CHANGE_USER_NAME	Active	This api changes username, deals with encryption changes and update foreign keysthat were using the old username.
<input type="checkbox"/>	<a href="#">Show</a>	<a href="#">Create/Update User</a>	LOAD_ROW	Active	Creates or updates Application's User data as appropriate.
<input type="checkbox"/>	<a href="#">Show</a>	<a href="#">Derive Person Party Id</a>	DERIVE_PERSON_PARTY_ID	Active	This is called by user form and other packages.
<input type="checkbox"/>	<a href="#">Show</a>	<a href="#">LDAP Wrapper Change User Name</a>	LDAP_WRAPPER_CHANGE_USER_NAME	Active	This is called by user form when a user name changed, we need to synch up with ldap with the new name.
<input type="checkbox"/>	<a href="#">Show</a>	<a href="#">LDAP Wrapper Create User</a>	LDAP_WRAPPER_CREATE_USER	Active	This is called by user form and the fnd_user_pkg.

- Generate WSDL:** This generates a Web service WSDL file for a selected interface. If the file is generated successfully, you will find the Web Service region becomes available. **Regenerate WSDL** also appears in the details page allowing you to regenerate the service again if needed. For more service generation information, see *Generating Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.
- Deploy (Redeploy or Undeploy)**  
 If the service has already been generated successfully, the administrators can find **Deploy** available in the Web Service region for the selected integration interface.  
 If a service has been deployed, the administrators can find **Redeploy** (or **Undeploy**) available instead. This allows the administrators to redeploy or undeploy the deployed Web service if needed.  
 Prior to deploying or redeploying the service to the application server, the administrators must first select at least one authentication type for the generated service. This allows SOA Provider services the deployment based on the selected type(s). For more service deployment information, see *Deploying and Undeploying Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.
- Create Grant:** This allows the administrators to create security grants by

authorizing the access permission of a selected interface method or a procedure or function to an appropriate user, a user group or all users.

Oracle Integration Repository also provides a feature to revoke the grants for a particular user for a selected method or service.

For more information on managing function security through security grants, see *Managing Grants*, page 4-15.

- **View Log**

This allows the administrators to view the logs generated during service generation and deployment. If logging is enabled for specific services or all services at the Site level only, administrators can find **View Log** in the Interface Details page. Click **View Log** to open the Log Details page where you can view log details compiled in the log table. You can also delete and export log messages retrieved in the Log Details page if needed. For more information, see *Viewing Generate and Deploy Time Logs*, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

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

**Note:** The integration repository administrators (defined by the Integration Repository Administrator role) can find the Administration tab containing the following information displayed next to the Integration Repository tab:

- SOA Monitor subtab: This allows the administrators to monitor and audit all SOAP messages in and out through SOA Provider and view the message details.

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

- Log subtab: This allows the administrators to enable and configure log setups.

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

## Common Information on Web Services

Web service information is displayed in the appropriate Web Service region of the interface details page.

For example, the Web Service - SOA Provider region by default appears in the details

page if the selected interface type is not Business Service Object. This region allows you to review a Web service details in WSDL code, and allows the administrators (or users granted with the integration repository administrator role) to perform administrative tasks including deploying or undeploying Web services.

**Note:** XML Gateway Map and Business Service Object (formerly known as Service Bean) interface types are service enabled in Release 12.0 through Web Service Provider. To enable services for more interface types, SOA Provider is used in this release to support XML Gateway Map, plus additional interface types including PL/SQL, Concurrent Program, Business Event, and Composite Service - BPEL types. Therefore, you might still find Web Service - SOA Provider region available for XML Gateway Map interface type if the service is enabled by SOA Provider in this release.

*Web Service Region(s) for XML Gateway Map and Business Service Object*

- For XML Gateway Map interface type

Because it can be supported by both Web Service Provider in Release 12.0 and by SOA Provider in this release, for backward compatibility, a profile option *FND: XML Gateway Map Service Provider* is used to let you select an appropriate service provider in enabling services for XML Gateway Map interface type. Based on your selected profile value, the interface details page can display the 'Web Service - Web Service Provider region' or 'Web Service - SOA Provider region', or displayed both regions at the same time if a service is generated successfully.

See: XML Gateway Map Web Service Region, page 4-18.

- For Business Service Object interface type

Web Service Provider supports the service enablement for Business Service Object interface type in Release 12.0 and will continue to support it in this release; therefore, the Web Service - Web Service Provider region will be displayed if a service is generated successfully.

**Note:** The Business Service Object interface type is not supported by SOA Provider.

See: Business Service Object Web Service Region, page 4-32.

From the appropriate Web service region, you can perform the following tasks:

- Review the status of a selected Web service. The Web Service Status field can be one of the following values:
  - Generated: Indicates that a selected interface has a Web service available, but the service has not yet been deployed.

- **Deployed:** Indicates that a selected interface not only has a Web service available, but also the service has been deployed.
- Review WSDL code once a Web service has been generated or deployed successfully.

See: Reviewing Web Service WSDL Source, page 4-9.

- Review selected authentication type(s) with read-only text once a Web service has been deployed successfully.

To secure Web service content and authenticate Web service operation, SOA Provider supports multiple authentication types for inbound service requests. Before deploying a generated service, an integration repository administrator must select at least one authentication type for the selected service in the Authentication Type field.

- **Username Token:** This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.

See: UsernameToken Based Security, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **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, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

The administrator can undeploy or redeploy the Web service if needed.

See: Performing Additional Web Service Activities, page 4-13.

## Reviewing Web Service WSDL Sources

To make integration interfaces available to customers over a network where customers can dynamically interact between applications, Oracle Integration Repository allows integration repository administrators (or users granted with the integration repository administrator role) to generate Web services WSDL files.

Once Web services are generated, you will find the appropriate Web Services region(s) available when viewing an interface detail for a given interface type.

- XML Gateway Map and Business Service Object (formerly known as Service Bean) interface types are supported by Web Service Provider for service enablement in Release 12.0. In this release, Web Service Provider will continue to support the Business Service

Object interface type, while XML Gateway Map along with PL/SQL, Concurrent Program, and Composite Service BPEL are supported by SOA Provider. Business Event interface type is supported by SOA Provider through the subscription model.

- For XML Gateway Map interface type service enabled by Web Service Provider in Release 12.0, you will find a standard and deployed XML Gateway WSDL URL displayed with the 'Web Service Status - Deployed' status in the Web Service - Web Service Provider region.

For more information on service enablement support for XML Gateway Map interface type, see XML Gateway Map Web Service Region, page 4-18.

### Viewing Web Service WSDL Information

The screenshot displays the Oracle Integration Repository interface. At the top, the Oracle logo and 'Integration Repository' text are visible, along with navigation links: Home, Logout, Preferences, Help, and Diagnostics. Below the header, the breadcrumb trail shows 'Integration Repository > PLSQL Interface : Repair Order'. On the right side of the header area are buttons for 'Browse', 'Search', and 'Printable Page'.

The main content area displays the following details for the 'Repair Order' interface:

- Internal Name:** CSD\_REPAIRS\_PUB
- Type:** PL/SQL
- Product:** Depot Repair
- Status:** Active
- Business Entity:** [Repair Order\(1\)](#)
- Scope:** Public
- Interface Source:** Oracle

Below these details is a section titled 'Full Description' with the text: 'This is the public interface for managing a repair order. It allows creation of repair order for a service request.'

The next section is 'Web Service - SOA Provider', which includes:

- Web Service Status:** Generated
- WSDL:** [View WSDL](#)
- \* Authentication Type:**
  - ☐ Username Token
  - ☐ SAML Token (Sender Vouches)

Following this is the 'Source Information' section:

- Source File:** patch/115/sql/csdprdras.pls
- Source Version:** 120.22.12010000.3
- Source Product:** CSD

The final section is 'Procedures and Functions', which contains a table:

Name	Internal Name	Status	Description
<a href="#">Create Repair Order</a>	CREATE_REPAIR_ORDER	Active	Creates a new Repair Order for the given Service Request.
<a href="#">Update Repair Order Status</a>	UPDATE_RO_STATUS	Active	Updates a repair order status.

At the bottom of the page, there is a footer with navigation links (Integration Repository, Home, Logout, Preferences, Help, Diagnostics), a copyright notice (Copyright (c) 2008, Oracle. All rights reserved.), and links for 'About this Page' and 'Privacy Statement'.

### To view WSDL file:

1. Log on to Oracle Integration Repository and locate your desired interface definition through a search or from the navigation tree.
2. Click the interface name to open the interface details.



3. Click the **View WSDL** link in the Web Service region to view the WSDL source code.

The following sample shows the WSDL description for the PLSQL Interface: Repair Order:

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions name="CSD_REPAIRS_PUB"
targetNamespace="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/
csd_repairs_pub/"

xmlns="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/csd_repair
s_pub/"
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:tns1="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/csd_r
epairs_pub/create_repair_order/"

xmlns:tns2="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/csd_r
epairs_pub/update_ro_status/">
<types>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/
csd_repairs_pub/create_repair_order/"
  <include
schemaLocation="http://<myhost>:<port>/webservices/SOAPProvider/plsql
/csd_repairs_pub/APPS_ISG_CREATE_REPAIR_ORDER_CSD_REPAIRS_PUB-24CREA
TE_REPAIR.xsd"/>
</schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/
csd_repairs_pub/update_ro_status/"
  <include
schemaLocation="http://<myhost>:<port>/webservices/SOAPProvider/plsql
/csd_repairs_pub/APPS_ISG_UPDATE_RO_STATUS_CSD_REPAIRS_PUB-24UPDATE_
RO_STA.xsd"/>
</schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/csd/soapprovider/plsql/
csd_repairs_pub/"
  <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>
. . .

```

**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 user information is defined by the `wsseUsername` property passed within the security headers. Detailed instructions on how to pass the security headers along with the SOAP request, see *Passing Values to Security Headers, 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:**

When an integration repository administrator successfully deploys or redeploys a Web service, the Web Service Status field appears with 'Deployed' value along with selected authentication type(s). 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.

## **Performing Additional Web Service Activities**

Oracle E-Business Suite Integrated SOA Gateway allows integration repository administrators to perform the following tasks:

- **Generating or Regenerating Web Services**

Oracle Integration Repository allows integration repository administrators to transform integration interface definitions into a format that complies with Web standards using WSDL to define Web services. Once the WSDL file is generated successfully, a Web Service region becomes visible in the interface details page.

**Note:** Because XML Gateway Map can be supported by both Web Service Provider and SOA Provider for service enablement, there might have more than one Web Service region available for XML Gateway Map interface type depending on the profile value set in

the 'FND: XML Gateway Map Service Provider' profile option. See:  
XML Gateway Map Web Service Region, page 4-18.

Please note that only integration repository administrators can perform this task.  
See: *Generating Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide.*

- **Deploying, Undeploying, and Redeploying Web Services**

If a Web service has been generated successfully, then an integration repository administrator can find **Deploy** in the Web Service region of an interface details page.

SOA provider supports multiple authentication types for inbound service requests; therefore, prior to deploying or redeploying a Web service, an integration repository administrator must first select at least one of the following authentication types:

- **Username Token**

This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request. It 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.

If the Web service is successfully deployed, the Web Service Status field will be updated to 'Deployed'. The View WSDL link appears along with the selected authentication type(s) for the deployed Web service. Click the View WSDL link to view the deployed WSDL code. In addition, the following buttons appear:

- **Undeploy:** This allows the administrator to undeploy the Web service if needed.
- **Redeploy:** This allows the administrator to redeploy the Web service if needed. If changes are made to the authentication type, the Web service must be redeployed.

See: *Deploying and Undeploying Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide.*

- **Subscribing to Business Events**

Integration repository administrators can subscribe to selected business events in

the event details page and create subscriptions for the selected events.

Once events are subscribed, the administrators can unsubscribe them if needed.

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

- **Viewing Generate and Deploy Time Logs**

Integration repository administrators can view and download the logs recorded during service generation and deployment for specific services or all services that have the logging enabled at the Site level only.

For more information, see *Viewing Generate and Deploy Time Logs, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Configuring Log Setups**

Integration repository administrators can have the privileges to access the log configuration page to enable and configure log setups at the site level and user level for all services or specific services or operations. With appropriate log setups and configuration, you can easily monitor system activities, track and view log messages, and troubleshoot any issues encountered at each stage of service development life cycle.

For more information on SOA logging framework and how to enable and configure logs, see *Logging for Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Monitoring SOAP Messages Using SOA Monitor**

In addition to transforming interface definitions into Web services and deploying them, integration repository administrators can have the privilege to access SOA Monitor to monitor and audit all SOAP messages in and out from the SOA Provider (if the SOA auditing feature is enabled).

This SOAP message monitoring tool allows any operation error if incurred during the message exchanges to be identified and audited. The administrators can search and view SOAP request and response message details, and take necessary actions if needed to expedite the interaction between services and consumers.

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

For more administrative tasks, see *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide* for details.

## Managing Grants

Only integration repository administrators (or users granted with the integration repository administrator role) can create security grants by authorizing the access

permission of a selected interface method or procedure and function to an appropriate user, user group, or all users.

**Note:** Interface types that have the security grant feature available are PL/SQL, Concurrent Program, Business Event, Business Service Object, and Java interfaces.

Oracle Integration Repository also allows the administrators to revoke the grants for a particular user on a selected event or service.

### To create a grant

In the interface details page, select appropriate method name check boxes in the Methods region or appropriate procedure and function names in the Procedures and Functions region. Click **Create Grant** to open the Create Grants page.

### Create Grants

The screenshot shows the Oracle Integration Repository interface. The top navigation bar includes 'ORACLE Integration Repository' and links for 'Home', 'Logout', 'Preferences', 'Help', 'Personalize Page', and 'Diagnostics'. The breadcrumb trail indicates the current path: 'Integration Repository > Administration > PLSQL Interface : Payment Instrument Registration >'. The left sidebar shows a tree view of interface types, with 'PL/SQL' expanded. The main content area is titled 'Create Grants' and contains a 'Selected Methods' table and a 'Grant All Selected' section.

Name	Internal Name Overloaded
Query Payment Instrument:ORAINSTRINQ	✓
Query Payment Instrument:ORAINSTRINQ	✓

**Grant All Selected**

Grantee Type:

Grantee Name:

**Note:** Each of the overloaded function contained in an interface can be uniquely granted to a specific user, user group, or all users through the create grant feature. If you select more than one overloaded function, an Overloaded column appears in the selected methods table indicating more than one overloaded function is selected for the grant.

From here, you can select a grantee type and grantee name if applicable and click **Apply**.

### To revoke a grant

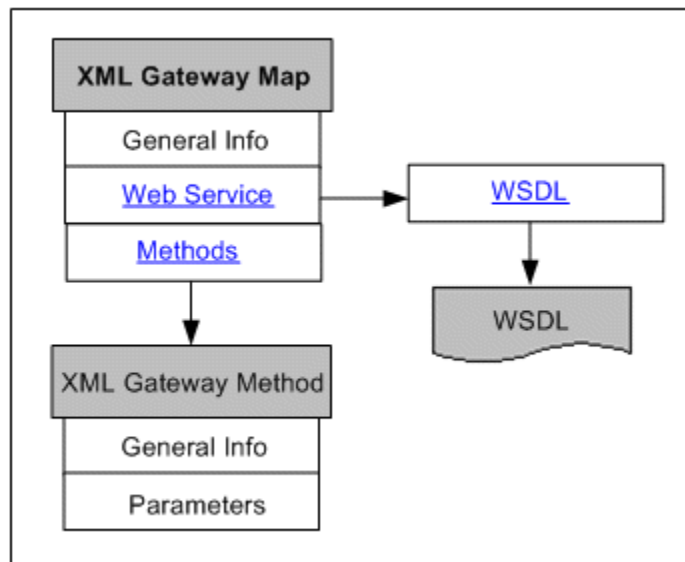
In the interface details page, select the Show link for the method or procedure and function that you want to view or revoke the grant. The Grant Details section of the selected method or procedure and function name appears detailing the grantee and grantee type information. Click the **Revoke** icon for the grant that you want to revoke to revoke the grant.

**Note:** To create and revoke grants, you must log on to Oracle Integration Repository through the username granted with the integration repository administrator role.

For more information on security grants, see Managing Security Grants, *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 contains the following information:

- **Web Service Region**

If the XML gateway map is exposed as a Web service, appropriate Web Service region(s) will be available.

See XML Gateway Map Web Service Region, page 4-18.

- **Methods Region**

The Methods region links to one or more XML Gateway Method information pages.

The general section of the XML Gateway Map displays common information, page 4-1.

The information page or interface details page includes a table listing the XML Gateway methods. Click a method name to access the information page for that method.

## **XML Gateway Map Web Service Region**

To support the XML Gateway Map service enabled by Web Service Provider in Release 12.0 and to differentiate the service enablement by SOA Provider in this release, Oracle E-Business Suite Integrated SOA Gateway uses the following profile option to let you select an appropriate service provider in enabling services for XML Gateway Map interface type. Based on the selected profile value, the interface details page displays an appropriate Web Service region or more than one region.

Select one of the following values to define the **FND: XML Gateway Map Service Provider** profile option:

- **WSP (Web Service Provider)**

This displays the Web Service - Web Service Provider region if Web services are available.

**Web Service - Web Service Provider region**



## XML Gateway Map with Web Service - Web Service Provider Region

The screenshot displays the Oracle Integration Repository web application. The left sidebar shows a tree view of the repository structure, with 'XML Gateway Map' selected under 'Web Service'. The main content area shows the details for the 'XML Gateway : Change Sales Order XML Message'.

**Integration Repository >**  
XML Gateway : Change Sales Order XML Message

Search Printable Page

Internal Name	CLN:CHANGESD	Scope	Public
Type	XML Gateway Map	Interface Source	Oracle
Product	Supply Chain Trading Connector		
Status	Active		
Standard	OAG 7.2 CHANGE_SALESORDER_008		

**Full Description**

This Change Sales Order OAG XML Message, inbound into the E-Business Suite, contains seller-initiated changes to a sales order used to update a PO.

**Web Service - Web Service Provider**

Web Service Status: Deployed  
WSDL: <http://hws60066ems.us.oracle.com:8040/webservices/AppsWSProvider/oracle/apps/fnd/XMLGateway?wsdl>

**Source Information**

Source File: patchy/115/xml/us/CLN\_CHANGE\_SALESORDER\_OAG72\_IN.xgm  
Source Version: 120.2  
Source Product: CLN

**Methods**

Name	Internal Name	Status	Description
No Methods.			

Search Printable Page

Integration Repository Home Logout Preferences Help Diagnostics

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In Release 12.0, XML Gateway Map interface type were deployed by default through Web Service Provider; therefore, you can find a standard XML Gateway WSDL URL displayed in this region with the 'Web Service Status - Deployed' status.

<http://host.com:port/webservices/AppsWSProvider/oracle/apps/fnd/XMLGateway?wsdl>

- **SOAP (SOA Provider)**

This is the default profile value which displays the Web Service - SOA Provider region if Web services are available.

### Web Service - SOA Provider region

**Note:** The default profile value is set to 'SOAP'. However, if you do not start from this release and your system is upgrading from Release 12.0, you must change the profile value from the default 'SOAP' to 'Both' because Web Service Provider could have already been used in enabling services. To continue having service enabled using SOA Provider and for backward compatibility, both service providers should be enabled in transforming XML Gateway Map interface definitions into Web services. Otherwise, a fault message appears if it is still set to the default profile value 'SOAP' (SOA Provider).

If you start with Rapid Install of Oracle E-Business Suite for this

release, the default service provider is SOA Provider ('SOAP' profile value). In this situation, Web Service Provider will be disabled and any invocations of generic XML Gateway Web services will return a fault message.

### XML Gateway Map with Web Service - SOA Provider Region

**ORACLE** Integration Repository

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Integration Repository >

XML Gateway : Confirm BOD

Browse Search Printable Page

Internal Name: **XNB:CBODI**  
 Type: **XML Gateway Map**  
 Product: **Telecommunications Billing Integrator**  
 Status: **Active**  
 Business Entity: [XML Gateway Confirmation Message](#)  
 Standard: **OAG 7.2 Confirm\_BOD\_004**

Scope: **Public**  
 Interface Source: **Oracle**

**Full Description**

Confirmation BOD map annotation public description.

**Web Service - SOA Provider**

Web Service Status: **Generated**  
 WSDL: [View WSDL](#)

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

**Source Information**

Source File: **patch/115/xml/US/XNB\_CLI\_CBOD\_OAG72\_III.xgm**  
 Source Version: **120.1**  
 Source Product: **XNB**

**Methods**

Name	Internal Name	Status	Description
<a href="#">CBODI</a>	CBODI	Active	Process transaction.

Browse Search Printable Page

Integration Repository Home Logout Preferences Help Diagnostics

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The View WSDL link is available along with appropriate Web Service Status information in the Web Service - SOA Provider region indicating whether the service is generated or deployed. For information on viewing WSDL description, see Reviewing Web Service WSDL Source, page 4-9.

To secure Web service content and authenticate Web service operation, SOA Provider supports multiple authentication types for inbound service requests. In addition to the Web Service Status field and View WSDL link, you can find the Authentication Type field with the following read-only check boxes:

- **Username Token:** This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.
- **SAML Token (Sender Vouches):** This authentication type is used for Web services relying on sending a username only through SAML Assertion.

Before an integration repository administrator deploys a generated service, the

administrator must select at least one authentication type for the selected service.  
See: Deploying and Undeploying Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Both**

This displays both the Web Service - Web Service Provider region and Web Service - SOA Provider region in the interface details page if Web services are available.

For more profile option information used in Oracle E-Business Suite Integrated SOA Gateway, see *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Integration repository administrators (defined by the Integration Repository Administrator role) can also find the following buttons available if the Web service has been generated successfully:

- **Deploy:** Deploys the Web service.
- **Undeploy:** Undeploys a Web service if the service has been deployed.
- **Redeploy:** Redeploys the Web service if needed.

See: Performing Additional Web Service Activities, page 4-13.

## **XML Gateway Method Information**

The XML Gateway method information page appears when you click a method name on an XML Gateway Map information page.

## XML Gateway method information page

The screenshot shows the Oracle Integration Repository interface. The left sidebar contains a tree view of the repository structure, with 'XML Gateway Map' expanded to show 'Process Manufacturing', 'OPM Process Execution', and 'OPM Product Development'. The main content area displays the 'XML Gateway Method Details : GET\_PROD\_BATCH'. It includes a 'View By' dropdown set to 'Interface Type'. The details section shows the internal name 'GET\_PROD\_BATCH', interface type 'XML Gateway Map', direction 'Outbound', and business entity 'Process Mfg Batch'. The status is 'Active' and the scope is 'Public'. Below this, there is a 'Full Description' section with the text 'Process transaction.' and a 'Parameters' section with a table listing parameters.

Name	Type	Required	Description
ECX_DOCUMENT_ID	VARCHAR2	Yes	Batch ID to retrieve Process production batch

The general section of this page displays common information, page 4-1 for the XML Gateway method, plus the following additional field:

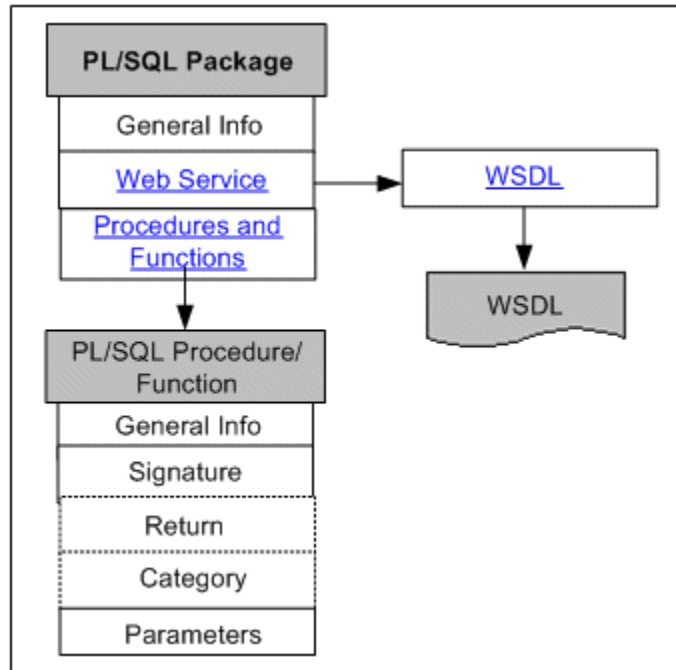
### Direction

- Inbound indicates that the interface receives incoming transactions or messages into the Oracle E-Business Suite.
- Outbound indicates that the interface sends outgoing transactions or messages to another system.

This page also contains a table listing the XML Gateway method parameters, including each parameter's data type and whether the parameter is required.

## 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/function information page:



The PL/SQL information details page contains the following information:

- **Web Service - SOA Provider Region**

If the PL/SQL is exposed as a Web service, the Web Service - SOA Provider region will be available. This region provides a link to a page containing the Web service WSDL source code.

The View WSDL link is available along with appropriate Web Service Status information in the Web Service - SOA Provider region indicating whether the service is generated or deployed.

Additionally, you can find the Authentication Type field with the following read-only check boxes:

- **Username Token:** This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.
- **SAML Token (Sender Vouches):** This authentication type is used for Web services relying on sending a username only through SAML Assertion.

These authentication types are used to secure Web service content and authenticate Web service operation. Before a service is deployed by an integration repository administrator, the administrator must select at least one authentication type for the service. For information on how to deploy a service, see: *Deploying and Undeploying Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

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

- Understanding Web Services, page 2-1
  - Common Information on Web Services, page 4-7
- 
- **Procedure and Function Region**  
The PL/SQL Procedures and Functions region links to one or more PL/SQL Procedures and Functions pages.

The general section of the PL/SQL information page displays common information, page 4-1 for the selected PL/SQL package.

#### PL/SQL information page

**ORACLE** Integration Repository Home Logout Preferences Help Diagnostics

Integration Repository >  
PL/SQL Interface : Message Dictionary Browse Search Printable Page

Internal Name **FIND\_MESSAGE** Scope **Public**  
Type **PL/SQL** Interface Source **Oracle**  
Product **Application Object Library**  
Status **Active**  
Business Entity [Applications Message Dictionary](#)  
Online Help [See the related online help](#)

**Full Description**  
APIs to Set, Retrieve, Clear the messages in Message Stack.

**Web Service - SOA Provider**  
Web Service Status **Deployed**  
WSDL [View WSDL](#)  
\* Authentication Type ☒ Username Token ☒ SAML Token (Sender Vouches)

**Source Information**  
Source File **patch/115/sql/AFILMSGS.pls**  
Source Version **120.2.12000000.1**  
Source Product **FIND**

**Procedures and Functions**

Name	Internal Name	Status	Description
<a href="#">Clear Message Buffer</a>	CLEAR	Active	Clears the message stack of all messages
<a href="#">Get Message Text</a>	GET	Active	Retrieves a translated and token-substituted message from the message stack and then clears that message from the message stack.
<a href="#">Get Message Text and Number</a>	GET_TEXT_NUMBER	Active	Retrieves the message text and message number from find_new_messages table for a given message name.
<a href="#">Set Message Name</a>	SET_NAME	Active	In Database Server, this Sets a message name in the global area without actually retrieving the message from Message Dictionary.
<a href="#">Set Token value</a>	SET_TOKEN	Active	In Database Server, SET_TOKEN adds a token/value pair to the global area without actually doing the substitution.

Browse Search Printable Page

This page also contains a table listing the package procedures and functions, including active status and internal name. Click a procedure or function name to access its information page.

## PL/SQL Procedure and Function Information

The PL/SQL procedure/function information page appears when you click a procedure



or function name on the PL/SQL information page.

### PL/SQL procedure/function information page

The screenshot shows the Oracle Integration Repository interface. On the left is a tree view of the 'Application Object Library' with categories like Business Event, Business Service Object, Composite - BPEL, Concurrent Program, EDI, Interface View, Java, Open Interface, and PL/SQL. The 'PL/SQL' folder is expanded, showing 'Applications Technology' and 'Application Object Library'. The main content area displays details for the 'Generate new session' method. It includes a 'Full Description' section stating 'Generates a new session number and performs auditing related operations.' and a 'Signature' section showing the procedure signature: `PROCEDURE NEW_ICX_SESSION(UID IN NUMBER, LOGIN_ID OUT NUMBER);`. Below the signature is a 'Parameters' table.

Name	Type	Direction	Precision/Size	Default Value	Description
UID	NUMBER	In			User Id
LOGIN_ID	NUMBER	Out			Login ID of audit record

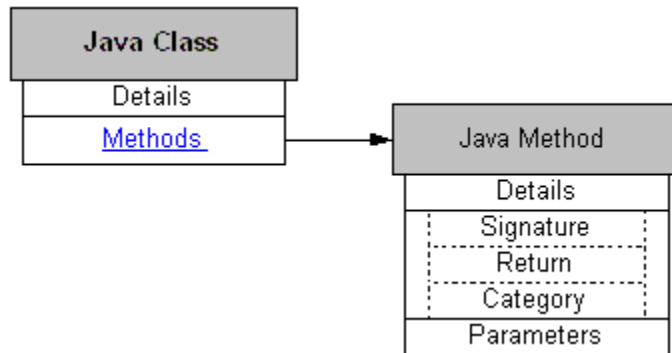
The general section of this page displays common information, page 4-1 for the selected PL/SQL procedure or function, plus the **Interface** field. Click the link to view the interface that uses this package.

This page also displays the signature of this procedure or function, and it contains a table listing the procedure or function parameters and their attributes, including parameter name, data type, message direction (inbound or outbound), precision size, default value, and description.

Integration repository administrators (or users with the integration repository administrator role) can find the **Create Grant** button available which allows the administrators to grant the access of selected PL/SQL procedure and functions to a specific user, user group, or all users. See: Managing Grants, page 4-15.

## 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.

### Java information page

**ORACLE® Integration Repository** Home Logout Preferences Help Diagnostics

Integration Repository

View By: **Interface Type**

- Business Event
- Business Service Object
- Composite - BPEL
- Concurrent Program
- EDI
- Interface View
- Java
  - Applications Technology
    - Application Object Library
      - User Management**
    - Financial Receivables Suite
    - Financials
    - Marketing Suite
    - Marketing and Sales Suite
    - Product Lifecycle Management
    - Public Sector
    - Sales Suite
    - Supply Chain Management
  - Open Interface
  - PL/SQL
  - Service Data Object
  - Web Service
  - XML Gateway Map

Integration Repository >

**Java Details : Registration Admin** Search Printable Page

Internal Name: **oracle.apps.fnd.umx.registration.RegistrationAdmin** Scope: **Public**  
 Type: **Java** Interface Source: **Oracle**  
 Product: **User Management**  
 Status: **Active**  
 Business Entities: [Security Role](#), [Security Role Request](#), [User](#), [User Account Request](#)  
 See Also: [oracle.apps.fnd.umx.registration.RegistrationBean](#)

**Full Description**

RegistrationAdmin includes methods to support registration with Oracle User Management. The methods of this class must be used to instantiate RegistrationBean. Once an instance of RegistrationBean is available, values captured in registration UIs can be stored in that bean. The Registration Bean is later converted to a workflow business event object, which acts as a temporary storage of registration data throughout the processing of the request.

**Source Information**

Source File: **java/umx/registration/RegistrationAdmin.java**  
 Source Version: **120.2**  
 Source Product: **FND**

**Methods**

Name	Internal Name	Status	Description
<a href="#">Assign Roles To Users</a>	assignRole	Active	Assigns a role to the user.
<a href="#">Assign Roles To Users</a>	assignRole	Active	Assigns a role to the user.
<a href="#">Instantiate Registration Bean</a>	instantiateRegBean	Active	Searches for an instance of RegistrationBean in the OADBTransaction.
<a href="#">Instantiate Registration Bean</a>	createRegistrationBean	Active	Creates a new instance of RegistrationBean and populates the meta-data based on the registration process.
<a href="#">Retrieve Registration Bean</a>	getRegistrationBean	Active	Looks for an instance of RegistrationBean in the supplied transaction cache and returns it. If an instance does not exist, it will return null.

Search Printable Page

This page also contains a table listing the class methods, including active status and internal name. Click a method name to access its information page.

## Java Method Information

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



## Java method information page

The screenshot shows the Oracle Integration Repository interface. On the left is a tree view of the repository structure, with 'User Management' selected under the 'Java' category. The main content area displays details for the 'assignRole' method. It includes a breadcrumb trail, a search bar, and a 'Printable Page' button. The 'Internal Name' is 'assignRole' and the 'Interface' is 'oracle.apps.fnd.umx.registration.RegistrationAdmin'. The 'Type' is 'Java'. The 'Status' is 'Active' and the 'Scope' is 'Public'. The 'See Also' field lists related methods: 'Security Role', 'Security Role Request', 'User', and 'User Account Request'. The 'Full Description' section explains that the method assigns a role to a user based on metadata and role type. The 'Signature' section shows the method signature: 'public void assignRole(OADBTransaction db, RegistrationBean rbean);'. The 'Parameters' section contains a table with two columns: 'Name Type' and 'Description'.

Name Type	Description
db	oracle.apps.fnd.framework.server.OADBTransaction: The OADBTransaction object
rbean	oracle.apps.fnd.umx.registration.RegistrationBean Instance of RegistrationBean

The general section of the Java method information page displays common information, page 4-1 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.

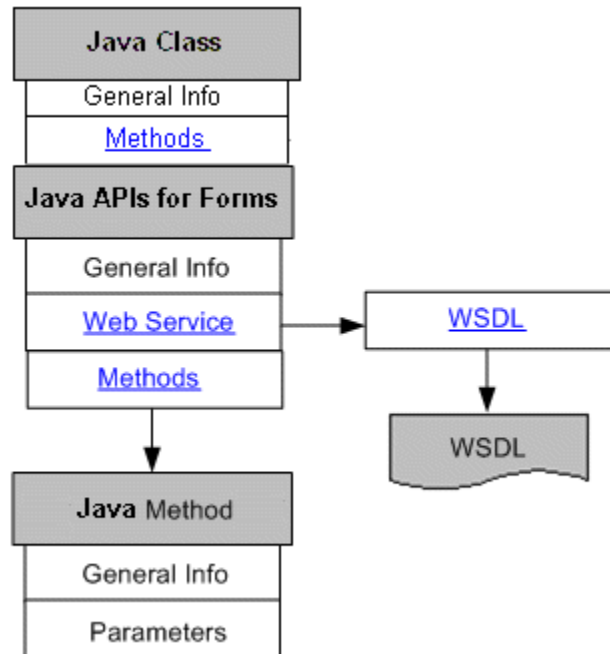
This page also displays the signature of this method, and information about the return type, and it contains a table listing the method parameters.

Integration repository administrators (or users with the integration repository administrator role) can find the **Create Grant** button available which allows the administrators to grant the access of selected methods to a specific user, user group, or all users. See: Managing Grants, page 4-15.

## 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. Similar to other service enabled integration interface types, Java APIs for Forms interfaces can be service enabled through SOA Provider.

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



### Searching and Viewing Java APIs for Forms

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

Click **Search** to access the main Search page, and then click **Show More Search Options** to display more search fields. Enter the following key search values along with any product family or scope if needed 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 3-9.

The general section of this page displays common information for the selected Java APIs for Forms. Additionally, the Interface Subtype field is displayed with 'Java APIs for Forms' value.

## Java APIs for Forms Interface Details

**ORACLE** Integration Repository

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Integration Repository >

Java Details : Item Service

Browse Search Printable Page

Internal Name: **oracle.apps.inv.services.inviditm.INVIDITMServices\_DocStyle**  
Type: **Java**  
Product: **Inventory Management**  
Status: **Active**  
Business Entity: [INV\\_ITEM](#)  
Derived Interface: [Generated SOA Provider Document Interface](#)

Scope: **Public**  
Interface Source: **Oracle**  
Interface Subtype: **Java APIs for Forms**

**Full Description**

The service end-point provides capabilities to Create, Update, Query Item Entity. Item Entity contains all the Item related attributes information like Bill of Material, Costing, Purchasing, Receiving, Inventory, Physical attributes, General Planning, MPS/MRP Planning, Lead times, Work in Process, Order Management, and Invoicing. This service is used for all types items.

**Web Service - SOA Provider**

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

Authentication Type: ☒ Username Token  
☒ SAML Token (Sender Vouches)

**Source Information**

Source File: **java/services/inviditm/INVIDITMServices\_DocStyle.java**  
Source Version: **120.0.12010000.5**  
Source Product: **INV**

**Methods**

Name	Internal Name	Status	Description
<a href="#">CreateItem</a>	createItem	Active	The CreateItem operation enables the item creation .
<a href="#">Query Item Details</a>	queryItemDetails	Active	The QueryItemDetails operation enables querying all the details of an existing item.
<a href="#">Update Item Details</a>	updateItemDetails	Active	The UpdateItemDetails operation enables updating the details of an existing item.

Browse Search Printable Page

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The interface details page contains the following information:

- **Web Service - SOA Provider Region**

If the Java APIs for Forms interface is exposed as a Web service, the Web Service - SOA Provider region will be available. You can find Web Service Status information for the selected Web service. Clicking the View WSDL link allows you to view the Web service WSDL source code.

Additionally, you can find the Authentication Type field with the following read-only check boxes:

- **Username Token:** This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.
- **SAML Token (Sender Vouches):** This authentication type is used for Web services relying on sending a username only through SAML Assertion.

These authentication types are used to secure Web service content and authenticate Web service operation. Before a service is deployed by an integration repository

administrator, the administrator must select at least one appropriate authentication type for the service. For information on how to deploy a service, see: *Deploying and Undeploying Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

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

- Understanding Web Services, page 2-1
  - Common Information on Web Services, page 4-7
- 
- **Methods Region**

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

Integration repository administrators can create security grants by authorizing the access permission for a selected method name to an appropriate user, a user group, or all users.

For more information, see *Managing Grants*, page 4-15.

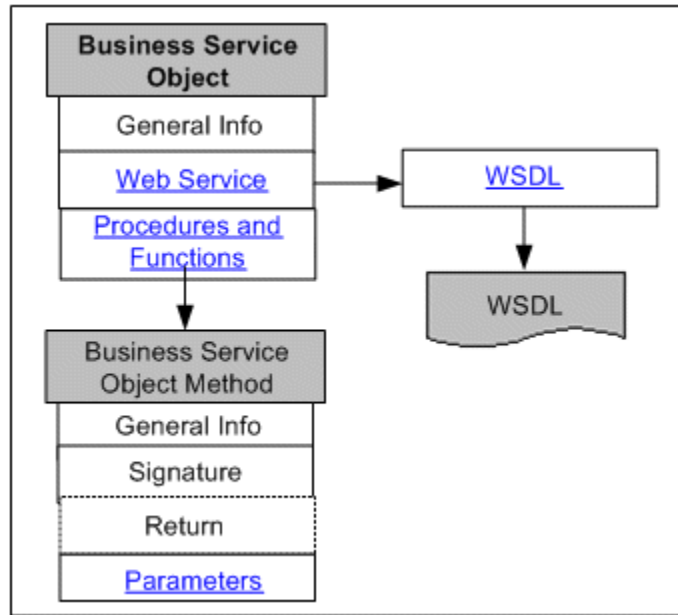
## Business Service Object

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

A service data objects (SDO) defines a generic API for accessing and manipulating structured data as part of a Service Oriented Architecture (SOA). 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 4-38.

**Note:** A business service object is not actually an interface type; rather, it is an object used by one or more Java service interfaces or other service data objects to pass data. Oracle Integration Repository includes it on lists of interface types, so 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 Information

The general section displays common information, page 4-1 for the selected business service object interface, plus interface name, the interface that extends, and XML schema information:

An XML schema is a description of a type of XML document, typically expressed in terms of constraints on the structure and content of documents of that type. It describes all input and output message definition and data type.

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.

The business service object interface information page contains the following information:

- **Web Service - Web Service Region**

If the Business Service Object interface is exposed as a Web service, the Web Service - Web Service Provider region will be available.

The View WSDL link is provided with appropriate Web Service Status information in the Web Service - Web Service Provider region. The Authentication Type field along with two authentication type check boxes displayed in read-only mode.

For more information about Web service region for business service object, see Business Service Object Web Service Region, page 4-32.

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

topics:

- Understanding Web Services, page 2-1
- Common Information on Web Services, page 4-7

- **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.

**Note:** In the list of methods, you can select one or more methods and specify which users can execute them.

For more information about the Method region for business service object, see Business Service Object Interface Method Information, page 4-36.

## **Business Service Object Web Service Region**

Unlike XML Gateway Map interface type that can be service enabled by both Web Service Provider (in Release 12.0) and SOA Provider (after Release 12.0), business service object interface type is service enabled only through Web Service Provider, not by SOA Provider.

When a service is generated successfully for a given business service object, the Web Service - Web Service Provider region appears with Web Service Status information.

## Business Service Object Interface Information Page

**ORACLE** Administration
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Integration Repository
 Integration Repository >
 Business Service Object : Integration Repository Service

Browse Search Printable Page

Qualified Name	/oracle/apps/fnd/rep/ws/IntegrationRepositoryService	Status	Active
Interface	oracle.apps.fnd.rep.ws.IntegrationRepositoryService	Scope	Public
Extends	oracle.svc.DataSourceService	Interface Source	Oracle
Product	Application Object Library		
XML Schema	IntegrationRepositoryService		

This service is used to query the IntegrationRepository.

**Full Description**

This service is used to query the IntegrationRepository.

**Web Service - Web Service Provider**

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

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

**Source Information**

Source File	java/rep/ws/server/IntegrationRepositoryServiceSAM.xml
Source Version	120.9
Source Product	FND
Implementation	oracle.apps.fnd.rep.ws.server.IntegrationRepositoryServiceSAM

**Methods**

Internal Name	Status	Description
<a href="#">getInterfaceByLifeCycleMode</a>	Active	This function returns the list of interfaces based on the life cycle mode.
<a href="#">getInterfaceByProductCode</a>	Active	This function returns the list of interfaces that belong to the given product based on the product code.
<a href="#">getInterfaceByProductFamily</a>	Active	This function returns the list of interfaces that belong to the given product family.
<a href="#">getInterfaceByScope</a>	Active	This method returns the interface classes based on the scope.
<a href="#">getDataObjectDescription</a>	Active	This function takes the fully qualified name of a datasource and returns the DataObjectDescription for it.
<a href="#">getInterface</a>	Active	This function returns the list of interfaces based on interfacetype, scope, productcode and lifecyclemode.
<a href="#">getInterfaceByType</a>	Active	This function returns the interfaces of the given input interface type.
<a href="#">getInterfaceFunction</a>	Active	Gets a InterfaceFunction based on its primary key attributes.
<a href="#">getInterfaceFunctionByName</a>	Active	This function takes the fully qualified name of a function exposed in the Irep, and returns a SDO for it.
<a href="#">getInterfaceClass</a>	Active	Gets a InterfaceClass based on its primary key attributes.
<a href="#">getInterfaceClassByName</a>	Active	This method returns the list of interfaces based on the name.
<a href="#">getInterfaceFunctions</a>	Active	This function returns a list of SDOs of type InterfaceFunction, taking the InterfaceId and InterfaceName as parameters to query for the servicebean in the Irep.
<a href="#">getServiceDescription</a>	Active	This function takes the fully qualified name for a service and returns the ServiceDescription object for it.
<a href="#">queryDataSource</a>	Active	Gets a list of data objects from the data source based on criteria.

The View WSDL link is provided with appropriate Web Service Status information in the Web Service - Web Service Provider region. Click the **View WSDL** link allowing you 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/Integrat
ionRepositoryService"
  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/IntegrationRep
ositoryService">
<types>
<xsd:schema>
  <xsd:import namespace="http://xmlns.oracle.com/apps/fnd/rep/ws"
schemaLocation="http://myurl.us.oracle.com:1234/webservices/AppsWSProvid
er/oracle/apps/fnd/rep/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 any 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*.

Please note that the user information is defined by the `wsseUsername` property passed within the security headers. Detailed instructions on how to pass the security headers along with the SOAP request, see *Passing Values to Security Headers, Oracle E-Business Suite Integrated*



You might find the following information under <Method>\_Response about error messages if occur:

```
...
<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 if occur. The Message element will appear as warning messages in the SOAP response. It is used to display any warning messages 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*, available from My Oracle Support Knowledge Document 1087332.1, Oracle Application Framework Release Notes for Release 12.1.3.

## Authentication Type

Additionally, you can find the Authentication Type field with the following read-only check boxes:

- Username Token: This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.
- SAML Token (Sender Vouches): This authentication type is used for Web services

relying on sending a username only through SAML Assertion.

These authentication types are used to secure Web service content and authenticate Web service operation. Before a service is deployed by an integration repository administrator, the administrator must select at least one authentication type for the service. For information on how to deploy a service, see: Deploying and Undeploying Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

## Business Service Object Interface Method Information

The business service object interface method information page appears when you click a method name on the business service object interface information page.

For more information about the Method region for business service object, see Business Service Object Web Service Region, page 4-32.

### Business Service Object Method Information Page

The screenshot shows the Oracle Integration Repository interface. On the left is a tree view of the repository structure, including categories like Business Event, Business Service Object, and various application suites. The main content area displays details for the 'getRepairOrder' method. It includes fields for Internal Name, Interface, Type, and Status. Below this are expandable sections for Full Description, Signature, Return, and Parameters. The Signature section shows a public method signature. The Return section shows the return type and description. The Parameters section contains a table with sequence, name, type, and description for the 'repairLineId' parameter.

Sequence Name	Type	Description
1	repairLineId oracle.jbo.domain.Number	Repair line id is a generated key for the repair order object.

In addition to common information, page 4-1, the general section of the method information page contains a link to the interface that uses this method.

The following regions also appear on the method information page:

- **Signature**

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

- **Return**

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

- **Parameters**

If a parameter is a service data object, you can click the link in the **Type** column to access the service data object information page.

Integration repository administrators (or users with the integration repository administrator role) can find the **Create Grant** button available which allows the administrators to grant the access of selected methods to a specific user, user group, or all users. See: Managing Grants, page 4-15.

## Integration Repository Service

Based on business service object interface, Integration Repository Service is a service component residing in Oracle 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. You can grant the control access of each business service object method to appropriate users.

To access the Integration Repository Service interface, log on to Oracle Integration Repository and use the following steps to navigate to Integration Repository Service:

1. Select Integration Repository responsibility from the Navigator menu, and click the Integration Repository link that appears.
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 **Integration Repository Service** link from the search result table.

This opens the Business Service Object Interface information page. If the service is exposed as Web service for Integration Repository Service, the Web Service region also appears.

See: Business Service Object Interface information page, page 4-31.

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 4-36.

7. Integration repository administrators can find **Create Grant** displayed in the Methods region.

Select a method name and click **Create Grant**, you can grant the control access of a selected business service object interface method to appropriate users.

See: Managing Grants, page 4-15.

## Reviewing Service Data Object

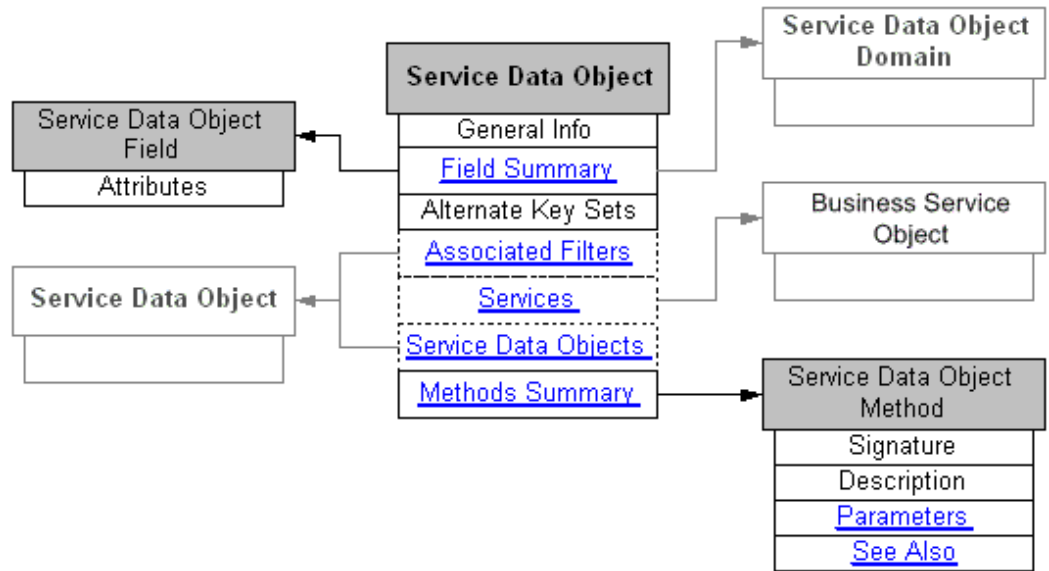
A service data objects (SDO) defines a generic API for accessing and manipulating structured data as part of a Service Oriented Architecture (SOA). It is designed to simplify and unify the way in which applications handle data. The SDO API is independent of the actual data source. For example, SDO can 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

This page is accessible from the `getDataList` and `processDataList` method information pages. You can also access it directly from the Oracle Integration Repository browse interface, through the list of interface types.

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, page 4-1, 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.

## Service Data Object Information Page

**ORACLE** Integration Repository

Home Logout Preferences Help Diagnostics

Integration Repository

View: Interface Type

**Repair Order**

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

**Service Data Object**

Internal Name	/oracle/apps/csd/svcb/RepairOrder	Status	Active
Class	oracle.apps.csd.svcb.RepairOrder	Scope	Public
Type	Service Data Object	Interface Source	Seeded
Product	Depot Repair		
Implementation	oracle.apps.csd.svcb.server.RepairOrdersSVO		
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	java/svcb/server/RepairOrdersSVO.xml
Source Version	120.1
Source Product	CSD

**Fields**

Name	Type	Scale	Precision	Description	Primary Key	Sortable
<a href="#">RepairLineId</a>	oracle.jbo.domain.Number	15		Repair line id is a generated key for the repair	Y	Y
<a href="#">FlowStatusId</a>	oracle.jbo.domain.Number	0		Flow status id.	N	N

**Alternate Key Sets**

**TIP** 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:

Sequence	Key Set Name	Attributes
1	ByNumber	RepairNumber

**Filters**

These are the filters that can be used to filter data sources based on this service data object:

[Repair Order Filter](#)

**Services**

These are the Services that directly use this DataObject:

[Repair Order Service](#)

**Service Data Objects**

These are the DataObjects that directly reference this DataObject:

[Repair Order Service](#)

**Methods**

Name	Status	Description
<a href="#">setRepairLineId</a>	Active	Sets RepairLineId.
<a href="#">getRepairLineId</a>	Active	Gets RepairLineId.
<a href="#">setRepairNumber</a>	Active	Sets RepairNumber.

The following regions also appear on the service object information 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 access 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 access the selected filter data object information page.

- **Services**

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

Click the name of a service to access 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 access its information page.

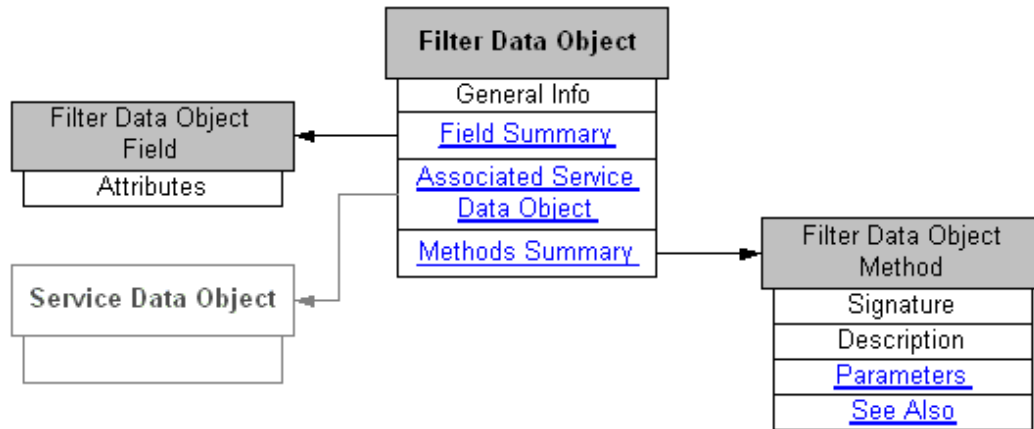
- **Methods**

Click a link in the **Name** column to access the service object method information page.

## Filter Data Object Information

This page is accessible only from the `getDataList` method information page.

The following diagram illustrates the basic structure of the filter data object information 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, page 4-1, 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*, available from My Oracle Support Knowledge Document 1087332.1, Oracle Application Framework Release Notes for Release 12.1.3.

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



## Filter data object information page

**ORACLE** Integration Repository

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Integration Repository

View By: **Interface Type**

- Business Event
- Business Service Object
  - Applications Technology
    - Application Object Library
  - Financial Receivables Suite
  - Financials
  - Public Sector
  - Service Suite
  - Supply Chain Management
- Composite - BPEL (1)
- Concurrent Program
- EDI
- Interface View
- Java
- Open Interface
- PL/SQL
- Service Data Object
  - Applications Technology
    - Application Object Library
  - Financial Receivables Suite
    - Receivables
  - Financials
  - Public Sector
  - Service Suite
  - Supply Chain Management
- Web Service
- XML Gateway Map

Integration Repository >

**Wf Agent Filter** [Search](#) [Printable Page](#)

Personalize Stack Layout: (PageHeader)

Internal Name	/oracle/apps/fnd/wf/bes/sample/WfAgentFilter	Status	Active
Class	oracle.svc.expression.ExpressionFilter	Scope	Public
Type	Service Data Object		
Product	Application Object Library		
Implementation	oracle.apps.fnd.wf.bes.sample.server.WfAgentsSVO		
XML Schema	WfAgentFilter		
Filter Type	Expression Filter		

Personalize Stack Layout: (DescriptionStack)

internal use only

**Full Description**

internal use only

**Source Information**

Source File	java/wf/bes/sample/server/WfAgentsSVO.xml
Source Version	120.2
Source Product	FND

Personalize Stack Layout

**Fields**

Personalize Advanced Table: (MembersTable)

Name	Type	Scale	Precision	Description	Search Criteria	Type
<a href="#">Name</a>	java.lang.String	30				

Personalize Stack Layout: (AssoSDORN)

**Associated Service Data Object**

Personalize Flow Layout: (AssoSDFlow)

Data Sources based on the [Wf Agent SDO](#) Service Data Object can be filtered by this Filter Data Object.

Personalize Stack Layout

**Methods**

Personalize Advanced Table: (MethodsSummaryTable)

Name	Status	Description
<a href="#">addName</a>	Active	Adds a ValueExpression for Name attribute.
<a href="#">addName</a>	Active	Adds a ValueExpression for Name attribute.

The following regions also appear on the service object information 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 access the service data object information page.

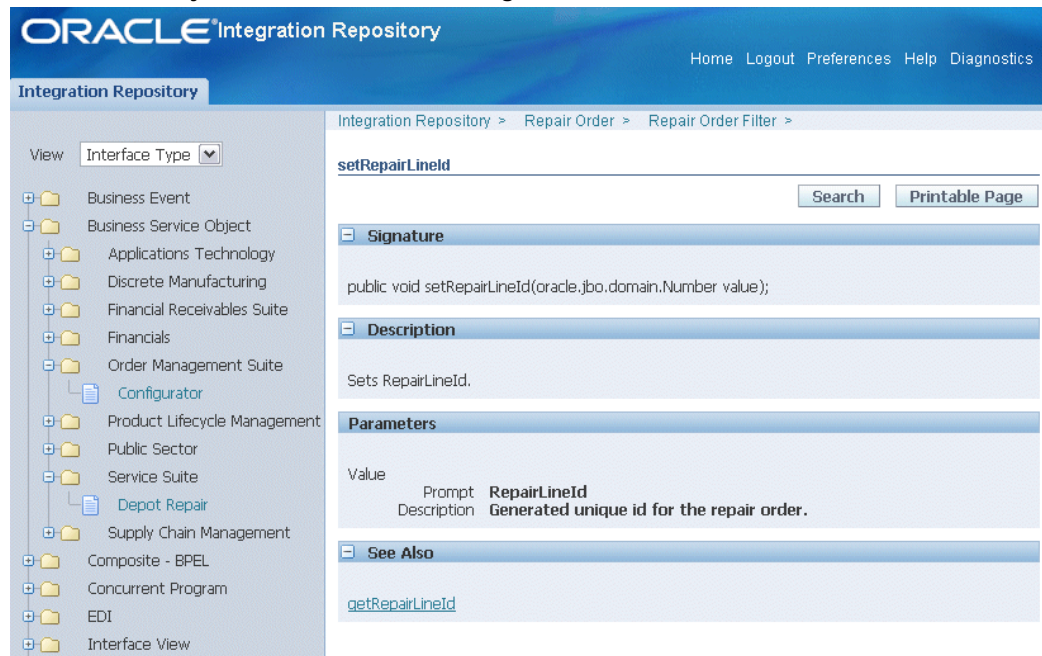
- Methods**

Click a link in the **Name** column to access the object method information 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 information page appears when you click a method name on the service data object information page or the filter data object information page.

### Service Data Object Method Information Page



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

- **Signature**

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

- **Parameters**

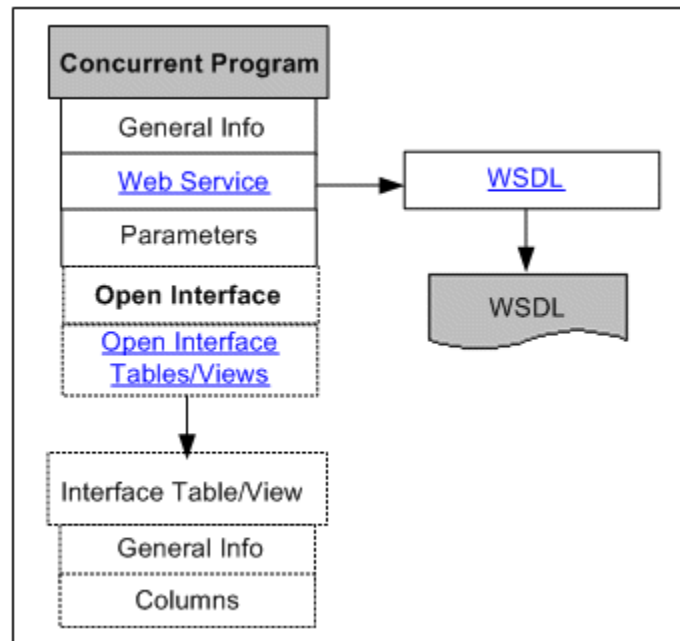
This region contains descriptions of the parameters that are listed in the Signature region.

- **See Also**

This region displays related service object methods. Click a related object method link to access 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 details page contains the following information:

- **Web Service - SOA Provider Region**

If the concurrent program is exposed as a Web service, the Web Service - SOA Provider region will be available.

The View WSDL link is available along with appropriate Web Service Status information in this region indicating whether the service is generated or deployed.

Additionally, you can find the Authentication Type field with the following read-only check boxes:

- Username Token: This authentication type provides username and password information in the security header for a Web service provider to use in authenticating the SOAP request.
- SAML Token (Sender Vouches): This authentication type is used for Web services relying on sending a username only through SAML Assertion.

These authentication types are used to secure Web service content and authenticate Web service operation. Before a service is deployed by an integration repository administrator, the administrator must select at least one authentication type. For information on how to deploy a service, see: Deploying and Undeploying Web

Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For more information about Web Services, see

- Understanding Web Services, page 2-1
  - Common Information on Web Services, page 4-7
  - Reviewing Web Service WSDL Source, page 4-9
- **Methods Region**

The Methods region displays its associated method information.

Integration repository administrators can create security grants by authorizing the access permission for a selected method name to an appropriate user, a user group, or all users. See *Managing Grants*, page 4-15.

**Note:** Since Oracle Integration Repository does not support Open Interface Tables and Views for service enablement, 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 4-47.

## Concurrent program information page

ORACLE<sup>®</sup>

Integration Repository

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Integration Repository >

Concurrent Program : Move Messages from Exception to Normal Queue of Workflow Agent

Browse Search Printable Page

Internal NameFNDWF\_MOVE\_MSGS\_EXCEP2NORMAL

TypeConcurrent Program

ProductWorkflow

StatusActive

Business EntityBusiness Event

Online HelpSee the related online help

ScopePublic

Interface SourceOracle

Full Description

Moves messages from the exception queue associated with the specified agent back to the agent's normal queue. This program helps enable mass reprocessing in case of a large number of errors. The program handles both queues whose payload type is WF\_EVENT\_T and queues whose payload type is SYS.AQ\$\_JMS\_TEXT\_MESSAGE.

Web Service - SOA Provider

Web Service StatusDeployed

WSDLView WSDL

\* Authentication Type

☐ Username Token

☒ SAML Token (Sender Vouches)

Source Information

Source Filepatch/115/import/US/wfcpprog.kdt

Source Version120.11.12010000.6

Source ProductFND

Parameters

Name	Type	Required	Displayed	Description
Agent Name FND_WF_AGENTS	Yes	Yes		Workflow Agent Name

Methods

Name	Internal Name	Status	Description
Process	Process	Active	Move messages from Exception to Normal Queue of Workflow Agent

Browse Search Printable Page

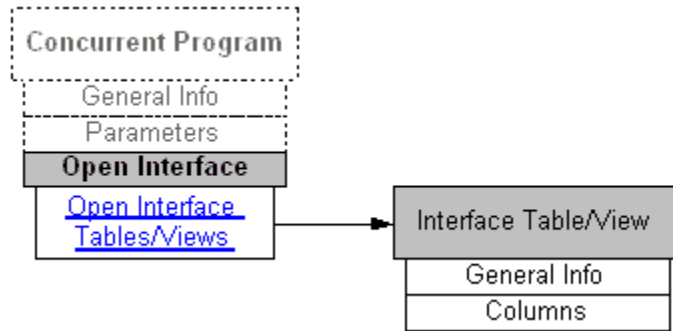
The general section of the concurrent program information page displays common information, page 4-1.

In the Parameters region, the parameters used in the selected interface are listed in a table. It includes parameter name, parameter type, required or not, displayed or not, and description information.

**Note:** The Type and Displayed columns are parameters used by Standard Report Submission (SRS).

## Open Interface Information

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



### Open Interface table list

**ORACLE®** Integration Repository Home Logout Preferences Help Diagnostics

Integration Repository

View By: Interface Type

- Business Event
- Business Service Object
- Composite - BP&L
- Concurrent Program
- EDI
- Interface View
- Java
- Open Interface
  - Applications Technology
  - e-Commerce Gateway
  - Contracts Suite
  - Contracts Core**
  - Discrete Manufacturing
  - Financial Globalizations Suite
  - Financial Payables Suite
  - Financial Receivables Suite
  - Financial Services
  - Applications

Integration Repository >

**Interface List : Contracts Core** Search

Interface Source: All Scope: All Go

Export

Name	Internal Name	Product	Type	Source	Status	Description
<a href="#">Clause Import Open Interface</a>	OKCARTICLEIMPORT	Contracts Core	Open Interface	Oracle	Active	Executes the Open Interface for Creating and Updating Clauses in Clause Library.
<a href="#">Clause Import Open Interface</a>	OKCCLAUSETMPORXML	Contracts Core	Open Interface	Oracle	Active	Executes the Open Interface for Creating and Updating Clauses in Clause Library. It also creates and updates User Defined Variables, Relationships, Flex ValueSets and flex Values. It uses the tables OKC_ART_INTERFACE_ALL, OKC_VARIABLES_INTERFACE, OKC_ART_RELS_INTERFACE, OKC_VALUESETS_INTERFACE and OKC_VS_VALUES_INTERFACE.
<a href="#">Import Repository Contracts</a>	OKC_REP_IMPORT	Contracts Core	Open Interface	Oracle	Active	Executes the Import Repository Contracts concurrent program.

The Open Interface information table lists the open interface tables and views that store the interface data, including active status, and whether it stores data inbound to Oracle E-Business Suite or outbound to another system. Click an interface table name to access the information page for that table.

## Interface Table Information

The interface table information page appears when you click an Open Interface table name on a concurrent program information page.



## Open Interface table information page

The screenshot shows the Oracle Integration Repository interface. On the left is a navigation tree with categories like Business Event, Business Service Object, Composite - BPOL, Concurrent Program, EDI, Interface View, Java, Open Interface, Applications Technology, e-Commerce Gateway, Contracts Suite, Discrete Manufacturing, Financial Globalizations Suite, Financial Payables Suite, Financial Receivables Suite, Financial Services, Applications, Financials, Marketing Suite, Marketing and Sales Suite, Order Management Suite, Procurement, Projects Suite, Public Sector, Sales Suite, and Service Suite. The 'Contracts Core' item is selected.

The main content area is titled 'Open Interface : Import Clauses'. It includes a search bar and a 'Printable Page' button. Below this, there is a table with the following data:

Internal Name	OKCARTICLEIMPORT	Status	Active
Type	Concurrent Program	Scope	Public
Product	Contracts Core		
Business Entity	<a href="#">Contract Library Clause</a>		

Below the table is the 'Full Description' section, which states: 'Executes the Open Interface for Creating and Updating Clauses in Clause Library. It uses the following tables: OKC\_ART\_INTERFACE\_ALL, OKC\_ART\_INT\_ERRORS.'

The 'Source Information' section shows:

Source File	patch/115/import/US/okcprg1.jdt
Source Version	120.20
Source Product	OKC

The 'Parameters' section contains a table with columns: Name, Type, Required, Displayed, and Description.

Name	Type	Required	Displayed	Description
P_BATCH_NUMBER	OKC_ART_IMP_BATCHNUM_IMPORT	Yes	Yes	Batch Number to indicate the batch to be processed in this run.
P_VALIDATE_ONLY	OKC_SRS_YN	Yes	Yes	Process mode indicator. For 'Y', import process will validate the records. 'N' will validate and import the records. Default value is 'Y'.
P_FETCHSIZE	OKC_ART_IMP_FETCHSIZE	Yes	Yes	A limit of number of rows to be fetched in each cycle in the run. Default value is 100.

The 'Open Interface Tables/Views' section contains a table with columns: Name, Direction, Status, and Description.

Name	Direction	Status	Description
<a href="#">OKC_ART_INTERFACE_ALL</a>	Inbound	Active	This is the interface table for import of standard clauses from external systems.
<a href="#">OKC_ART_INT_ERRORS</a>	Outbound	Active	This table stores all the errors encountered during the clause import process.

The general section of this page displays common information, page 4-1 for the selected interface table.

By clicking a name link in the Open Interface Tables/Views region, you will find the selected table details displayed in a separate page. This open interface details page contains a table listing the interface table columns and their attributes, including a table column data type, data length, data precision, and data scale for each column, and whether the column is required or not.

## Open Interface Table Details

ORACLE<sup>®</sup> Integration Repository

Home Logout Preferences Help Personalize Page Diagnostics

Integration Repository

View By Interface Type

Business Event

Business Service Object

Composite - BPEL(1)

Concurrent Program

EDI

Interface View

Java

Open Interface

Applications Technology

e-Commerce Gateway

Contracts Suite

Contracts Core

Discrete Manufacturing

Financial Globalizations Suite

Financial Payables Suite

Financial Receivables Suite

Financial Services Applications

Financials

Marketing Suite

Marketing and Sales Suite

Order Management Suite

Procurement

Projects Suite

Public Sector

Sales Suite

Service Suite

Supply Chain Management

University

PL/SQL

Service Data Object

Web Service

XML Gateway Map

Integration Repository > Open Interface : Import Clauses >

Open Interface Table Details : OKC Clause Import Interface

Search Printable Page

Personalize Stack Layout: (PageHeader)

Internal NameOKC\_ART\_INTERFACE\_ALL

TypeInterface Table

ProductContracts Core

Business EntityContract Library Clause

StatusActive

ScopePublic

Source Information

Source Filepatch/115/odf/OKCAINT.odf

Source Version120.6

Source ProductOKC

Personalize Stack Layout

Full Description

This is the interface table for import of standard clauses from external systems. All valid data in this table will be imported to OKC\_ARTICLES\_ALL, OKC\_ARTICLE\_VERSIONS and OKC\_ARTICLE\_ADOPTIONS by the Clause Import Concurrent program. The users are expected to upload data into this table using SQL\*Loader, Pro\*C or other tools.

This is the open interface table for OKC Clause Library.

Columns

Personalize "Columns"

Personalize Advanced Table: (ColumnsTable)

Name	Type	Data Length	Data Precision	Data Scale	Required	Description
ACTION	VARCHAR2	1			Yes	This column represents different options that can be performed while importing this Clause row. i.e. 'N' - New Clause will be created. 'U' - Update an existing Draft or Rejected clause in the library. 'V' - Create a new version for the clause .
ADDITIONAL_INSTRUCTIONS	VARCHAR2	2000			No	This column stores any additional instructions that are needed for using the Clause Version.
ARTICLE_DESCRIPTION	VARCHAR2	2000			No	This is a short description of the Clause Version.
ARTICLE_INTENT	VARCHAR2	1			Yes	Intent for the Clause. Valid Values are B - Buy and S - Sell. (Only applicable when Action='N')
ARTICLE_LANGUAGE	VARCHAR2	4			Yes	Language of the clause text (referred as article_text in this table). If it is not provided, the client language for the user submitting the import request will be used.(Only applicable when Action='N')
ARTICLE_NUMBER	VARCHAR2	240			No	Clause Number - will be used for new clauses (Only applicable when Action = 'N'). Is required, if organization does not use autonumbering based on document sequence setup for clause number.

## Interface View Information

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

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## Open Interface View List

**Interface List : Property Manager**

Interface Source:  Scope:

Name	Internal Name	Product	Type	Source	Status	Description
<a href="#">Employee Space Assignment View</a>	PN_SPACE_ASSIGN_EMP_PUB_V	Property Manager	Interface View	Oracle	Active	Identifies an employee space assignment and its attributes
<a href="#">Locations View</a>	PN_LOCATIONS_PUB_V	Property Manager	Interface View	Oracle	Active	Identifies a location and its attributes

## Interface View Information Page

**View Details : Locations View**

Internal Name: **PN\_LOCATIONS\_PUB\_V** Status: **Active**  
 Type: **Interface View** Scope: **Public**  
 Product: **Property Manager**  
 Business Entity: [Space](#)

**Full Description**  
 Identifies a location and its attributes

**Source Information**  
 Source File: **patch/115/odf/pnvw.odf**  
 Source Version: **120.21**  
 Source Product: **PN**

Name	Type	Data Length	Data Precision	Data Scale	Description
ACC_TREATMENT	VARCHAR2	60			This captures the meaning of the accounting treatment code from frnd_lookups where the lookup type is PN_ACC_TREATMENT_CODE
ACC_TREATMENT_CODE	VARCHAR2	30			Indicates the accounting treatment of a location
ACTIVE_END_DATE	DATE	7			Date to which this location is defined. Column is used for tracking location dates and forms part of the primary key for this table along with LOCATION_ID and ACTIVE_START_DATE.
ACTIVE_START_DATE	DATE	7			Date from which the location is defined. Column is used for tracking location dates and forms part of the primary key for this table along with LOCATION_ID and ACTIVE_END_DATE.
ADDRESS_LINE1	VARCHAR2	240			Address of the land or building
ADDRESS_LINE2	VARCHAR2	240			Address of the land or building
ADDRESS_LINE3	VARCHAR2	240			Address of the land or building
ADDRESS_LINE4	VARCHAR2	240			Address of the land or building
ADDR_ATTRIBUTE1	VARCHAR2	150			Descriptive flexfield segment
ADDR_ATTRIBUTE10	VARCHAR2	150			Descriptive flexfield segment
ADDR_ATTRIBUTE11	VARCHAR2	150			Descriptive flexfield segment

This page also 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.

## EDI Message Information

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

## EDI message information page

The screenshot shows the Oracle Integration Repository interface. On the left is a tree view of the repository structure, including categories like Business Event, Financials, Business Service Object, Applications Technology, Application Object Library, Service Suite, Depot Repair, Supply Chain Management, Composite - BPOL, Concurrent Program, EDI, Financial Receivables Suite, Financials, Public Sector, Receivables, Interface View, Java, Open Interface, PL/SQL, Service Data Object, Web Service, and XML Gateway Map. The 'Receivables' folder is selected. The main content area displays details for the message 'OUT: Credit Memo/Debit Memo @12/CREADV/DEBADV'. It includes a search bar and a 'Printable Page' button. The message details are as follows:

Internal Name	AR:CDMD	Status	Active
Type	EDI	Scope	Public
Product	Receivables		
Direction	Outbound		
Business Entities	Credit Memo , Debit Memo		

**Full Description**  
This is the source file to support the outbound Credit Memo/Debit Memo transaction. The ASC X12 name is 812. The EDIFACT name is CREADV/DEBADV

**Source Information**

Source File	patch/115/sql/ECEPV02.sql
Source Version	120.5
Source Product	EC

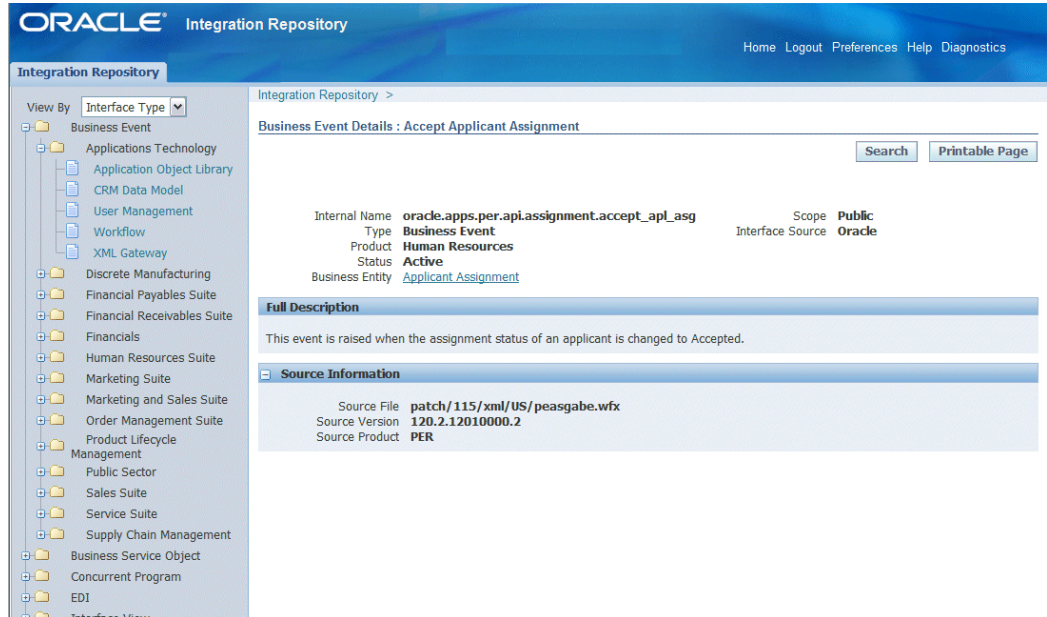
At the bottom of the page, there are links for 'About this Page' and 'Privacy Statement', and a copyright notice: 'Copyright (c) 2006, Oracle. All rights reserved.'

The EDI Message information page also 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.

## 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

An administrator can find the **Subscribe** button available in the event details page if the selected event is not subscribed. 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 `WF_BPEL_Q`, 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 *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

This chapter covers the following topics:

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

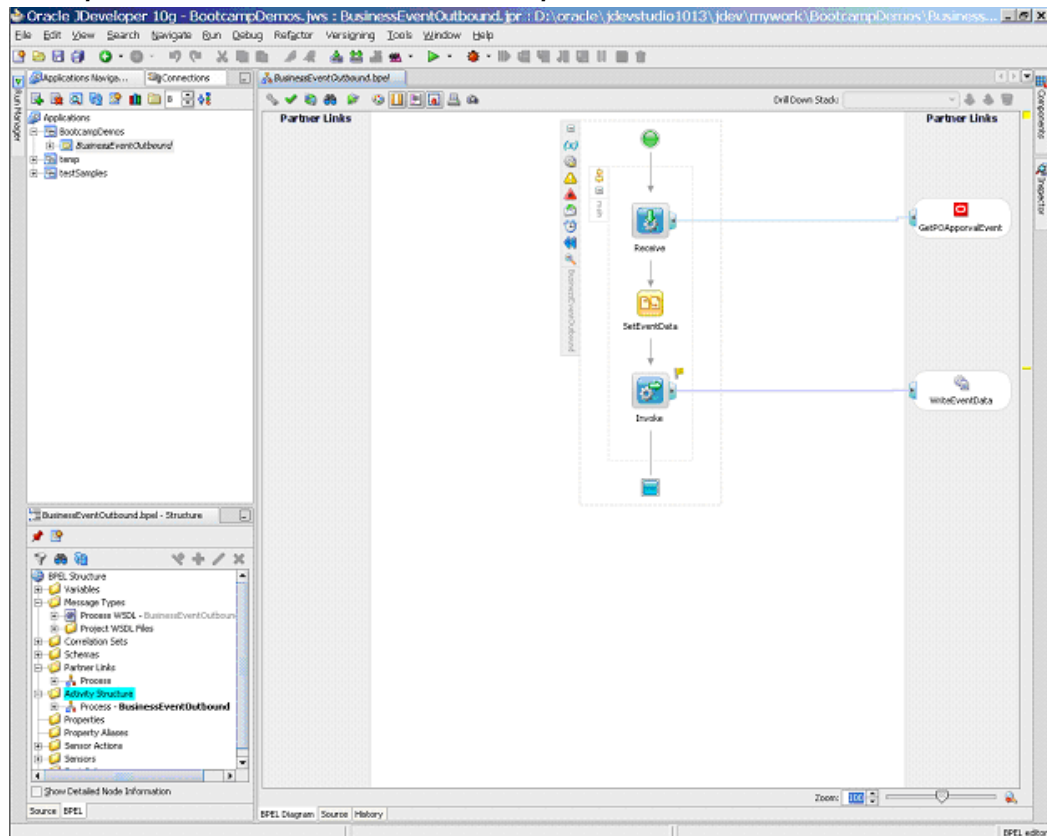
### Overview of Composite Services

A composite service consists of a collection of native packaged public interfaces or called native services that belong to a specific product or product family and are available in the Integration Repository.

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

To create a composite service, integration developers need to specify the invocation sequence in Oracle JDeveloper by using the BPEL language. This composite service has its own WSDL definition and endpoint through the creation of a partner link which allows an outbound business event, for example, to be published to the Oracle BPEL Process Manager or to interact with a partner service.

## A Composite Service - BPEL in Oracle JDeveloper



How to create and administer composite services, see *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide* and *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide* for details.

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

## Viewing Composite Services

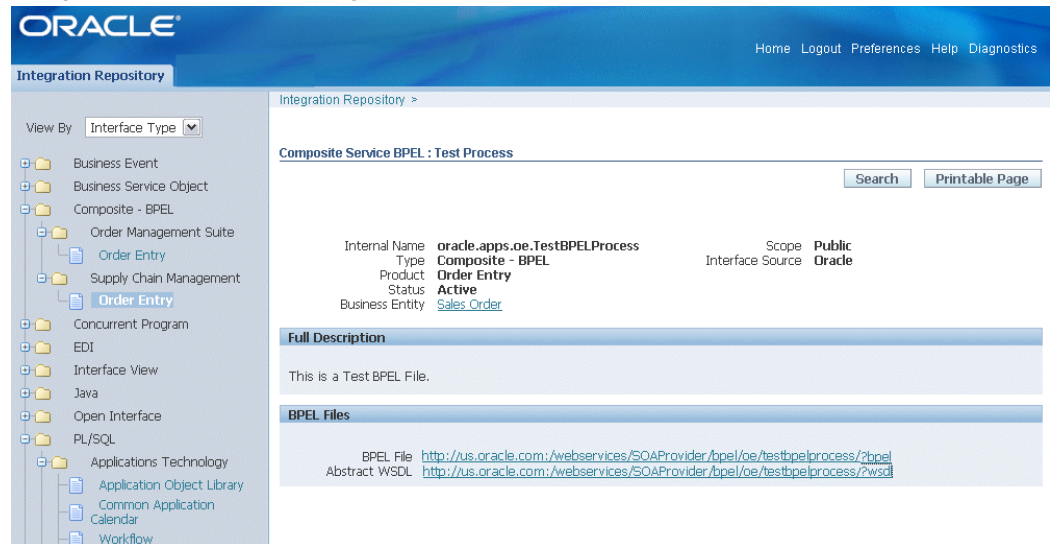
You can view composite services by navigating to the Composite Service interface type directly from the Oracle Integration Repository Browser window or performing a search by selecting Composite Service interface type in the Search page.

By clicking a composite service name link from the navigation tree or search results,



you will find the composite service interface details page where displays composite service name, description, BPEL file, and other annotated information.

### Composite Service Details Page



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

- View a WSDL file by clicking the URL link  
See: Reviewing Web Service WSDL Source, page 4-9.
- View the composite - BPEL file by clicking the URL link  
You will find the BPEL code displayed in a pop-up window containing major BPEL process components and activities included for the composite service.

Users granted with the Download Composite Service privilege can find additional **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 machine.

See: Downloading Composite Services, page 5-4.

It is important to note that a composite service - BPEL itself consisting of multiple native services is considered as a Web service. Therefore, there is no **Generate** or **Regenerate** shown in the composite service details page.

#### To view a composite service:

1. Log on to Oracle Integration Repository with the Integrated SOA Gateway responsibility. 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 Service interface type node to locate your desired composite service.
4. Click the composite service that you want to review to open the Composite Service Interface Details page.
5. Click the WSDL link to review the WSDL description.
6. Click the BPEL link to view the BPEL code.

## Downloading Composite Services

In addition to viewing composite service details and reviewing a WSDL file, users with the download privilege can download a composite service BPEL .JAR file to your local directory.

**Important:** In general, only system integration developers and integration repository administrators can download the composite services. However, general users (system integration analysts) who are granted the download privilege, an Integration Repository Download Composite Service permission set `FND_REP_DOWNLOAD_PERM_SET`, can also perform the download action. Otherwise, users will not find **Download Service** available in the details page.

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



### Composite Details Page with Download Privilege

The screenshot shows the Oracle Integration Repository interface. On the left is a navigation tree with categories like Business Event, Business Service Object, Composite - BPEL, Order Management Suite, Supply Chain Management, Concurrent Program, EDI, Interface View, Java, Open Interface, PL/SQL, Applications Technology, Application Object Library, Common Application Calendar, and Workflow. The 'Order Entry' item under 'Supply Chain Management' is selected. The main content area displays details for 'Composite Service BPEL : Test Process'. It includes a 'View By' dropdown set to 'Interface Type', a 'Search' button, a 'Printable Page' button, and a 'Download Service' button. The details table lists: Internal Name (oracle.apps.oe.TestBPELProcess), Type (Composite - BPEL), Product (Order Entry), Status (Active), Business Entity (Sales Order), Scope (Public), and Interface Source (Oracle). Below this is a 'Full Description' section stating 'This is a Test BPEL File.' and a 'BPEL Files' section with links for the BPEL File and Abstract WSDL.

To download the relevant files aggregated in a .JAR file for a composite service BPEL project, navigate to the composite service details page for a service that you want to download, and then click **Download Service** to download the file to your local machine.

**Note:** After downloading the file, system integration developers can unzip the BPEL .JAR file and open the BPEL process in Oracle JDeveloper for further modification on service endpoints if needed. Additionally, the developers can deploy the BPEL process. Since composite services are typically not deployed within Oracle E-Business Suite, a separate BPEL PM (SOA Suite or a third party BPEL PM server) is needed to deploy the BPEL composite services. For example, the developers can deploy it to Oracle BPEL server through Oracle BPEL Process Manager. See *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide* for details.

#### To download a composite service:

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 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 Service 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 Interface Details page.
5. Click **Download Service** to download the selected composite file to your local machine.

---

# Working with Custom Integration Interfaces and Services

## Overview of Custom Integration Interfaces

Oracle Integration Repository provides the capability to display annotated custom integration interfaces that are created for native and composite services.

Integration developers create and annotate custom integration interfaces based on the Integration Repository annotation standards. These annotated source files can then be uploaded to the Integration Repository through backend processing.

Since custom interface definitions can be created for various interface types, including custom interface definitions for XML Gateway Map, Business Event, PL/SQL, Concurrent Program, Business Service Object, Java (except for Java APIs for Forms subtype) and Composite Service for BPEL type, these annotated interface definitions are merged into the interface types they belong to and displayed together with Oracle interfaces from the Integration Repository browser window.

**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 interfaces, Oracle Integration Repository provides the following capabilities:

- Ability to restrict display of custom or Oracle interfaces (seeded) in the Interface List page from the navigation tree
- Ability to search on custom or seeded integration interfaces for a product family in the Search page

The interface details page displays an additional value indicating whether this interface is a custom or seeded one.

For Integration Repository annotation standards, see *Integration Repository Annotation Standards, Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

This section discusses the following topics:

- Searching Custom Integration Interfaces, page 6-2
- Viewing Custom Integration Interfaces, page 6-5
- Performing Additional Web Service Activities for Custom Integration Interfaces, page 6-5

## Searching Custom Integration Interfaces

You can find custom integration interfaces in the following ways:

- 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

**Oracle Integration Repository** Home Logout Preferences Help Diagnostics

**Integration Repository**

View By: Interface Type

- Business Event
- Business Service Object
- Composite - BPFL
- Concurrent Program
- EDI
- Interface View
- Java
  - Applications Technology
    - Application Object Library
      - User Management**
  - Financial Receivables Suite
  - Financials
  - Marketing Suite
  - Marketing and Sales Suite
  - Product Lifecycle Management
  - Public Sector
  - Sales Suite
  - Supply Chain Management
- Open Interface
- PL/SQL
- Service Data Object
- Web Service
- XML Gateway Map

**Interface List : User Management** Search

Interface Source: All Scope: All Go

Export

Name	Internal Name	Product	Type	Source	Status	Description
<a href="#">RegistrationAdmin</a>	oracle.apps.fnd.umx.registration.RegistrationAdmin	User Management	Java	Oracle	Active	RegistrationAdmin includes methods to support registration with Oracle User Management.
<a href="#">RegistrationBean</a>	oracle.apps.fnd.umx.registration.RegistrationBean	User Management	Java	Oracle	Active	Registration Bean allows you to store data captured during the registration flow in a temporary storage until approved.
<a href="#">URLFramework</a>	oracle.apps.fnd.umx.util.URLFramework	User Management	Java	Oracle	Active	URLFramework includes methods to support Centralized Account Provisioning System in Oracle Applications.

Search

Integration Repository Home Logout Preferences Help Diagnostics

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- 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

**ORACLE** Integration Repository

Home Logout Preferences Help Diagnostics

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

Category Value

Interface Source

Status

Web Service Status

Standard

Standard Specification

Scope

Export

Name	Internal Name	Product	Type	Source	Status	Description
<a href="#">Custom SDR</a>	CUSTOM_SDR	Trade Management	PL/SQL	Custom	Active	This custom PL/SQL package can be used for SDR
<a href="#">Custom SDR1</a>	CUSTOM_SDR1	Trade Management	PL/SQL	Custom	Active	This custom PL/SQL package can be used for SDR
<a href="#">Custom Supplier Ship and Debit Request</a>	CUSTOM_SD_REQUEST	Trade Management	PL/SQL	Custom	Active	This custom PL/SQL package This package can be used to Create Ship & Debit Request

Browse

Integration Repository SOA Monitor Home Logout Preferences Help Diagnostics

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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:

1. Log on Oracle E-Business Suite with the Integrated SOA Gateway responsibility. Select the Integration Repository link to open the repository browser.
2. You can locate custom integration interface definitions from 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 should be displayed in a table format.
4. Select a custom integration interface name link 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 Oracle seeded interfaces.

## Viewing Custom Interface Details

After performing a search on custom integration interfaces either from the Interface List page or from the Search main page, you can view the details page for a selected custom integration interface from the search result.

Select a custom integration interface name link from the search result table, the interface details page appears where you can find the interface name, description, and other annotated information.

Please note that all custom integration interface definitions have 'Custom' value in the Interface Source field and this value distinguishes it from a seeded one.

From the interface details page, you can perform the following tasks if you have appropriate privileges:

- Generate Web services
- Deploy Web services if they are generated successfully

See Performing Additional Web Service Activities for Custom Integration Interfaces, page 6-5 for details.

## Performing Additional Web Service Activities for Custom Integration Interfaces

In addition to viewing custom integration interface details, users with administrator role can perform the following administrative tasks:

- **For Custom Integration Interfaces of Interface Types**

- **Generating Web Services**

Users with administrator role can find **Generate WSDL** available in the interface details page. Clicking **Generate WSDL** automatically creates a corresponding WSDL file. Once the WSDL file is generated successfully, the appropriate Web Service region becomes available. See: *Generating Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Deploying Web Services**

If the service has already been generated successfully, users with administrator role can find **Deploy** available in the Web Service region for the selected custom integration interface. Prior to deploying the service to the application server, the administrator must first select at least one authentication type for the generated service supported by SOA Provider. This allows SOA Provider services the deployment based on the selected type(s).

If the service has been successfully deployed, the Web Service Status field will be updated to 'Deployed'. The View WSDL link appears along with the selected authentication type(s) for the deployed Web service.

- **Redeploying or Undeploying Web Services**

The following buttons appear if a Web service has been successfully deployed:

- **Redeploy:**

This allows you to redeploy the service when needed. If changes are made to the Authentication Type field for the deployed service, the administrator must redeploy the Web service.

- **Undeploy:** This allows you to undeploy the Web service that has been deployed earlier.

See: *Deploying and Undeploying 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 development and deployment life cycle, the administrators can view design-time logs through the Interface Details page and run-time logs through the SOA Monitor user interface for the service or operation if the logging is enabled and configured properly at required logging category level.

How to view design-time logs, see *Viewing Design-Time Logs, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

How to view run-time logs, see *Viewing Run-Time Logs, Oracle E-Business Suite*



*Integrated SOA Gateway Implementation Guide.*

- **Subscribing to Business Events**

The administrator can find **Subscribe** in the business event interface details page allowing the administrator to subscribe to selected business event and create subscription for the selected event.

See: Subscribing to Business Events, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide.*

For detailed information about each administrative task listed here, see Administering Native Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide.*

- **For Custom Composite Integration Interface**

- **Viewing Custom Composite Services**

You can view custom composite service details including the associated WSDL file for a selected custom composite service.

To locate a custom composite service, you can perform a search from the Search page. 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 as criteria:

- Interface Source: Custom
    - Interface Type: Composite

can view a custom composite service details, and download the .ZIP file for a composite service if it is available for download.

For more information on viewing composite services, see Viewing Composite Services, page 5-2.

- **Downloading Custom Composite Services**

Similar to downloading native packaged composite services, users granted with the download privilege can download a custom composite service BPEL .JAR file to your local directory by clicking **Download Service** in the interface details page.

For more information on how to download a composite service, see Downloading Composite Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide.*



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# Glossary

**Agent**

A named point of communication within a system.

**Agent Listener**

A type of service component that processes event messages on inbound agents.

**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.

**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.

**Interface Type**

Integration interfaces are grouped into different interface types.

**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.

**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.

**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.

**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.

**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 (specifically 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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