Oracle® Cloud

Using the Twitter Adapter with Oracle Integration
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Preface

This guide describes how to configure the Twitter 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 Twitter 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>
Understand the Twitter Adapter

Review the following conceptual topics to learn about the Twitter 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:
- Twitter Adapter Capabilities
- What Application Version Is Supported?
- Workflow to Create and Add a Twitter Adapter Connection to an Integration

Twitter Adapter Capabilities

The Twitter Adapter enables you to create an integration with a Twitter application. Twitter is an online social networking service that enables you to send and read short messages called tweets. If you register with Twitter, you can read and post tweets. If you do not log in, you can only read tweets.

The Twitter Adapter is one of many predefined adapters included with Oracle Integration. You can configure the Twitter 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

Workflow to Create and Add a Twitter 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 Twitter Adapter Connection</td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
<td>More Information</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-----------------</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 Twitter 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 Twitter 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 Twitter Adapter, you must first have access to the Twitter API for your integration. To access the Twitter API, you must create an application.

To create an application:

2. Create a new account or log in using an existing account if you already have one.
3. Click Manage Your Apps in the footer of the Twitter developer page.
4. Create a new application or select an existing one if already created.
5. Authorize your application to use your Twitter account by clicking Create my access token.
6. On the Permissions tab, ensure that the application has Read and Write permissions.
7. Copy and paste the OAuth settings to a safe location, as displayed in the Keys and Access Tokens tab.

You need the following information. These keys contain sensitive data, and must be kept secret. If anyone gets this information, they can access your Twitter account.

- Consumer key
- Consumer secret
- Access token
- Access token secret
You specify this information when creating a connection in Configure Connection Security.

**Note:**
Before creating a Twitter connection, you must upload the trusted Twitter public certificate to Oracle Integration. The Twitter public certificate can be downloaded from https://twitter.com. Rename the public certificate file extension to .cer. See Upload an SSL Certificate.

### 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.

---

**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 Twitter connection by selecting the security policy and specifying the consumer key, consumer secret, access token, and access secret. The security policy grants you authorization access to the resources of the Twitter application.

1. Click **Configure Credentials**.
2. In the **Security Policy** field, note that the **Custom Security Policy** security policy is displayed by default, and cannot be deselected.
3. Complete the following fields with information created after completing the steps in Prerequisites for Creating a Connection.
   a. In the **Consumer Key** field, enter the consumer key.
   b. In the **Consumer Secret** field, enter the consumer secret.
   c. In the **Access Token** field, enter the access token.
   d. In the **Access Secret** field, enter the access token secret.

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%.
   
   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**.
Add the Twitter Adapter Connection to an Integration

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

The following sections describe the wizard pages that guide you through configuration of the Twitter Adapter as an invoke in an integration. The Twitter Adapter cannot be used as a trigger in an integration.

Topics:
- Basic Info 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>
</table>
| What do you want to call your endpoint?| 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:  
  • Blank spaces (for example, My Inbound Connection)  
  • Special characters (for example, #;83 or rightnow4)  
  • Multibyte characters                                        |
| What does this endpoint do?            | 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. |

Invoke Operation Page

Select the Twitter API operation to perform.
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Operation</td>
<td>Select the Twitter API operation to invoke. Place your cursor over each operation to view a description of the operation.</td>
</tr>
<tr>
<td></td>
<td>• Search Tweets</td>
</tr>
<tr>
<td></td>
<td>• Get Followers IDs</td>
</tr>
<tr>
<td></td>
<td>• Get IDs of Retweeters</td>
</tr>
<tr>
<td></td>
<td>• Retweet</td>
</tr>
<tr>
<td></td>
<td>• Tweet</td>
</tr>
<tr>
<td></td>
<td>• Get Friends IDs</td>
</tr>
<tr>
<td></td>
<td>• Get Trends for Place</td>
</tr>
<tr>
<td></td>
<td>• Get Subscribers for List</td>
</tr>
<tr>
<td></td>
<td>• Get Followers List</td>
</tr>
<tr>
<td></td>
<td>• Get Retweets of Me</td>
</tr>
<tr>
<td></td>
<td>• Get Friends List</td>
</tr>
<tr>
<td></td>
<td>• Lookup Statuses</td>
</tr>
<tr>
<td></td>
<td>• Get Trends Available</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>
<tbody>
<tr>
<td>Summary</td>
<td>Displays a summary of the configuration values you defined on previous pages of the wizard.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>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 Twitter Adapter

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

Topics:

• Changes that Can Invalidate Credentials Required for the Twitter Connection
• Get an Invalid or Expired Token Error Response

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

Changes that Can Invalidate Credentials Required for the Twitter Connection

The following issues can invalidate the Twitter credentials.

Regenerating your consumer key and consumer secret (by clicking on 'Regenerate Consumer Key and Secret' button for your app on the Twitter developer site).

Solution: Update the Twitter Adapter connection in Oracle Integration with the new values for consumer key, consumer secret, access token, and access token secret.

Regenerate the access token and secret for your account (by clicking on 'Regenerate My Access Token and Access Secret' button for your app on the Twitter developer site)

Solution: Update the Twitter Adapter connection in Oracle Integration with the new values for consumer key, consumer secret, access token, and access token secret.

Revoke access to your app (by clicking on 'Revoke access' and revoking access to this app on the Twitter developer site)

Solution:

1. Log in to the Twitter developer site and go to https://apps.twitter.com. Click the application name, and go to the Keys and Access Tokens tab.

2. Click Create my access token to authorize this application to access your Twitter account.

3. Update the Twitter Adapter connection in Oracle Integration with the new values of consumer key, consumer secret, access token, and access token secret.
Get an Invalid or Expired Token Error Response

The following error can occur if you have regenerated tokens or revoked access to your Twitter application.

Error code 89 : message : Invalid or Expired Token

Solution: Check the authorization for your application on the Twitter developer page and update the credentials for the adapter.

2. If you have revoked access to the application, provide access by clicking Generate Access Token.
3. Make a note of the following tokens in the Keys and Access Tokens tab:
   - Consumer key
   - Consumer secret
   - Access token
   - Access token secret
4. Update the Twitter Adapter connection with these credentials.