Oracle® Cloud
Using the LinkedIn Adapter with Oracle Integration
## Contents

### Preface

- Audience iv
- Documentation Accessibility iv
- Related Resources iv
- 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
  - Add a Contact Email 2-3
  - Configure Connection Security 2-3
  - Test the Connection 2-3
- Upload an SSL Certificate 2-4

### 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 the LinkedIn 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 LinkedIn 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:
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>
Understanding 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

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.
- Access user information.
- Post status updates on LinkedIn.
- Share content on LinkedIn.
- Get updates about user activity (for example, what the user has shared recently 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 Oracle Integration Adapters Certification Matrix under section Oracle Integration Adapters Certification at the top of the page:

Oracle Integration Adapters 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.

<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.</td>
<td>Create a LinkedIn Adapter Connection</td>
</tr>
<tr>
<td></td>
<td>The connections can be reused in multiple integrations and are typically</td>
<td></td>
</tr>
<tr>
<td></td>
<td>created by the administrator.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Create the integration. When you do this, you add trigger and invoke</td>
<td>Create Integrations and Add the LinkedIn Adapter</td>
</tr>
<tr>
<td></td>
<td>connections to the integration.</td>
<td>Connection to an Integration</td>
</tr>
<tr>
<td>3</td>
<td>Map data between the trigger connection data structure and the invoke</td>
<td>Map Data of Using Integrations in Oracle Integration</td>
</tr>
<tr>
<td></td>
<td>connection data structure.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(Optional) Create lookups that map the different values used by those</td>
<td>Manage Lookups of Using Integrations in Oracle</td>
</tr>
<tr>
<td></td>
<td>applications to identify the same type of object (such as gender codes or</td>
<td>Integration</td>
</tr>
<tr>
<td></td>
<td>country codes).</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Activate the integration.</td>
<td>Manage Integrations of Using Integrations in Oracle</td>
</tr>
<tr>
<td>6</td>
<td>Monitor the integration on the dashboard.</td>
<td>Monitor Integrations of Using Integrations in Oracle</td>
</tr>
<tr>
<td>7</td>
<td>Track payload fields in messages during runtime.</td>
<td>Assign Business Identifiers for Tracking Fields in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Messages and Manage Business Identifiers for Tracking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fields in Messages of Using Integrations in Oracle</td>
</tr>
<tr>
<td>8</td>
<td>Manage errors at the integration level, connection level, or specific</td>
<td>Manage Errors of Using Integrations in Oracle</td>
</tr>
<tr>
<td></td>
<td>integration instance level.</td>
<td>Integration</td>
</tr>
</tbody>
</table>
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

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.
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 Security**

Configure security for your LinkedIn connection by setting access credentials.

1. Click **Configure Credentials**.

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.

4. Click **OK**.

   You are now ready to test your connection.

**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%.
A connection named 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 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.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
</table>
| What do you want to call your endpoint? | Provide a meaningful name so that others can understand the connection. For example, you may want to name it LinkedInTarget_update_status. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following:
  - Blank spaces (for example, My FTP 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 endpoint updates status on a user's LinkedIn timeline. |

Select an Operation Page

Select the LinkedIn operation you want to perform.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get Basic Profile</td>
<td>Gets LinkedIn basic profile fields.</td>
</tr>
<tr>
<td>Get Full Profile</td>
<td>Gets additional user profile fields.</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Get Latest Shared Item by Member</td>
<td>Gets the most recent updates that users posted on LinkedIn or a list of the articles they &quot;shared&quot; with their connections.</td>
</tr>
<tr>
<td>Share</td>
<td>Shares content on behalf of an authenticated user. Content is shared on the user's timeline.</td>
</tr>
<tr>
<td>Status Update</td>
<td>Updates status on the user's LinkedIn timeline. For example, when the user writes something on their timeline.</td>
</tr>
</tbody>
</table>

**Summary Page**

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

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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**. Click **Cancel** to cancel your configuration details. |
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

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

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 when configuring the adapter on the Connections page:

"Authorization Failed: String index out of range: -12"