Oracle® Fusion Middleware

Using the Oracle ERP Cloud Adapter

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Contents

Preface

Audience i
Related Resources i
Conventions i

1 Introduction to Oracle ERP Cloud Adapter

1.1 Oracle ERP Cloud 1
1.2 Installing the Cloud Adapters 2
1.3 Performing Postinstallation Configuration Tasks 2
1.4 Specifying the Oracle ERP Cloud Service Catalog Service WSDL or Event Catalog URL 2
1.5 Obtaining the Authentication Credentials 5
1.6 Unsupported Features 5
1.7 Restrictions 6

2 Understanding Oracle ERP Cloud Adapter Features

2.1 Designing an Integration with the Adapter Configuration Wizard 1
2.2 Monitoring Your Application During Runtime 3

3 Designing SOA Composite Applications

3.1 Creating a SOA Composite Application 1
3.2 Adding an Adapter to a SOA Composite Application as a Service or Reference 1
3.3 Completing Design of a SOA Composite Application 2

4 Designing Oracle Service Bus Business Services

4.1 Creating an Oracle Service Bus Business Service 1
4.2 Adding an Adapter to a Business Service as a Service or Reference 1
4.3 Completing Design of an Oracle Service Bus Business Service 2

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5 Configuring Oracle ERP Cloud Properties

5.1 Configuring Basic Information Properties 1
5.1.1 What You Can Do from the Basic Info Page 1
5.1.2 What You See on the Basic Info Page 2
5.2 Configuring Oracle Cloud Adapter Connection and CSF Key Properties 2
5.2.1 What You Can Do from the Oracle Cloud Adapter Connection Page 2
5.2.2 What You See on the Oracle Cloud Adapter Connection Page 3
5.2.3 What You Can Do from the Oracle Cloud Adapter CSF Key Page 3
5.2.4 What You See on the Oracle Cloud Adapter CSF Key Page 4
5.3 Configuring Oracle ERP Cloud Source Request Properties 4
5.3.1 What You Can Do from the Oracle ERP Cloud Trigger Request Page 4
5.3.2 What You See on the Oracle ERP Cloud Source Request Page 5
5.4 Configuring Oracle ERP Cloud Source Response Properties 5
5.4.1 What You Can Do from the Oracle ERP Cloud Trigger Response Page 5
5.4.2 What You See on the Oracle ERP Cloud Trigger Response Page 6
5.5 Configuring Oracle ERP Cloud Target Operation Properties 6
5.5.1 What You Can Do from the Oracle ERP Cloud Target Operations Page 7
5.5.2 What You See on the Oracle ERP Cloud Target Operations Page 7
5.6 Reviewing Configuration Values on the Summary Page 7
5.6.1 What You Can Do from the Summary Page 8
5.6.2 What You See on the Summary Page 8

6 Managing Applications

6.1 Managing the Application in Oracle Enterprise Manager Fusion Middleware Control 1
6.2 Testing Oracle Service Bus Business Services from Oracle Service Bus Console 1

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Preface

This guide describes how to use the Oracle ERP Cloud adapter in your SOA composite applications and Oracle Service Bus business services.

Audience

This guide is intended for users who want to create, deploy, test, and monitor applications that use the Oracle ERP Cloud adapter.

Related Resources

Refer to the Oracle Fusion Middleware library on the Oracle Help Center for additional information.

- For Oracle SOA Suite information, see Oracle SOA Suite.
- For Oracle Service Bus information, see Oracle Service Bus.
- For adapters information, see On-Premises and Cloud SOA Adapters.
- For versions of platforms and related software for which Oracle products are certified and supported, review the Certification Matrix.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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1

Introduction to Oracle ERP Cloud Adapter

This section introduces Oracle ERP Cloud adapter.

Topics

- Oracle ERP Cloud
- Installing the Cloud Adapters
- Performing Postinstallation Configuration Tasks
- Specifying the Oracle ERP Cloud Service Catalog Service WSDL or Event Catalog URL
- Obtaining the Authentication Credentials
- Unsupported Features
- Restrictions

1.1 Oracle ERP Cloud

The Oracle ERP Cloud adapter enables you to create an integration with Oracle Enterprise Resource Planning (ERP) applications.

Oracle ERP Cloud enables you to streamline your enterprise business processes. Oracle ERP Cloud combines the power of a global business software suite with transactional and reporting capabilities that address financial, procurement, and project requirements across a range of business flows and countries. The complete and integrated suite transforms your organization through the latest social, mobile, and analytic technologies to optimize collaboration, process efficiency, and compliance while increasing insight into the business.

The Oracle ERP Cloud adapter enables you to easily integrate on-premises or SaaS applications with Oracle ERP Cloud without having to know about the specific details involved in the integration. The Oracle ERP Cloud adapter provides the following benefits:

- Integrates easily with the Oracle ERP Cloud application's WSDL file to produce a simplified, integration-centric WSDL.
- Generates automatic mapping to the exposed business object or event subscription that you select during adapter configuration:
  - Business object: Represents a self-contained business document that can be acted upon by the integration. An integration can send requests to create a new record for that business object. They can send a request either to update or delete an existing record for a business object. Integrations can also send requests to retrieve information about one or more records representing that business object.
  - Event subscription: Represents an event document to which you subscribe. The event subscription is raised by the Oracle ERP Cloud application.

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> **Note**
>
> Oracle ERP Cloud can send events to on-premise systems. To do so, you must open the on-premises firewall to enable access from the outside.

- Automatically handles security policy details required to connect to the Oracle ERP Cloud application.
- Provides standard error handling capabilities.
- Enables you to map business objects that have polymorphic data structures.

For more information, see Configuring Oracle ERP Cloud Properties.

1.2 Installing the Cloud Adapters

This section describes cloud adapter installation details.

See the `README.txt` file available with the patch for instructions on installing the cloud adapters.

After you complete adapter installation, perform the tasks described in *Performing Postinstallation Configuration Tasks*.

> **Note**
>
> For information about supported versions and platforms, see the release certification matrix at Supported System Configurations.

1.3 Performing Postinstallation Configuration Tasks

You must perform postinstallation configuration tasks after installing the cloud adapters.

For information about postinstallation configuration tasks, see the *Oracle Cloud Adapters Postinstallation Configuration Guide*.

1.4 Specifying the Oracle ERP Cloud Service Catalog Service WSDL or Event Catalog URL

You specify a mandatory Oracle ERP Cloud service catalog service WSDL (for accessing business objects) and optionally an event catalog URL (for accessing event subscriptions). The service catalog service WSDL is required to configure the adapter for both inbound and

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outbound endpoints using either business objects or business services. The event catalog URL is required for configuring the inbound adapter for event subscriptions.

Obtaining the Service Cloud Service WSDL

WSDL Requirements	Where Do You Get the WSDL
The URL must be that of a service catalog service WSDL. The service catalog service is a Fusion Application service that returns a list of external services available for integration. It allows clients to retrieve information about all public Fusion Application service endpoints available for that instance. The service catalog service enables clients to retrieve information about all public Oracle Fusion Application service endpoints available for that instance. The information it returns is specific to the particular cloud instance and also reflects the new services that may have been introduced in patches applied to the instance. This service is used to programmatically discover the SOAP services available on the cloud instance and retrieve the necessary metadata to invoke the SOAP services to manage business objects.	The developer creating an Oracle ERP Cloud connection must work with the Oracle ERP Cloud service administrator to get the concrete WSDL URL for the service catalog service provisioned for the specific SaaS application.

This section describes how to derive the external virtual host and port for a tokenized service WSDL. The topology information in the Topology Registration setup task contains the external virtual host and port for the domains and applications. The following instructions describe the steps for deriving the values using the service catalog service WSDL URL as an example: `https://atf_server:port/fndAppCoreServices/ServiceCatalogService`.

To access the Review Topology page, the ASM_REVIEW_TOPOLOGY_HIERARCHY_PRIV entitlement must be granted to the user's job role. The entitlement is granted to the ASM_APPLICATION_DEPLOYER_DUTY duty role, which is inherited by the duty roles ASM_APPLICATION_DEVELOPER_DUTY and ASM_APPLICATION_ADMIN_DUTY.

If the menu items and tasks described in the following procedure are not available in your cloud instance, your user account is missing the required role. Contact your cloud instance security administrator for assistance.

1. Log in to the cloud instance.
2. Click the **Navigator** icon in the global area in the top part of the window, then chose **Setup and Maintenance** under the **Tools** heading.
3. Select **Review Topology** under the **Topology Registration** section in the **Tasks** regional area on the left side of the window.
4. Click the **Detailed** tab in the middle of the window.

   The tab shows the list of domains configured in the cloud instance.

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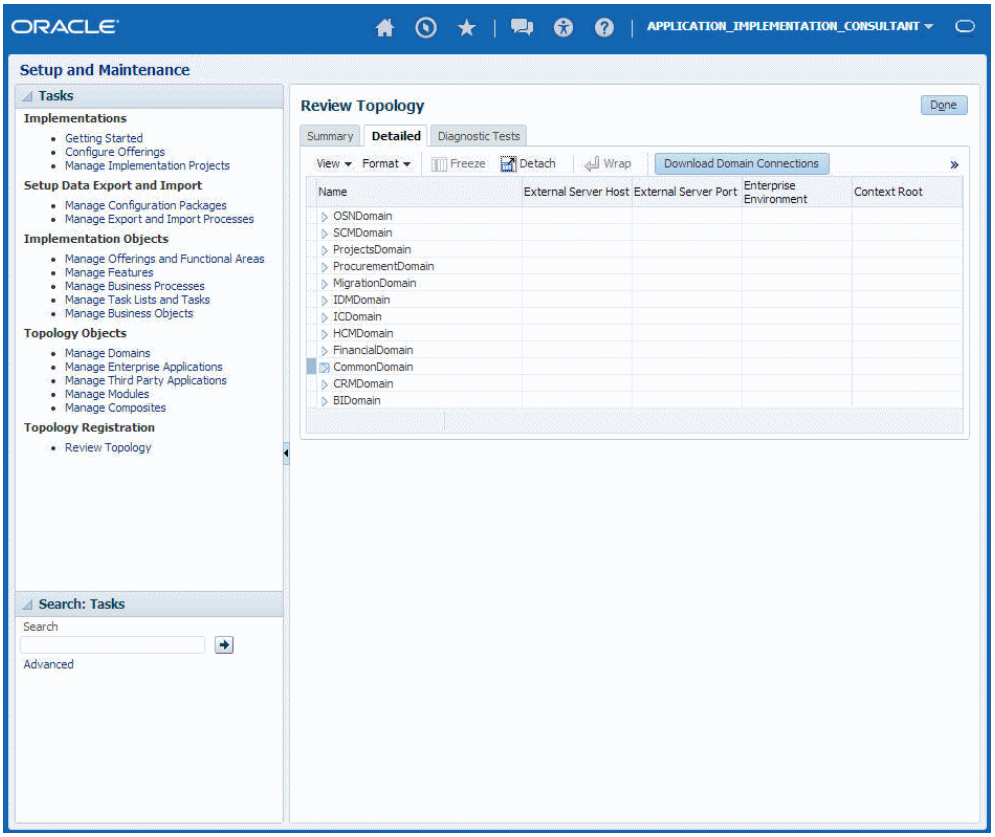

5. Map the token name for the service path value to the domain name in the Topology Manager:

Token Name in Service Path	Domain Name
atf_server	CommonDomain
crm_server	CRMDomain
fin_server	FinancialDomain
hcm_server	HCMDomain
ic_server	ICDomain
prc_server	ProcurementDomain
prj_server	ProjectsDomain
scm_server	SCMDomain

6. Expand the domain name and select any external virtual host and port for the J2EE applications that are deployed on the domain. In the sample window, the values for this particular instance are **fs-your-cloud-hostname** and **443**, respectively.

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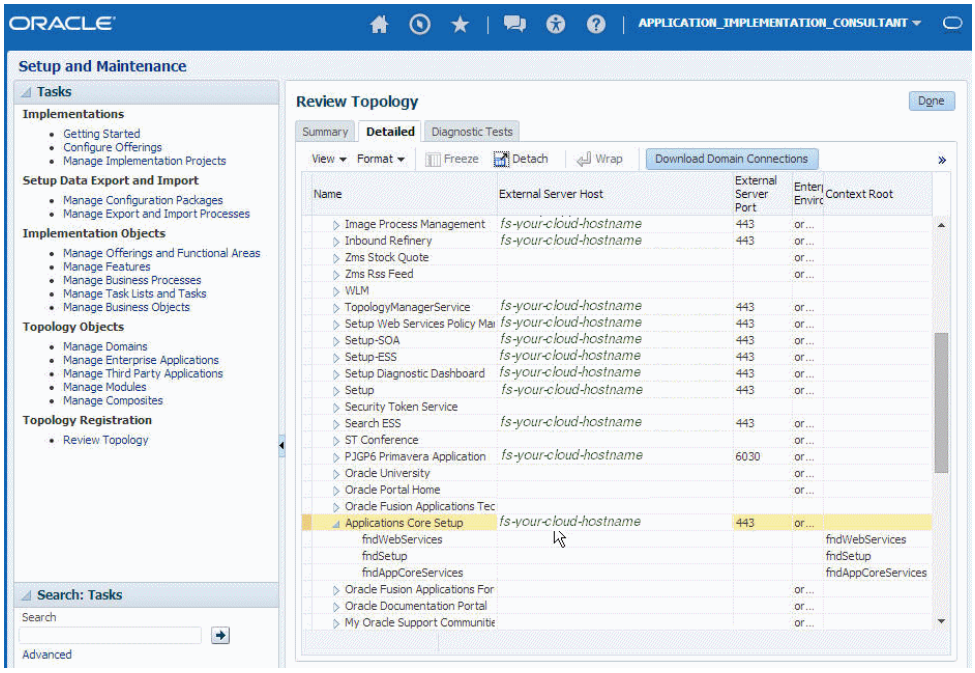

7. Replace the *domainName_server:PortNumber* with the external virtual host and port identified in the previous step. For example:

   ```
   https://fs-your-cloud-hostname:port/fndAppCoreServices/ServiceCatalogService?wsdl
   ```

Obtaining the Event Catalog URL

You must know the CRM URL format to access the CRM application user interface. Follow the URL format to determine the event catalog URL. For example, if the CRM URL format is:

```
https://fusxxxx-crm-ext.us.oracle.com/customer/faces/CrmFusionHome
```

Then the event catalog URL is:

```
https://fusxxxx-crm-ext.us.oracle.com/soa-infra
```

1.5 Obtaining the Authentication Credentials

Obtain the user name and password that are required for creating the Credential Store Framework (CSF) authentication key in Oracle JDeveloper from your SOA domain administrator. These credentials are required for most cloud adapters.

1.6 Unsupported Features

The adapter does not support the following features:

- Adapter runtime retry configuration properties such as `jca.retry.count`, `jca.retry.backoff`, `jca.retry.interval`, and `jca.retry.maxInterval`.
- Message recovery in the Error Hospital in Oracle Enterprise Manager Fusion Middleware Control.

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- The display of properties in the **Properties** tab for a reference (outbound) adapter in Oracle Enterprise Manager Fusion Middleware Control (for example, service WSDL URL, CSF key used, and others). These are the reference adapters that you select on the Services and References page.
- Rejected message handling
- Metrics such as the number of invocations.
- The following message encryption and decryption features available when you right-click a cloud adapter in the **Exposed Service** swimlane or **External References** swimlane in Oracle JDeveloper:
  - **Protect Sensitive Data** > **Encrypt Request Data** for cloud adapters in the **Exposed Service** swimlane.
  - **Protect Sensitive Data** > **Decrypt Sensitive Data** for cloud adapters in the **External References** swimlane.
- The policy attachments feature available when you right-click a cloud adapter in the **Exposed Service** swimlane or **External References** swimlane in Oracle JDeveloper.

1.7 Restrictions

Note the following restrictions:

Not all Oracle Fusion Application services are available in SaaS mode because the Oracle Fusion Application topology splits visibility to web and service resources into two categories: internal and external. Therefore, some services are internal and cannot be used by the adapter for integration. Only external services are available for public consumption.

The adapter cannot be used for integrating the interfamily modules, because services defined on them are not external services.

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2

Understanding Oracle ERP Cloud Adapter Features

The Oracle ERP Cloud adapter provides the following features.

Topics

- Designing an Integration with the Adapter Configuration Wizard
- Monitoring Your Application During Runtime

2.1 Designing an Integration with the Adapter Configuration Wizard

You use the Adapter Configuration Wizard to include the Oracle ERP Cloud adapter in a SOA composite application or an Oracle Service Bus business service.

The Adapter Configuration Wizard consists of configuration pages that enable you to select the artifacts required to communicate with the Oracle ERP Cloud application. You can configure the adapter in the inbound (source) direction or the outbound (target) direction.

> **Note**
>
> If the Localize Files dialog is displayed during adapter configuration, click **Cancel**. You cannot localize the WSDL file.

- Inbound (source) direction:
  - The Basic Info page prompts you to enter a meaningful name and optional description.
  - The Connection page prompts you to specify the WSDL, security policy, and CSF authentication key to use. The authentication key is created by clicking the **Add** icon to specify the key name, user name, and password.

    You can also test the connection to the Oracle ERP Cloud application on the Connection page. This enables you to confirm that the URL to the service catalog service and credentials are correct. Status is displayed that indicates whether the connection is successful and whether the credentials are authenticated by the Oracle ERP Cloud application. Any errors that occurred during the attempt to connect are also displayed.
  - The Request page prompts you to select the business object to receive as a request from the Oracle ERP Cloud Application.

    To get all available data objects in the Oracle ERP Cloud instance, the adapter first reads the schema document (.XSD) that is referenced in the service's WSDL. The adapter then parses this XSD to obtain the list of all schema imports and shows them as data objects.

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For example, the adapter displays the opportunity business object and its useful metadata first by reading the opportunity service's WSDL and the referenced schema `OpportunityService.xsd` file. The XSD in turns imports another schema `Opportunity.xsd` in which the opportunity business object is defined. The metadata for the opportunity business object is defined in this schema.

A search facility is provided that enables you to filter the display of business objects for quick selection. When you enter a search string, the list renders only the matching business objects in the list browser instead of showing all objects.

- The Response page prompts you to select the business object for the integration to send as a response document to the Oracle ERP Cloud application. To send no response, select **None**. You can also optionally select to send an immediate response back to the Oracle Sales ERP application. An immediate response indicates a conversational response. For an immediate response, you can select any of the data objects as a response document.
- The Summary page displays your selections.

- Outbound (source) direction:
  - The Basic Info page prompts you to enter a meaningful name and optional description. This is the same page as is displayed for the inbound direction.
  - The Connection page prompts you to specify the WSDL, security policy, and CSF authentication key to use. The authentication key is created by clicking the **Add** icon to specify the key name, user name, and password. You can also test the connection to the Oracle ERP Cloud application on the Connection page. This enables you to confirm that the URL to the service catalog service and credentials are correct. Status is displayed that indicates whether the connection is successful and whether the credentials are authenticated by the Oracle ERP Cloud application. Any errors that occurred during the attempt to connect are also displayed.
  - The Operations page prompts you to select a business object or service and the operation to perform on your selection.

    A search facility based on service names is also provided. To quickly select a business service, you type a search string. The list renders only matching business services in the list browser instead of showing all services.
  - The Summary page displays your selections for the outbound direction.

The following artifacts are created for each adapter instance in the Applications window in Oracle JDeveloper:

- WSDL file: Only the standard WSDL file type is supported.
- JCA file: Contains the internal implementation details used by the adapter during runtime. It contains the different interaction and connection properties used by the adapter.

When application configuration is complete, you can deploy the application from Oracle JDeveloper to the runtime environment.

> **Note**
>
> The wizard does not support the creation of response message callbacks. As an alternative, you can design your BPEL process to include activities that support callbacks.

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> **Note**
>
> If you re-edit an already configured Oracle ERP Cloud adapter service or reference, the service catalog WSDL is replaced with the service URL. You must re-enter the service catalog WSDL for the adapter to work correctly.

For information about the details to specify in the fields of the wizard pages, see Configuring Oracle ERP Cloud Properties.

2.2 Monitoring Your Application During Runtime

You can monitor your application from the runtime environment.

You use the runtime part of the adapter for delivering the information generated during design time to the service endpoint. You can monitor your SOA composite application or Oracle Service Bus business service from Oracle Enterprise Manager Fusion Middleware Control. You can also test and monitor your Oracle Service Bus business service from Oracle Service Bus Console. However, you cannot monitor the service and reference metrics for the adapters in Oracle Enterprise Manager Fusion Middleware Control.

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3
Designing SOA Composite Applications

This section describes how to design a SOA composite application with the Oracle ERP Cloud adapter.

Topics

- Creating a SOA Composite Application
- Adding an Adapter to a SOA Composite Application as a Service or Reference
- Completing Design of a SOA Composite Application

3.1 Creating a SOA Composite Application

This section provides an overview of how to create a SOA composite application in which to include the adapter as an exposed service or external reference.

1. Start Oracle JDeveloper.
2. From the **File** menu, select **New** > **Application**.
3. In the New Gallery dialog, select **SOA Application** from the **Items** list, then click **OK**. The SOA Create SOA Application wizard is displayed.
4. Specify an application name, and click **Next**.
5. Specify a project name, and click **Next**.
6. Select **Composite with BPEL Process**, and click **Finish**.

   The SOA composite application is displayed for designing in the SOA Composite Editor.

3.2 Adding an Adapter to a SOA Composite Application as a Service or Reference

You can add an Oracle ERP Cloud adapter to a SOA composite application as an inbound (source) service to the **Exposed Services** swimlane or as an outbound (target) reference to the **External References** swimlane in Oracle JDeveloper.

1. Go to the Component Palette in your SOA composite application.
2. Go to the **Cloud** section under **Custom/Third Party**.

   The adapters are displayed.
3. Drag the adapter to the appropriate swimlane:
   a. To create an inbound (source) service, drag the adapter to the **Exposed Services** swimlane, and see the following sections that describe the wizard pages for configuring the adapter:
      - Configuring Basic Information Properties
      - Configuring Oracle Cloud Adapter Connection and CSF Key Properties

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- Configuring Oracle ERP Cloud Source Request Properties
- Configuring Oracle ERP Cloud Source Response Properties
- Reviewing Configuration Values on the Summary Page

b. To create an outbound (target) reference, drag the adapter to the **External References** swimlane, and see the following sections that describe the wizard pages for configuring the adapter.

- Configuring Basic Information Properties
- Configuring Oracle Cloud Adapter Connection and CSF Key Properties
- Configuring Oracle ERP Cloud Target Operation Properties
- Reviewing Configuration Values on the Summary Page

3.3 Completing Design of a SOA Composite Application

This section provides an overview of how to complete design of your SOA composite application and deploy the application.

1. Design the remaining contents of your SOA composite application. For example:
   a. Connect the BPEL process to the adapter. For this example, the BPEL process is connected to the adapter as an external reference.
   b. Design the contents of the BPEL process. For example:
      i. Double-click the BPEL process.
      ii. Add and configure an invoke activity to invoke the adapter.

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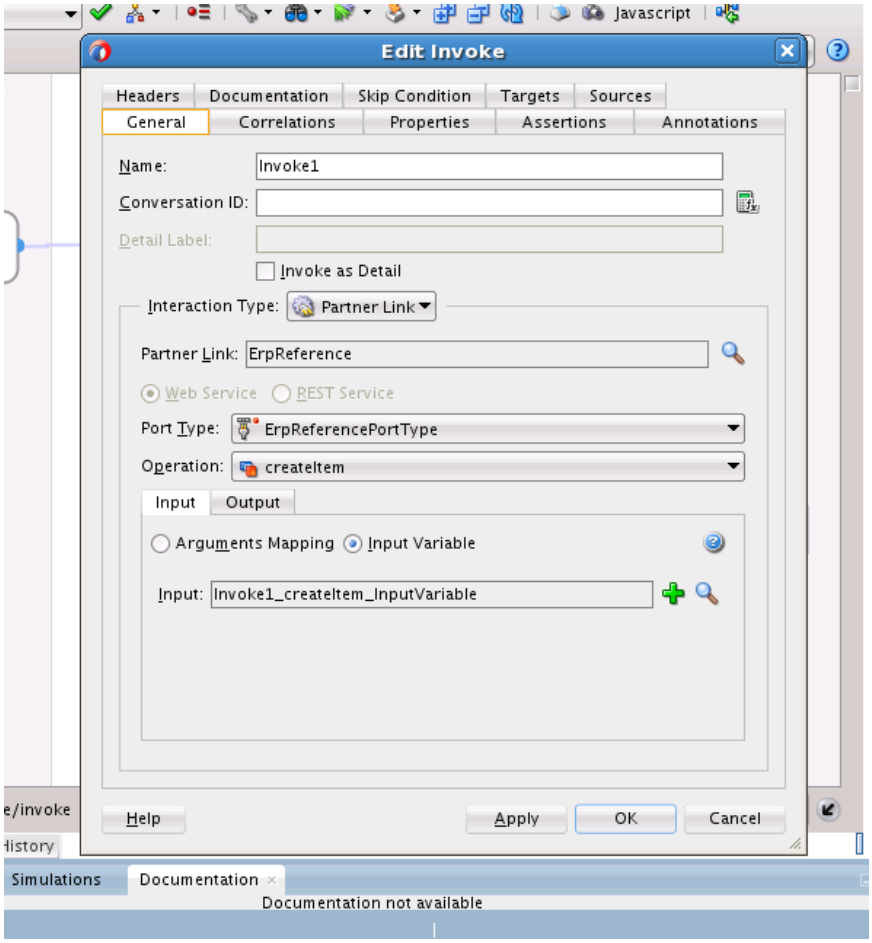

iii. Add and configure assign activities to copy the contents of one variable to another when sending and receiving messages to and from the adapter.

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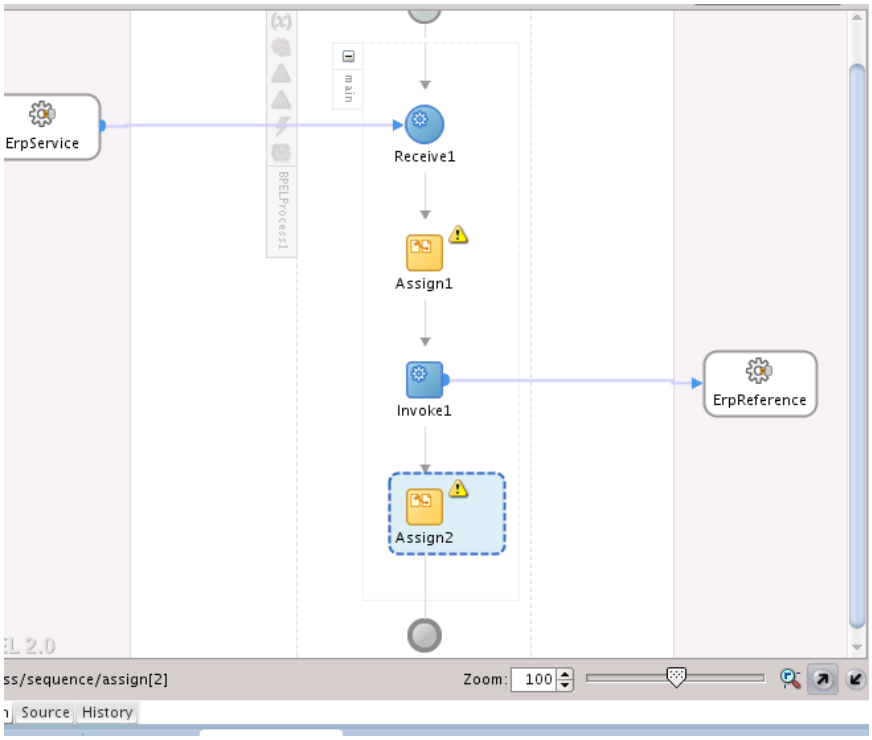
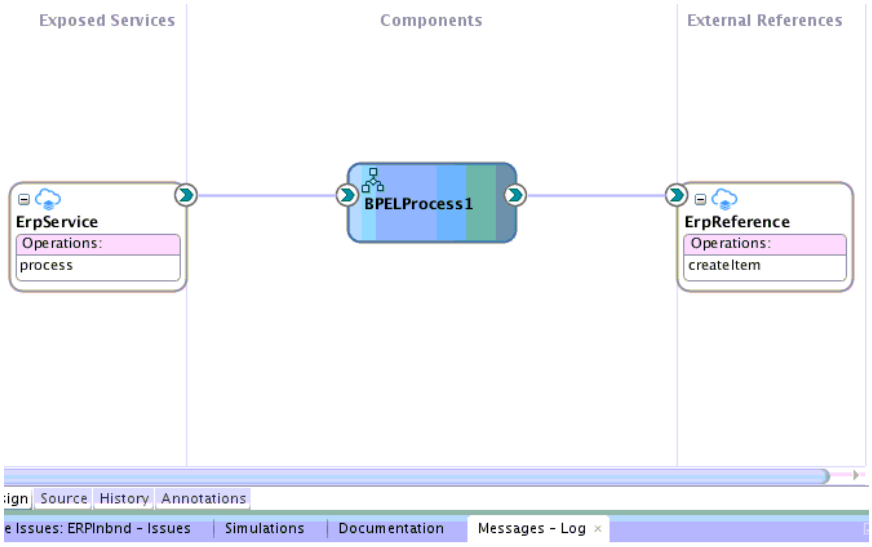


iv. Add and configure other activities, as appropriate.

When complete, view the SOA composite application in the SOA Composite Editor.



For specific information about creating and designing SOA composite applications, see *Developing SOA Applications with Oracle SOA Suite*.

2. Deploy the SOA composite application:

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> **Note**
>
> You cannot use Oracle JDeveloper to deploy a SOA composite application to Oracle SOA Cloud Service.

a. In the navigator, right-click the project and select **Deploy** > ***project_name***.

b. Follow the steps in the deployment wizard to deploy the SOA composite application to the application server.

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4

Designing Oracle Service Bus Business Services

This section describes how to design an Oracle Service Bus business service with the adapter in Oracle JDeveloper.

Topics

- Creating an Oracle Service Bus Business Service
- Adding an Adapter to a Business Service as a Service or Reference
- Completing Design of an Oracle Service Bus Business Service

4.1 Creating an Oracle Service Bus Business Service

This section provides an overview of how to create an Oracle Service Bus business service in which to include the adapter in Oracle JDeveloper.

1. Start Oracle JDeveloper.
2. From the **File** menu, select **New** > **Application**.
3. In the New Gallery dialog, select **Service Bus Application** from the **Items** list, then click **OK**.
4. Specify an application name, and click **Next**.
5. Specify a project name.
6. Select **Service Bus**, and click **Finish**.

   The Oracle Service Bus business service is displayed for designing in the Oracle Service Bus Overview Editor.

4.2 Adding an Adapter to a Business Service as a Service or Reference

You can add the adapter to an Oracle Service Bus business service as an inbound (source) proxy service to the **Proxy Services** swimlane or as an outbound (target) external service to the **External Services** swimlane in Oracle JDeveloper.

> **Note**
>
> If the Import OSB Resource dialog is displayed during adapter configuration, click **Cancel**. You cannot localize the WSDL file.

1. Go to the Component Palette in your Oracle Service Bus business service.
2. Go to the **Cloud** section under **Service Bus**.

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The adapters are displayed.

3. Drag the adapter to the appropriate swimlane:
   a. To create an inbound (source) proxy service, drag the adapter to the **Proxy Services** swimlane, and see the following sections that describe the wizard pages for configuring the adapter:
      - Configuring Basic Information Properties
      - Configuring Oracle Cloud Adapter Connection and CSF Key Properties
      - Configuring Oracle ERP Cloud Source Request Properties
      - Configuring Oracle ERP Cloud Source Response Properties
      - Reviewing Configuration Values on the Summary Page
   b. To create an outbound (target) external service, drag the adapter to the **External Services** swimlane, and see the following sections that describe the wizard pages for configuring the adapter:
      - Configuring Basic Information Properties
      - Configuring Oracle Cloud Adapter Connection and CSF Key Properties
      - Configuring Oracle ERP Cloud Target Operation Properties
      - Reviewing Configuration Values on the Summary Page

4.3 Completing Design of an Oracle Service Bus Business Service

This section provides an overview of how to complete design of your Oracle Service Bus business service and deploy the application.

1. Design the contents of your Oracle Service Bus business service. For example, to configure an Oracle Service Bus proxy service in your business service:
   a. In the Oracle Service Bus Overview Editor, right-click the **Pipeline/Split Joins** lane and select **Insert** > **Pipeline**.

      The Create Pipeline Service dialog is displayed.
   b. Enter a name for the pipeline and select the project location, then click **Next**
   c. Select **WSDL** as the **Service Type**.
   d. To the right of the **WSDL** selection, click the **Browse** icon to select the WSDL.
   e. Select **Application**.
   f. Expand **Resource Chooser** and select the WSDL file, then click **OK**.
   g. Ensure that **Expose as a Proxy Service** is selected.
   h. From the **Proxy Transport** list, select **http**, then click **Finish**.

      The **Pipeline** component is displayed in the Oracle Service Bus Overview Editor.
   i. Connect the external service to the **Pipeline** component.

   For more information about creating and designing an Oracle Service Bus business service, see *Developing Services with Oracle Service Bus*.
2. Open the pipeline that shows the default routing.

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3. Verify the service and corresponding operation are displayed in the **Routing Properties** tab at the bottom of the dialog.

   The outbound project is ready for deployment.

4. Deploy the business service.

   > **Note**
   >
   > You cannot use Oracle JDeveloper to deploy a business service to Oracle SOA Cloud Service.

   a. Select the project, then select **Deploy to Service Bus Server**.

   b. Follow the steps in the deployment wizard.

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5

Configuring Oracle ERP Cloud Properties

The Oracle ERP Cloud adapter enables you to create integrations with an Oracle ERP Cloud application.

The following sections describe the wizard pages that guide you through configuration of the Oracle ERP Cloud adapter as a source and target in an integration.

Topics

- Configuring Basic Information Properties
- Configuring Oracle Cloud Adapter Connection and CSF Key Properties
- Configuring Oracle ERP Cloud Source Request Properties
- Configuring Oracle ERP Cloud Source Response Properties
- Configuring Oracle ERP Cloud Target Operation Properties
- Reviewing Configuration Values on the Summary Page

For more information about Oracle ERP Cloud, see Configuring Oracle ERP Cloud Properties.

5.1 Configuring Basic Information Properties

You can enter a name and description on the Basic Info page of each source and target adapter in your integration.

Topics

- What You Can Do from the Basic Info Page
- What You See on the Basic Info Page

5.1.1 What You Can Do from the Basic Info Page

You can specify the following values on the Basic Info page. The Basic Info page is the initial wizard page that is displayed whenever you drag an adapter to the trigger (source) or invoke (target) area supported by your adapter.

- Specify a meaningful name.
- Specify a description of the responsibilities.

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5.1.2 What You See on the Basic Info Page

The following table describes the key information on the Basic Info page.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the responsibilities of this connection. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following: • Blank spaces (for example, `My Inbound Connection`) • Special characters (for example, `#;83&` or `righ(t)now4`) • Multibyte characters
What does this endpoint do?	Enter an optional description of the connection's responsibilities. For example: `This connection receives an inbound request to synchronize account information with the cloud application.`

5.2 Configuring Oracle Cloud Adapter Connection and CSF Key Properties

Enter the Oracle Cloud adapter configuration connectivity and Credential Store Framework (CSF) key values for your integration.

Topics

- What You Can Do from the Oracle Cloud Adapter Connection Page
- What You See on the Oracle Cloud Adapter Connection Page
- What You Can Do from the Oracle Cloud Adapter CSF Key Page
- What You See on the Oracle Cloud Adapter CSF Key Page

5.2.1 What You Can Do from the Oracle Cloud Adapter Connection Page

You can specify the following connection values for the Oracle Cloud adapter.

- Specify the WSDL URL for some adapters. If you are configuring the Oracle Eloqua Cloud adapter, no WSDL is required.
- Specify the security policy.
- Create the authentication key. A key created for one direction (for example, outbound) is also available for selection in the other direction (for example, inbound).

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5.2.2 What You See on the Oracle Cloud Adapter Connection Page

The following table describes the key information on the Oracle Cloud adapter Connection page.

Element	Description
WSDL URL	**Note**: This field is not displayed for the Oracle Eloqua Cloud adapter. Specify the WSDL. The WSDL is used to build integrations specific to your instance. You can also select the WSDL from a file system or another source by choosing the browser icon next to the **WSDL URL** field. Click **File System** at the top of the dialog, then browse for the WSDL.
Security Policy	Select the security policy appropriate to your environment (for example, **USERNAME_PASSWORD_TOKEN**). • The wizard shows all policies, including those that may not be applicable. To make a correct selection, you must have a knowledge of policies. For example, you cannot select a SAML-based policy because the identity is not propagated. • The policies you apply to the cloud adapter are unique to the cloud adapter and do not impact other endpoints in the composite.
Authentication Key	Select the CSF authentication key. • **Add**: Click to create a new authentication key. You must specify the key name, user name, and password. • **Edit**: Click to edit an authentication key. • **Delete**: Click to delete an authentication key.
Test	Click to validate the authentication key.

5.2.3 What You Can Do from the Oracle Cloud Adapter CSF Key Page

You can specify the following CSF key values for the Oracle Cloud adapter.

- CSF key name
- User name and password
- If you are configuring the Oracle Eloqua Cloud adapter only, you must specify a company name.

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5.2.4 What You See on the Oracle Cloud Adapter CSF Key Page

The following table describes the key information on the Oracle Cloud adapter CSF Key page.

Element	Description
CSF Key Name	Specify the CSF key to enable runtime injection of credentials. The adapter uses the CSF to retrieve the username and password required for authentication with the application (for example, the Oracle Sales Cloud or Oracle ERP application). This key identifies your login credentials during design-time.
Company Name (Oracle Eloqua Cloud adapter only)	**Note**: This field is only displayed for the Oracle Eloqua Cloud adapter. Specify the Oracle Eloqua company name.
Email Account and Role	**Note**: This field is only displayed for the Oracle NetSuite Cloud adapter. Specify the email account and role.
User Name	Enter the user name for connecting to your application (for example, the Oracle Sales Cloud or Oracle ERP application). Your administrator provides you with user credentials.
Password	Enter the password for connecting to your application.
Re-enter Password	Re-enter the same password a second time.
Application ID (NetSuite Adapter only)	Enter the application ID. When creating a SOA composite application, this field is optional if you are using a NetSuite 2015 WSDL and mandatory if using a NetSuite 2016 WSDL.

5.3 Configuring Oracle ERP Cloud Source Request Properties

Enter the Oracle ERP Cloud connection source request values for your integration. The values you specify start the integration.

Topics

- What You Can Do from the Oracle ERP Cloud Trigger Request Page
- What You See on the Oracle ERP Cloud Source Request Page

5.3.1 What You Can Do from the Oracle ERP Cloud Trigger Request Page

You can select the following trigger request values for the Oracle ERP Cloud application.

Select the specific type to receive as a request from Oracle ERP Cloud. Your ability to select either a business object or event subscription is based on the content of the WSDL file (for business objects) or event catalog URL (for event subscriptions) you specified during Oracle ERP Cloud Adapter configuration.

- Select to receive a business object as a request from the Oracle ERP Cloud application. This selection invokes the integration.

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- Select to receive an event subscription raised by the Oracle ERP Cloud application as a request from Oracle ERP Cloud. This selection invokes the integration.

> **Note**
>
> If the options for selecting business objects and events are missing, that indicates that the event catalog URL was not supplied on the Connection page.

5.3.2 What You See on the Oracle ERP Cloud Source Request Page

The following table describes the key information on the Oracle ERP Cloud source Request page.

Element	Description
Configure a Request	Select the request type appropriate to your integration. The fields that are displayed below are based on the request type that you select. • **With Business Objects**: Select to display a list of business objects. • **With Business Events**: Select to display a list of business events.
Select a Business Object (is displayed if **With Business Objects** is selected)	Select the business object from the Oracle ERP Cloud application to receive as a request that starts the integration.
Business Event For Subscription (is displayed if **With Business Events** is selected)	Select the event subscription from the Oracle ERP Cloud application. This event is received as a request that starts the integration.
Filter Expr for *Business_Event_Name* (is displayed if **With Business Events** is selected)	Enter an event condition filter expression. A filter expression specifies that the contents (payload or headers) of a message be analyzed before any event is sent. For example, you can apply a filter expression that specifies that an event be sent only if the message includes a customer ID. When the expression logic is satisfied, the event is accepted for delivery to the integration.
Filter by object name or **Filter By Event Name**	Type the initial letters of the name to filter the display of business objects or event subscriptions.

5.4 Configuring Oracle ERP Cloud Source Response Properties

Enter the Oracle ERP Cloud source response values for your integration.

Topics

- What You Can Do from the Oracle ERP Cloud Trigger Response Page
- What You See on the Oracle ERP Cloud Trigger Response Page

5.4.1 What You Can Do from the Oracle ERP Cloud Trigger Response Page

You can configure the operation and business object that comprise the response type for the Oracle ERP Cloud application.

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- Immediate (synchronous) response: A response business object is immediately returned as output. You select **Immediate** as the response type on the Response page and select the business object as part of the response to the client.
- No response is required: You select **None** on the Response page because a response is not required.

5.4.2 What You See on the Oracle ERP Cloud Trigger Response Page

Select the business object for the integration to send as a response document to the Oracle ERP Cloud application. The following types of responses are available.

Select the type of response appropriate to your business requirements:

- Immediate: A synchronous response is required (See Table 5-1 for instructions)
- None: No response is required (See Table 5-2 for instructions)

The following table describes the fields available if an immediate (synchronous) response is required.

Table 5-1 Response Type — Immediate (Synchronous) Response is Required

Element	Description
Response Type	Select **Immediate** for the Oracle ERP Cloud application to wait until a response is received from the integration. This is also known as the request and response message exchange pattern. This is the default selection.
Filter by object name	Enter the initial letters to filter the display of business objects.
Select a Business Object	Select the business object to receive from the Oracle ERP Cloud application as a response. A description of the selected business object is displayed below this list.
Name	Displays the name of the selected business object.
Description	Displays the description of the selected business object.

The following table describes the fields available if no response is required.

Table 5-2 Response Type — None

Element	Description
Response Type	Select **None**.
Select a Business Object	If you select **None**, this section is hidden.

5.5 Configuring Oracle ERP Cloud Target Operation Properties

Enter the Oracle ERP Cloud target operation values for your integration.

Topics

- What You Can Do from the Oracle ERP Cloud Target Operations Page

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- What You See on the Oracle ERP Cloud Target Operations Page

5.5.1 What You Can Do from the Oracle ERP Cloud Target Operations Page

You can configure the following target operation values for the Oracle ERP Cloud.

- Select the business object or service.
- Select the operation to perform on the selected business object or service.

5.5.2 What You See on the Oracle ERP Cloud Target Operations Page

The following table describes the key information on the Oracle ERP Cloud target Operations page.

Element	Description
Browse by	Select to browse by business object or service. There is a one-to-one correspondence between the business object and service. The service acts on the business document. • **Business Objects**: Select to browse a list of available business objects. • **Services**: Select to browse a list of available services.
Filter by object name (displayed if **Business Objects** is selected)	Type the initial letters to filter the display of business objects.
Select a Business Object (displayed if **Business Objects** is selected)	Select the business object to use.
Filter by service (displayed if **Services** is selected)	Type the initial letters to filter the display of services.
Select a Service (displayed if **Services** is selected)	Select the service to use.
Select the operation to perform on the business object or service	Select the operation to perform on the selected business object or service.
Life Cycle	Displays the state of the selected business object or service. Deprecated indicates the business document is nearing the end of use and must be used with caution.
Name	Displays the name of the selected business object or service.
Description	Displays the description of the selected business object or service.

5.6 Reviewing Configuration Values on the Summary Page

You can review the specified adapter configuration values on the Summary page.

Topics

- What You Can Do from the Summary Page
- What You See on the Summary Page

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5.6.1 What You Can Do from the Summary Page

You can review source or target configuration details from the Summary page. The Summary page is the final wizard page for each adapter after you have completed your configuration.

- View the configuration details you defined for the source or target adapter. For example, if you have defined an inbound source adapter with a request business object and immediate response business object, specific details about this configuration are displayed on the Summary page.
- Click **Done** if you want to save your configuration details.
- Click a specific tab in the left panel or click **Back** to access a specific page to update your configuration definitions.
- Click **Cancel** to cancel your configuration details.

5.6.2 What You See on the Summary Page

The following table describes the key information on the Summary page.

Element	Description
Summary	Displays a summary of the source or target configuration values you defined on previous pages of the wizard. For adapters for which a generated XSD file is provided, click the XSD link to view a read-only version of the file. To return to a previous page to update any values, click the appropriate tab in the left panel or click **Back**.

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6

Managing Applications

This section describes how to manage and monitor an Oracle SOA Suite or Oracle Service Bus application that uses the adapter from Oracle Enterprise Manager Fusion Middleware Control or Oracle Service Bus Console.

Topics

- Managing the Application in Oracle Enterprise Manager Fusion Middleware Control
- Testing Oracle Service Bus Projects from Oracle Service Bus Console

6.1 Managing the Application in Oracle Enterprise Manager Fusion Middleware Control

You manage the SOA composite application or Oracle Service Bus business service that includes your adapter in Oracle Enterprise Manager Fusion Middleware Control.

1. Log in to Oracle Enterprise Manager Fusion Middleware Control.
2. In the navigator, expand the tree to display your SOA composite application or Oracle Service Bus business service project (for this example, a SOA composite application is selected).
3. Select the SOA composite application.
4. Click **Test**.

   The Test Web Service page is displayed.
5. Complete the fields on the page to initiate a test of your composite.
6. Click **Test Web Service**.

   Invocation results are displayed.
7. Click **Launch Flow Trace** to view the flow trace of the SOA composite application, including flow details about the adapter.

   For more information about monitoring applications from Oracle Enterprise Manager Fusion Middleware Control, see *Administering Oracle SOA Suite and Oracle Business Process Management Suite* and *Administering Oracle Service Bus*.

6.2 Testing Oracle Service Bus Business Services from Oracle Service Bus Console

You can test Oracle Service Bus business service projects from Oracle Service Bus Console.

1. Log in to Oracle Service Bus Console.
2. In the navigator under **All Projects**, open the project to test.
3. In the navigator, click the business service for that project.

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4. Click the **Launch Test Console** (green arrow button) to test the outbound endpoint.

   This opens a window that displays the proxy service and the operation to test.

5. Provide the input and click **Execute**.

   This sends the payload to the Oracle Cloud application. The response is displayed under the **Response Document** section.

   For more information about testing Oracle Service Bus business service projects, see *Administering Oracle Service Bus*.

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