Oracle® Cloud

Using the Oracle Logistics Adapter with Oracle Integration
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Preface

This guide describes how to configure the Oracle Logistics Adapter as a connection in an integration in Oracle Integration.

Note:
The information in this guide applies to all of your Oracle Integration instances. It doesn't matter which edition you're using, what features you have, or who manages your cloud environment. You'll find what you need here, including notes about any differences between the various flavors of Oracle Integration when necessary.

Topics

• Audience
• Documentation Accessibility
• Related Resources
• Conventions

Audience

This guide is intended for developers who want to use the Oracle Logistics Adapter in integrations in Oracle Integration.

Documentation Accessibility

For information about Oracle’s commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Resources

See these Oracle resources:
• Oracle Cloud
  http://cloud.oracle.com
• Using Integrations in Oracle Integration
• Using the Oracle Mapper with Oracle Integration

Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Understand the Oracle Logistics Adapter

Review the following conceptual topics to learn about the Oracle Logistics Adapter and how to use it as a connection in integrations in Oracle Integration. A typical workflow of adapter and integration tasks is also provided.

Topics:

- Oracle Logistics Adapter Capabilities
- What Application Version Is Supported?
- About Oracle Logistics Adapter Use Cases
- Workflow to Create and Add an Oracle Logistics Adapter Connection to an Integration

Oracle Logistics Adapter Capabilities

The Oracle Logistics Adapter enables you to create an Oracle Integration connection to a specific Oracle Logistics Cloud (Transportation Management and Global Trade Management) instance. The connection can then be used to create an integration that calls Oracle Logistics Cloud web services and exposes a web service that Oracle Logistics Cloud can call.

The Oracle Logistics Adapter provides the following benefits:

- Configure the Oracle Logistics Adapter as a trigger (inbound) connection or as an invoke (outbound) connection in an integration.
- Use existing web service capabilities.
- Select specific interfaces for your integration such as Release and ActualShipment.

The Oracle Logistics Adapter is one of many predefined adapters included with Oracle Integration.

What Application Version Is Supported?

For information about which application version is supported by this adapter, see the Oracle Integration Adapters Certification Matrix under section Oracle Integration Adapters Certification at the top of the page:

Oracle Integration Adapters Certification Matrix

About Oracle Logistics Adapter Use Cases

The Oracle Logistics Adapter can be used in a variety of integration scenarios. The Oracle Logistics Adapter uses Oracle Logistics Cloud's existing TransmissionService for sending inbound transmissions (as an invoke) and receiving outbound transmissions from Oracle Logistics Cloud (as a trigger).
The “Sample Integration between Logistics Cloud and Supply Chain Cloud” chapter of *Integrating with Integration Cloud Services* in the Transportation and Global Trade Management document library provides a description of how these products can be integrated using Oracle Integration. The corresponding integrations may be downloaded from My Oracle Support note 2209248.1 and imported into Oracle Integration.

One part of this sample involves sending a fulfillment line from Order Management Cloud into Oracle Logistics Cloud as an order release, and sending a response back to Order Management Cloud.

1. Create a connection from the Oracle Logistics Adapter using the release element.
2. Create a connection from the Oracle ERP Cloud Adapter as a trigger connection using the fulfillment line.
3. Create another connection from the Oracle ERP Cloud Adapter as an invoke connection using the fulfillment response.
4. To create an order release from a fulfillment line:
   a. Create a new integration for creating an order release.
   b. Drag the trigger connection created from the Oracle ERP Cloud Adapter to the trigger section.
   c. Drag the connection created from the Oracle Logistics Adapter to the invoke section.
   d. Configure mapping between the fulfillment line and release schemas.
   e. Trigger the integration from Order Management Cloud to create the order release in Oracle Logistics Cloud.
5. To send a response from Oracle Logistics Cloud to Order Management Cloud:
   a. Create a new integration for sending a fulfillment response.
   b. Drag the connection created from the Oracle Logistics Adapter to the trigger section.
   c. Drag the invoke connection created from the Oracle Logistics Adapter to the invoke section.
   d. Configure mapping between the release and fulfillment response schemas.
   e. Trigger the new integration from Oracle Logistics Cloud to post an order release with updated planning information, which is transformed into the fulfillment response.

**Workflow to Create and Add an Oracle Logistics Adapter Connection to an Integration**

You follow a very simple workflow to create a connection with an adapter and include the connection in an integration in Oracle Integration.
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create the adapter connections for the applications you want to integrate. The connections can be reused in multiple integrations and are typically created by the administrator. Oracle Logistics Adapter connections must use the TransmissionService for version 6.4.2 or greater.</td>
<td>Create an Oracle Logistics Adapter Connection</td>
</tr>
<tr>
<td>2</td>
<td>Create the integration. When you do this, you add trigger and invoke connections to the integration.</td>
<td>Create Integrations and Add the Oracle Logistics Adapter Connection to an Integration</td>
</tr>
<tr>
<td>3</td>
<td>Map data between the trigger connection data structure and the invoke connection data structure. <strong>Note:</strong> Data in Oracle Logistics Cloud generally resides in a domain. This can be a single domain for an entire implementation or multiple domains segregated by business unit, customer, or other criteria. Oracle Logistics Cloud domains may not correlate to the upstream system, so the domain must be specified in the mapper in the inbound direction to Oracle Logistics Cloud. For example, element <code>ORDER123</code> in Supply Chain Cloud can map into Oracle Logistics Cloud as element <code>MY_DOMAIN.ORDER123</code>.</td>
<td>Map Data of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td>4</td>
<td>(Optional) Create lookups that map the different values used by those applications to identify the same type of object (such as units of measure or country codes).</td>
<td>Manage Lookups of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td>5</td>
<td>Activate the integration.</td>
<td>Manage Integrations of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td>6</td>
<td>Monitor the integration on the dashboard.</td>
<td>Monitor Integrations of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td>7</td>
<td>Track payload fields in messages during runtime.</td>
<td>Assign Business Identifiers for Tracking Fields in Messages and Manage Business Identifiers for Tracking Fields in Messages of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td>8</td>
<td>Manage errors at the integration level, connection level, or specific integration instance level.</td>
<td>Manage Errors of Using Integrations in Oracle Integration</td>
</tr>
</tbody>
</table>
Create an Oracle Logistics Adapter Connection

A connection is based on an adapter. You define connections to the specific cloud applications that you want to integrate.

Topics:

• Prerequisites for Creating a Connection
• Create a Connection
• Upload an SSL Certificate

Prerequisites for Creating a Connection

You must satisfy the following prerequisites to create a connection with the Oracle Logistics Adapter:

• Ensure your Oracle Logistics Cloud instance is version 6.4.2 or greater.

• Create a user account in Oracle Logistics Cloud with the INTEGRATION role. You specify this user account when creating an Oracle Logistics Adapter connection on the Connections page of Oracle Integration. See Oracle Logistics Cloud.

• Test that the WSDL is accessible by going to https://servicename-identity_domain_name.otm.data-center.oraclecloud.com/GC3Services/TransmissionService/call?wsdl. See Transportation and Global Trade Management Cloud Getting Started Guide.

  The Oracle Logistics Cloud only supports the TransmissionService WSDL. Save the TransmissionService WSDL to a file and subsequently import it into Oracle Integration when creating the connection.

• Send data from Oracle Logistics Cloud to another system through Oracle Integration. This action can be performed by calling the Oracle Integration web service for the necessary integration. An external system should be created in Oracle Logistics Cloud that points to the Oracle Integration endpoint, which can be obtained from an activated integration in Oracle Integration. To improve performance, use Out XML profiles to limit the amount of data sent to Oracle Integration. The Oracle Logistics Cloud FA domain includes two sample external system records (OM ICS SERVICE and WSH ICS SERVICE) as examples.

Create a Connection

The first step in creating an integration is to create the connections to the applications with which you want to share data.

1. In the navigation pane, click Integrations, then click Connections.
2. Click Create.

Note:

You can also create a connection in the integration canvas of:
- An orchestrated integration (See Define Inbound Triggers and Outbound Invokes.)
- A basic routing integration (See Add a Trigger (Source) Connection.)

The Create Connection — Select Adapter dialog is displayed.

3. Select an adapter from the dialog. You can also search for the type of adapter to use by entering a partial or full name in the Search field, and clicking Search. The Create New Connection dialog is displayed.

4. Enter the information to describe the connection.
   - Enter a meaningful name to help others find your connection when they begin to create their own integrations. The name you enter is automatically added in capital letters to the Identifier field. If you modify the identifier name, do not include a blank space (for example, Sales Opportunity).
   - Select the role (direction) in which to use this connection (trigger, invoke, or both). Only the roles supported by this adapter are displayed for selection. When you select a role, only the connection properties and security policies appropriate to that role are displayed on the Connections page. If you select an adapter that supports both invoke and trigger, but select only one of those roles, then try to drag the adapter into the section you did not select, you receive an error (for example, configure an Oracle Service Cloud (RightNow) Adapter as only an invoke, but drag the adapter to the trigger section).
   - Enter an optional description of the connection.
5. Click Create.

Your connection is created and you are now ready to configure connection details, such as email contact, connection properties, security policies, connection login credentials, and (for certain connections) agent group.

Add a Contact Email

From the Connection Administrator section of the connection, you can add a contact email address for notifications.

1. In the Email Address field, enter an email address to receive email notifications when problems occur.
2. In the upper right corner, click Save.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Click Configure Connectivity.

The Connection Properties dialog is displayed.

2. Enter the WSDL URL for your Oracle Logistics Cloud instance. See Transportation and Global Trade Management Cloud Getting Started Guide.
3. Click OK.
4. Configure connection security.

Configure Connection Security

Configure security for your Oracle Logistics Adapter connection by selecting the security policy and security token.
1. Click **Configure Credentials**.

2. Enter your login credentials. These are the credentials for the INTEGRATION user you previously created in Oracle Logistics Cloud. For more information, see [Prerequisites for Creating a Connection](#).
   a. Select the security policy. Only the Username Password Token policy is supported. It cannot be deselected.
   b. Enter the username and password.
   c. Reenter the password a second time.

3. Click **OK**.

### Test the Connection

Test your connection to ensure that it is successfully configured.

1. In the upper right corner of the page, click **Test**.

2. If your adapter connection uses a WSDL, you are prompted to select the type of connection testing to perform:
   - **Validate and Test**: Performs a full validation of the WSDL, including processing of the imported schemas and WSDLs. Complete validation can take several minutes depending on the number of imported schemas and WSDLs. No requests are sent to the operations exposed in the WSDL.
   - **Test**: Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.

   If successful, the following message is displayed and the progress indicator shows 100%.
   
   Connection *connection_name* was tested successfully.

3. If your connection was unsuccessful, an error message is displayed with details. Verify that the configuration details you entered are correct.

4. When complete, click **Save**, then click **Close**.

### Upload an SSL Certificate

Certificates are used to validate outbound SSL connections. If you make an SSL connection in which the root certificate does not exist in Oracle Integration, an exception is thrown. In that case, you must upload the appropriate certificate. A certificate enables Oracle Integration to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration.

To upload an SSL certificate:

1. In the navigation pane, click **Integrations**, then click the ‹ arrow next to **Designer**.

2. Click **Settings > Certificates**.

   All certificates currently uploaded to the trust store are displayed in the Certificates dialog. The **Filter By > Type** list displays the following details:
   - **Preinstalled**: Displays the certificates automatically installed in Oracle Integration. These certificates cannot be deleted.
• **Uploaded**: Displays the certificates uploaded by individual users. These certificates can be deleted and updated.

You can also search for certificates in the **Search** field. The search results are limited to a maximum of ten records sorted by name for performance and usability reasons. To ensure that your search results are more granular, enter as much of the certificate name as possible.

3. Click **Upload** at the top of the page.

4. In the Upload Certificate dialog box, select the certificate type. Each certificate type enables Oracle Integration to connect with external services.
   - **Trust Certificate**: Use this option to upload a trust certificate.
     a. Enter a unique alias for the certificate.
     b. Click **Browse**, then select the trust file (for example, `.cer` or `.crt`) to upload.
   - **Message Protection Certificate**: Use this option to upload a keystore certificate with SAML token support. Create, read, update, and delete (CRUD) operations are supported on this type of certificate.
     a. Enter a unique alias for the certificate.
     b. Click **Browse**, then select the certificate file (`.cer` or `.crt`) to upload.
   - **Identity Certificate**: Use this option to upload a certificate for two-way SSL communication.
     a. Click **Browse**, then select the keystore file (`.jks`) to upload.
     b. Enter the password of the keystore being imported.
     c. Enter the comma-separated list of aliases from the keystore being imported.
     d. Enter the comma-separated list of passwords corresponding to key aliases.
     e. If you want to display the passwords in clear text, select **Show Key Password(s)**. This enables you to ensure that you are correctly entering a list of keystore passwords.

5. Click **Upload**.

6. Click the certificate name to view details such as the subject of the certificate, the issuer of the certificate, the date the certificate was issued, and the date the certificate expires.
Add the Oracle Logistics Adapter Connection to an Integration

When you drag the Oracle Logistics Adapter into the trigger or invoke area of an integration, the Adapter Endpoint Configuration Wizard appears. This wizard guides you through the configuration of the Oracle Logistics Adapter endpoint properties.

These topics describe the wizard pages that guide you through configuration of the Oracle Logistics Adapter as an trigger and invoke in an integration.

Topics:
- Basic Info Page
- Trigger Request Page
- Invoke Operation Page
- Summary Page

Basic Info Page

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

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you want to call your endpoint?</td>
<td>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:</td>
</tr>
<tr>
<td></td>
<td>• Blank spaces (for example, My Inbound Connection)</td>
</tr>
<tr>
<td></td>
<td>• Special characters (for example, #;83&amp; or righ(t)now4)</td>
</tr>
<tr>
<td></td>
<td>• Multibyte characters</td>
</tr>
<tr>
<td>What does this endpoint do?</td>
<td>Enter an optional description of the connection's responsibilities. For example:</td>
</tr>
<tr>
<td></td>
<td>This connection receives an inbound request to synchronize account information with the cloud application.</td>
</tr>
</tbody>
</table>
Trigger Request Page

Configure the Oracle Logistics Adapter to receive a business object as a request from the Oracle Logistics application to map to the target system. This selection invokes the integration.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter by object name</td>
<td>Enter the initial letters to filter the display of business objects.</td>
</tr>
<tr>
<td>Select a Business Object</td>
<td>Select a single or multiple business objects from the Oracle Logistics Cloud application to receive as a request that starts the integration.</td>
</tr>
</tbody>
</table>

Invoke Operation Page

Enter the Oracle Logistics invoke operation values for your integration.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Operation</td>
<td>Select the cloud operation to perform. The operations that are displayed are based on the contents of the WSDL file.</td>
</tr>
<tr>
<td>Filter by object name</td>
<td>Enter the initial letters of an object name to display a range of objects.</td>
</tr>
<tr>
<td>Select Business Objects</td>
<td>Select a single or multiple business objects from the Oracle Logistics application. The selected operation acts upon these business objects. Be careful when mapping to a Transmission with multiple business object interfaces. You must create a GLogXMLElement for each interface. See Multiple Element Types are Selected for a Transmission for details.</td>
</tr>
<tr>
<td>Your Selected Business Objects</td>
<td>Displays the selected business objects.</td>
</tr>
</tbody>
</table>
You can review the specified adapter configuration values on the Summary page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Displays a summary of the configuration values you defined on previous pages of the wizard. The information that is displayed can vary by adapter. For some adapters, the selected business objects and operation name are displayed. 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. Click Cancel to cancel your configuration details.</td>
</tr>
</tbody>
</table>
Troubleshoot the Oracle Logistics Adapter

Review the following topics to learn about troubleshooting issues with Oracle Logistics Adapter

Topics:

- Multiple Element Types are Selected for a Transmission

Additional integration troubleshooting information is provided. See Troubleshoot Oracle Integration in Using Integrations in Oracle Integration.

Multiple Element Types are Selected for a Transmission

When multiple element types are selected for a transmission, per the schema, a GlogXMLElement can only contain a single GLogXMLTransaction. However, Oracle Integration lists multiple GLogXMLTransactions under GLogXMLElement in the mapper. In this case, right-click the icon to the left of GLogXMLElement and select Repeat Element. Then map to only one of the GLogXMLTransaction elements within each GLogXMLElement.