

# Oracle® Cloud

## Using the LinkedIn Adapter with Oracle Integration Generation 2



E85504-11  
December 2022

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

ORACLE®

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

E85504-11

Copyright © 2019, 2022, Oracle and/or its affiliates.

Primary Author: Oracle Corporation

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

# Contents

## Preface

---

Audience	iv
Documentation Accessibility	iv
Diversity and Inclusion	iv
Related Resources	v
Conventions	v

## 1 Understand the LinkedIn Adapter

---

LinkedIn Adapter Capabilities	1-1
What Application Version Is Supported?	1-1
Workflow to Create and Add a LinkedIn Adapter Connection to an Integration	1-2

## 2 Create a LinkedIn Adapter Connection

---

Prerequisites for Creating a Connection	2-1
Create a Connection	2-1
Configure Connection Security	2-2
Test the Connection	2-3
Upload an SSL Certificate	2-3

## 3 Add the LinkedIn Adapter Connection to an Integration

---

Basic Information Page	3-1
Select an Operation Page	3-1
Summary Page	3-2

## 4 Troubleshoot the LinkedIn Adapter

---

Unauthorized Access Response	4-1
Specify the Port Number with the Authorized Redirect URL	4-1

# 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>.

**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.

## 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
<b>boldface</b>	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 LinkedIn Adapter

Review the following conceptual topics to learn about the LinkedIn 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:

- [LinkedIn Adapter Capabilities](#)
- [What Application Version Is Supported?](#)
- [Workflow to Create and Add a LinkedIn 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](#).

## LinkedIn Adapter Capabilities

The LinkedIn Adapter enables you to use basic LinkedIn services in an integration in Oracle Integration on behalf of an authenticated user.

The LinkedIn Adapter enables you to:

- Access the user's basic LinkedIn profile.
- Share content on LinkedIn.

### Note:

The LinkedIn Adapter can only serve as an invoke connection when you create integrations.

## 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](#).

## Workflow to Create and Add a LinkedIn 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.	<a href="#">Create a LinkedIn Adapter Connection</a>
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	Create Integrations and <a href="#">Add the LinkedIn Adapter Connection to an Integration</a>
3	Map data between the trigger connection data structure and the invoke connection data structure.	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 gender codes 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>
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 a LinkedIn 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 for creating a connection with the LinkedIn Adapter.

1. Go to the LinkedIn developer console (<https://www.linkedin.com/developer/apps>) to create and register an application.
  - a. Click **My Apps** > **Create Application** to open the Create New Application dialog.
  - b. Complete the required fields, and click **Submit**.

The client ID and client secret are provided by LinkedIn when your application is registered. The client ID and client secret are application-specific and are different for every application.
  - c. Specify the authorized redirect URL when prompted using the following format:

```
https://hostname:port/icsapis/agent/oauth/callback
```

2. Ensure that you have the credentials required to provide consent for access to the user's LinkedIn profile.
3. Know the scope of the access request. Scopes enable you to specify which type of access you need, for example: `r_basicprofile+r_emailaddress+w_share`.

## 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 Security

Configure security for your LinkedIn connection by setting access credentials.

1. Go to the **Security** section.
2. Enter your login credentials.
  - a. Enter the Client ID. This is a unique string provided to your client on the LinkedIn developer console (<https://www.linkedin.com/developer/apps>).
  - b. Enter the Client Secret. This is also a unique string provided to your client on the LinkedIn developer console (<https://www.linkedin.com/developer/apps>).

- c. Enter the Scope. The scope of the access request. Scopes enable you to specify which type of access you need, for example:  
r\_basicprofile+r\_emailaddress+w\_share.
3. Click **Provide Consent**.  
Prompts LinkedIn to ask consent of the user in order to authorize the application's access to the LinkedIn profile.

## 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 adapter connection uses a Web Services Description Language (WSDL) file. Only some adapter connections use WSDLs.

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"> <li>• <b>Validate and Test:</b> 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.</li> <li>• <b>Test:</b> Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.</li> </ul>

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 <span style="float: right;">Upload</span>			
6 Certificates			
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 LinkedIn Adapter Connection to an Integration

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

These topics describe the wizard pages that guide you through configuration of the LinkedIn Adapter as an invoke in an integration. The LinkedIn Adapter cannot be used as a trigger in an integration.

### Topics:

- [Basic Information Page](#)
- [Select an Operation Page](#)
- [Summary Page](#)

### Basic Information Page

Enter the basic information parameters.

Element	Description
<b>What do you want to call your endpoint?</b>	Provide a meaningful name so that others can understand the connection. For example, you may want to name it <code>LinkedInTarget_update_status</code> . You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following: <ul style="list-style-type: none"><li>• Blank spaces (for example, <code>My FTP Connection</code>)</li><li>• Special characters (for example, <code>#;83&amp;</code> or <code>righ(t)now4</code>)</li><li>• Multibyte characters</li></ul>
<b>What does this endpoint do?</b>	Enter an optional description of the connection's responsibilities. For example: <code>This endpoint updates status on a user's LinkedIn timeline.</code>

### Select an Operation Page

Select the LinkedIn operation you want to perform.

Element	Description
<b>Get basic profile</b>	Gets LinkedIn basic profile fields.
<b>Share</b>	Gets additional user profile fields.
<b>Share user generated content</b>	Shares user generated content in the user's account.

## Summary Page

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

Element	Description
<b>Summary</b>	<p>Displays a summary of the configuration values you defined on previous pages of the wizard.</p> <p>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.</p> <p>To return to a previous page to update any values, click the appropriate tab in the left panel or click <b>Back</b>.</p> <p>To cancel your configuration details, click <b>Cancel</b>.</p>

# 4

## Troubleshoot the LinkedIn Adapter

The following topics can help you troubleshoot problems you may encounter with the LinkedIn Adapter.

### Topics:

- [Unauthorized Access Response](#)
- [Specify the Port Number with the Authorized Redirect URL](#)

### Note:

Oracle Integration offers a number of pre-assembled solutions, known as recipes, that provide you with a head start in building your integrations. You can start with a recipe, and then customize it to fit your needs and requirements. Depending upon the solution provided, a variety of adapters are configured in the pre-assembled solutions.

See the Recipes page on the Oracle Help Center.

## Unauthorized Access Response

If you make an API call using an invalid token, you will receive a "401 Unauthorized" response back from the server.

This might be caused by one or more of the following:

- An expired access token. Generated access tokens have a lifespan of only 60 days.
- The user might have revoked the permission they initially granted to your application.
- You have changed the member permissions (scope) your application is requesting.

To resolve the issue, you have to refresh the LinkedIn connection and ask the user to authorize your application for access the LinkedIn profile instance used in the integration.

## Specify the Port Number with the Authorized Redirect URL

When configuring the authorized redirect URL, ensure that you specify the port number. For example:

```
https://host:443/icsapis/agent/oauth/callback
```

Not specifying the port number in the URL results in an error saying the application wasn't authorized for the redirect URL.