

Oracle® Cloud

Using the Oracle Logistics Adapter with Oracle Integration Generation 2



E85536-11
December 2022

The Oracle logo, consisting of the word "ORACLE" in white, uppercase, sans-serif font, centered within a solid red square.

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Oracle Cloud Using the Oracle Logistics Adapter with Oracle Integration Generation 2,

E85536-11

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Preface

This guide describes how to configure this adapter as a connection in an integration in Oracle Integration.



Note:

The use of this adapter may differ depending on the features you have, or whether your instance was provisioned using Standard or Enterprise edition. These differences are noted throughout this guide.

Topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Diversity and Inclusion](#)
- [Related Resources](#)
- [Conventions](#)

Audience

This guide is intended for developers who want to use this 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>.

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Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and

partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Related Resources

See these Oracle resources:

- Oracle Cloud
<http://cloud.oracle.com>
- *Using Integrations in Oracle Integration Generation 2*
- *Using the Oracle Mapper with Oracle Integration Generation 2*

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.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

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](#)



Note:

There are overall service limits for Oracle Integration. A service limit is the quota or allowance set on a resource. See [Service Limits](#).

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 [Connectivity Certification Matrix](#).

See [Connectivity 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.

Step	Description	More Information
1	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.	Create an Oracle Logistics Adapter Connection
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	Create Integrations and Add the Oracle Logistics Adapter Connection to an Integration
3	Map data between the trigger connection data structure and the invoke connection data structure. Note: 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 ORDER123 in Supply Chain Cloud can map into Oracle Logistics Cloud as element MY_DOMAIN.ORDER123 .	Map Data in <i>Using Integrations in Oracle Integration Generation 2</i>
4	(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).	Manage Lookups in <i>Using Integrations in Oracle Integration Generation 2</i>
5	Activate the integration.	Manage Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
6	Monitor the integration on the dashboard.	Monitor Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
7	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Manage Business Identifiers for Tracking Fields in Messages in <i>Using Integrations in Oracle Integration Generation 2</i>

Step	Description	More Information
8	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in <i>Using Integrations in Oracle Integration Generation 2</i>

2

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.
- Configure web service security and authentication. See the Security Guide located in the [Transportation and Global Trade Management Documentation Web Library](#) and the "Integrating with Other Systems" chapter of the *Oracle Transportation Management Cloud Service Getting Started Guide* in the [Oracle Logistics Cloud Library](#) for details.

Create a Connection

Before you can build an integration, you have to create the connections to the applications with which you want to share data.


To create a connection in Oracle Integration:

1. In the left navigation pane, click **Home > Integrations > 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.)

3. In the Create Connection — Select Adapter dialog, select the adapter to use for this connection. To find the adapter, scroll through the list, or enter a partial or full name in the **Search** field and click 
Search.
4. In the Create Connection dialog, enter the information that describes this connection.
 - a. 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, don't include blank spaces (for example, SALES OPPORTUNITY).
 - b. Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
 - c. Select the role (direction) in which to use this connection (trigger, invoke, or both). Only the roles supported by the 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, you'll get an error when you try to drag the adapter into the section you didn't select. For example, let's say you configure a connection for the Oracle Service Cloud (RightNow) Adapter as only an **invoke**. Dragging the adapter to a **trigger** section in the integration produces an error.
 - d. Enter an optional description of the connection.
5. Click **Create**.

Your connection is created. You're now ready to configure the connection details, such as connection properties, security policies, connection login credentials, and (for certain connections) agent group.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Connection Properties** section.
2. Enter the WSDL URL for your Oracle Logistics Cloud instance. See [Transportation and Global Trade Management Cloud Getting Started Guide](#).

Configure Connection Security

Configure security for your Oracle Logistics Adapter connection by selecting the security policy and security token.

1. Go to the **Security** section.
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.

Test the Connection

Test your connection to ensure that it's configured successfully.

1. In the page title bar, click **Test**. What happens next depends on whether your connection uses a Web Services Description Language (WSDL) file.

If Your Connection...	Then...
Doesn't use a WSDL	The test starts automatically and validates the inputs you provided for the connection.
Uses a WSDL	A dialog prompts you to select the type of connection testing to perform: <ul style="list-style-type: none"> • 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.

2. Wait for a message about the results of the connection test.
 - If the test was successful, then the connection is configured properly.
 - If the test failed, then edit the configuration details you entered. Check for typos, verify URLs and credentials, and download the diagnostic logs for additional details. Continue to test until the connection is successful.
3. When complete, click **Save**.

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 left navigation pane, click **Home > Settings > Certificates**. All certificates currently uploaded to the trust store are displayed in the Certificates dialog. The



link enables you to filter by name, certificate expiration date, status, type, category, and installation method (user-installed or system-installed). Certificates installed by the system cannot be deleted.

Certificates				Upload
Name	Type	Category	Status	
mykey3 <small>EXPIRES IN 1 MONTH</small>	X.509	Identity	Configured	
mykey2 <small>EXPIRED</small>	X.509	Identity	Configured	
recert1586867745048 <small>EXPIRES IN 4 YEARS</small>	X.509	Trust	Configured	
recert1586863610817 <small>EXPIRES IN 4 YEARS</small>	X.509	Trust	Configured	
recert1586857607511 <small>EXPIRES IN 4 YEARS</small>	X.509	Trust	Configured	
recert1586857416600 <small>EXPIRES IN 4 YEARS</small>	X.509	Trust	Configured	

2. Click **Upload** at the top of the page. The Upload Certificate dialog box is displayed.
3. Enter an alias name and optional description.
4. In the **Type** field, select the certificate type. Each certificate type enables Oracle Integration to connect with external services.
 - **X.509 (SSL transport)**
 - **SAML (Authentication & Authorization)**
 - **PGP (Encryption & Decryption)**

X.509 (SSL transport)

1. Select a certificate category.
 - a. **Trust:** Use this option to upload a trust certificate.
 - i. Click **Browse**, then select the trust file (for example, `.cer` or `.crt`) to upload.
 - b. **Identity:** Use this option to upload a certificate for two-way SSL communication.

- i. Click **Browse**, then select the keystore file (.jks) to upload.
- ii. Enter the comma-separated list of passwords corresponding to key aliases.

 **Note:**

When an identity certificate file (JKS) contains more than one private key, all the private keys must have the same password. If the private keys are protected with different passwords, the private keys cannot be extracted from the keystore.

- iii. Enter the password of the keystore being imported.
- c. Click **Upload**.

SAML (Authentication & Authorization)

1. Note that **Message Protection** is automatically selected as the only available certificate category and cannot be deselected. Use this option to upload a keystore certificate with SAML token support. Create, read, update, and delete (CRUD) operations are supported with this type of certificate.
2. Click **Browse**, then select the certificate file (.cer or .crt) to upload.
3. Click **Upload**.

PGP (Encryption & Decryption)

1. Select a certificate category. Pretty Good Privacy (PGP) provides cryptographic privacy and authentication for communication. PGP is used for signing, encrypting, and decrypting files. You can select the private key to use for encryption or decryption when configuring the stage file action.
 - a. **Private:** Uses a private key of the target location to decrypt the file.
 - i. Click **Browse**, then select the PGP file to upload.
 - ii. Enter the PGP private key password.
 - b. **Public:** Uses a public key of the target location to encrypt the file.
 - i. Click **Browse**, then select the PGP file to upload.
 - ii. In the **ASCII-Armor Encryption Format** field, select **Yes** or **No**. **Yes** shows the format of the encrypted message in ASCII armor. ASCII armor is a binary-to-textual encoding converter. ASCII armor formats encrypted messaging in ASCII. This enables messages to be sent in a standard messaging format. This selection impacts the visibility of message content. **No** causes the message to be sent in binary format.
 - iii. From the **Cipher Algorithm** list, select the algorithm to use. Symmetric-key algorithms for cryptography use the same cryptographic keys for both encryption of plain text and decryption of cipher text.
- c. Click **Upload**.

3

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.

Element	Description
What do you want to call your endpoint?	<p>Provide a meaningful name so that others can understand the responsibilities of this connection. You can include English alphabetic characters, numbers, underscores, and hyphens in the name. You can't include the following characters:</p> <ul style="list-style-type: none">• No blank spaces (for example, My Inbound Connection)• No special characters (for example, #;83& or righ(t)now4) except underscores and hyphens• No multibyte characters
What does this endpoint do?	<p>Enter an optional description of the connection's responsibilities. For example:</p> <pre>This connection receives an inbound request to synchronize account information with the cloud application.</pre>

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.

Element	Description
Filter by object name	Enter the initial letters to filter the display of business objects.
Select a Business Object	Select a single or multiple business objects from the Oracle Logistics Cloud application to receive as a request that starts the integration.

Invoke Operation Page

Enter the Oracle Logistics invoke operation values for your integration.

Element	Description
Cloud Operation	Select the cloud operation to perform. The operations that are displayed are based on the contents of the WSDL file.
Filter by object name	Enter the initial letters of an object name to display a range of objects.
Select Business Objects	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.
Your Selected Business Objects	Displays the selected business objects.

Summary Page

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

Element	Description
Summary	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 . To cancel your configuration details, click Cancel .

4

Troubleshoot the Oracle Logistics Adapter

Review the following topics to learn about troubleshooting issues with the 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 Generation 2* and the [Oracle Integration Troubleshooting page](#) in the Oracle Help Center.

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.