Oracle® Cloud

Using the Facebook Adapter with Oracle Integration
Preface

This guide describes how to configure the Facebook 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 Facebook 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><code>monospace</code></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>
1

Understand the Facebook Adapter

Review the following conceptual topics to learn about the Facebook 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:

• Facebook Adapter Capabilities
• What Application Version Is Supported?
• About Facebook Adapter Use Cases
• Workflow to Create and Add a Facebook Adapter Connection to an Integration

Facebook Adapter Capabilities

The Facebook Adapter enables you to create an integration with a Facebook application.

Facebook is an online social networking service. You can create a user profile, add other users as friends, exchange messages, post status updates, post photos, share videos, and receive notifications when others update their profiles. You can also join special interest user groups and categorize friends into categories such as people from work or close friends.

The Facebook Adapter is one of many predefined adapters included with Oracle Integration. You can configure the Facebook Adapter as a connection in an integration in 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 Facebook Adapter Use Cases

The Facebook Adapter can be used in many different scenarios. For example, an item created in PIM results in a posting done to a page. The Facebook Adapter can subscribe to the created item or an updated event, and can update the status on a Facebook page.
# Workflow to Create and Add a Facebook 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.</td>
<td>Create a Facebook 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 Facebook 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.</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 gender codes 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 a Facebook 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

To use the Facebook Adapter, you must have access to the Facebook Graph API for your integration. To access the Graph API, you must create a Facebook application.

**Note:**
Create a separate Facebook application for every Oracle Integration instance.

**Note:**
To create a Facebook application:

1. Go to [https://developers.facebook.com](https://developers.facebook.com).
2. Log in with your Facebook credentials or create an account if you do not currently have one.
3. On the new page to which you are redirected, click **Create App** to create your first Facebook application or, if you previously created an application, click **My Apps > Add a New App**.

Before creating a Facebook connection, you must upload the trusted Facebook public certificate to Oracle Integration. The Facebook public certificate can be downloaded from [https://www.facebook.com](https://www.facebook.com).

1. In your browser, click the lock icon to the left of the [https://www.facebook.com](https://www.facebook.com) URL.
2. Select **Secure Connection > More Information** to access and download the certificate.
3. Rename the `FacebookCertificate.txt` file extension to `.cer`.
4. To upload the certificate, see **Upload an SSL Certificate**.
The Create a New App ID dialog is displayed.

a. Provide a name for the application.
b. Provide a contact email address.
c. Select a category for your application.
d. Click **Create App ID**.
e. Enter the requested value when prompted in the Security Check dialog and click **Submit**.

You are redirected to the Facebook developer Dashboard page. The application ID and application secret are displayed.

4. Copy and paste these values because you need them later when creating a Facebook Adapter connection. The application ID represents the client ID and the application secret represents the client secret that you must specify when creating the connection. These keys are sensitive data, and must be kept secret.

You also need to configure your Facebook application with the callback URL.

5. Perform the following steps:

a. Click the **Add Product** tab on the left side.
b. In the **Facebook Login** section, click **Get Started**.
   
The Client OAuth Settings page is displayed.
c. Under this section, find the **Valid OAuth redirect URIs** input field.
d. Enter the callback URL using the following format, then click **Save Changes**:

   https://ICS_hostname:ICS_SSL_port_number/icsapis/agent/oauth/callback

   For example:
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 Security

Configure security for your Facebook connection by selecting the security policy and setting login credentials.

1. Click Configure Credentials.

2. In the Security Policy field, note that the Facebook OAuth Authorization Code Credentials security policy is displayed by default, and cannot be deselected.

3. In the Client ID field, enter the client ID created after completing the steps in Prerequisites for Creating a Connection.
4. In the **Client Secret** field, enter the client secret created after completing the steps in **Prerequisites for Creating a Connection**.

5. In the **Scope** field, enter the following scopes, each separated by a blank space.

   - user_posts
   - user_likes
   - publish_actions
   - manage_pages

6. Click **Provide Consent** to allow consent.

7. 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%.

   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 Facebook Adapter Connection to an Integration

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

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

Topics:
- Basic Info Page
- Invoke Operation Selection 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$ 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: This connection receives an inbound request to synchronize account information with the cloud application.</td>
</tr>
</tbody>
</table>
Invoke Operation Selection Page

Select the Facebook API operation.

The following table describes the key information on the Facebook Adapter Operation Selection page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Operation</td>
<td>Select the Facebook API operation to perform:</td>
</tr>
<tr>
<td></td>
<td>• Get User’s Home Page Feed</td>
</tr>
<tr>
<td></td>
<td>• Get All Feed for the Page</td>
</tr>
<tr>
<td></td>
<td>• Get Posts Published by the Page</td>
</tr>
<tr>
<td></td>
<td>• Post a Message to a Page</td>
</tr>
<tr>
<td></td>
<td>• Get Details of the Page</td>
</tr>
<tr>
<td></td>
<td>• Get TV Shows this Person Likes</td>
</tr>
<tr>
<td></td>
<td>• Get Social Context of the User</td>
</tr>
<tr>
<td></td>
<td>• Get User’s Friends</td>
</tr>
<tr>
<td></td>
<td>• Get User’s Custom Friend Lists</td>
</tr>
<tr>
<td></td>
<td>• Post Status Update of the User</td>
</tr>
<tr>
<td></td>
<td>• Get Mutual Friends with Specified User</td>
</tr>
</tbody>
</table>

The Facebook resource URI and template parameter associated with your selected operation are displayed on the Summary page of this wizard.

The Facebook REST API documentation is available at the following URL:

https://developers.facebook.com/docs/graph-api/reference/v2.5

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>
<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 Facebook Adapter

Review the following topics to learn about troubleshooting issues with the Facebook Adapter.

Topics:

• 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.

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″