Oracle® Cloud

Using the File Adapter

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This guide describes how to configure and add the File Adapter to an integration in Oracle Integration Cloud Service.

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Contents

Preface

Using the File Adapter describes how to configure the File Adapter as a connection in an integration in Oracle Integration Cloud Service.

Topics:

Audience

Using the File Adapter is intended for developers who want to use the File Adapter in integrations in Oracle Integration Cloud Service.

Related Resources

For more information, see these Oracle resources:

- Oracle Cloud

  `http://cloud.oracle.com`
- *Using Oracle Integration Cloud Service*
- *Using the Oracle Mapper*
- *Getting Started with Oracle Cloud*
- *Managing and Monitoring Oracle Cloud*
- Oracle Public Cloud Machine documentation in the Oracle Help Center:

  http://docs.oracle.com

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.

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

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Getting Started with the File Adapter

Review the following conceptual topics to learn about the File Adapter and how to use it as a connection in integrations in Oracle Integration Cloud Service. A typical workflow of adapter and integration tasks is also provided.

Topics

About the File Adapter

Use the File Adapter in an Oracle Integration Cloud Service integration to exchange (write) files on local and remote systems.

The File Adapter provides the following benefits:

- Transfers (writes) files to any publicly accessible server in either binary or ASCII format.
- Supports a synchronous one-way request message exchange pattern. There is no response from the server.
- Allows the creation of binary files (opaque) and schema-based files such as XML schema and NXSD.

The File Adapter is a predefined adapter included with Oracle Integration Cloud Service. You can configure File Adapter as a connection in an integration in Oracle Integration Cloud Service. For information about Oracle Integration Cloud Service, connections, and integrations, see the following sections:

- About Oracle Integration Cloud Service
- About Oracle Integration Cloud Service Connections
- About Oracle Integration Cloud Service Integrations

About Oracle Integration Cloud Service

Oracle Integration Cloud Service is a complete, secure, but lightweight integration solution that enables you to connect your applications in the cloud. It simplifies

connectivity between your applications and connects both your applications that live in the cloud and your applications that still live on premises. Oracle Integration Cloud Service provides secure, enterprise-grade connectivity regardless of the applications you are connecting or where they reside.

Oracle Integration Cloud Service provides native connectivity to Oracle Software as a Service (SaaS) applications, such as Oracle Sales Cloud, Oracle RightNow Cloud, and so on. Oracle Integration Cloud Service *adapters* simplify connectivity by handling the underlying complexities of connecting to applications using industry-wide best practices. You only need to create a *connection* that provides minimal connectivity information for each system. Oracle Integration Cloud Service *lookups* map the different codes or terms used by the applications you are integrating to describe similar items (such as country or gender codes). Finally, the visual data mapper enables you to quickly create direct mappings between the trigger and invoke data structures. From the mapper, you can also access lookup tables and use standard XPath functions to map data between your applications.

Once you integrate your applications and activate the integrations to the runtime environment, the dashboard displays information about the running integrations so you can monitor the status and processing statistics for each integration. The dashboard measures and tracks the performance of your transactions by capturing and reporting key information, such as throughput, the number of messages processed successfully, and the number of messages that failed processing. You can also manage business identifiers that track fields in messages and manage errors by integrations, connections, or specific integration instances.

About Oracle Integration Cloud Service Connections

Connections define information about the instances of each predefined configuration you are integrating. Oracle Integration Cloud Service includes a set of predefined *adapters*, which are the types of applications on which you can base your connections, such as Oracle Sales Cloud, Oracle Eloqua Cloud, Oracle RightNow Cloud, and others. A connection is based on an adapter. A connection includes the additional information required by the adapter to communicate with a specific instance of an application (this can be referred to as metadata or as connection details). For example, to create a connection to a specific RightNow Cloud application instance, you must select the Oracle RightNow adapter and then specify the WSDL URL, security policy, and security credentials to connect to it.

Video

About Oracle Integration Cloud Service Integrations

Integrations are the main ingredient of Oracle Integration Cloud Service. An integration includes at the least a trigger (source) connection (for requests sent to Oracle Integration Cloud Service) and invoke (target) connection (for requests sent from Oracle Integration Cloud Service to the target) and the field mapping between those two connections.

When you create your integrations, you build on the connections you already created by defining how to process the data for the trigger (source) and invoke (target) connections. This can include defining the type of operations to perform on the data, the business objects and fields against which to perform those operations, required schemas, and so on. To make this easier, the most complex configuration tasks are handled by Oracle Integration Cloud Service. Once your trigger (source) and invoke (target) connections are configured, the mappers between the two are enabled so you

can define how the information is transferred between the trigger (source) and invoke (target) data structures for both the request and response messages.

Video

Typical Workflow for Creating and Including an Adapter Connection in an Integration

Follow a workflow to create a connection with an adapter and include the connection in an integration in Oracle Integration Cloud Service.

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.	Creating a File Adapter Connection
2	Create the integration. When you do this, you add trigger and invoke connections to the integration.	Creating an Integration and Adding the File Adapter Connection to an Integration
3	Map data between the trigger connection data structure and the invoke connection data structure.	Mapping Integration Cloud Service Data of *Using Oracle Integration Cloud Service*
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).	Creating Lookups of *Using Oracle Integration Cloud Service*
5	Activate the integration.	Managing Integrations of *Using Oracle Integration Cloud Service*
6	Monitor the integration on the dashboard.	Monitoring Integration Cloud Services of *Using Oracle Integration Cloud Service*
7	Track payload fields in messages during runtime.	Assigning Business Identifiers for Tracking Fields in Messages and Managing Business Identifiers for Tracking Fields in Messages of *Using Oracle Integration Cloud Service*
8	Manage errors at the integration level, connection level, or specific integration instance level.	Managing Errors of *Using Oracle Integration Cloud Service*

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Creating a File Adapter Connection

A connection is based on an adapter. You define connections to the specific cloud applications that you want to integrate. The following topics describe how to define connections:

Topics

Prerequisites for Creating a Connection

These are the prerequisites for creating a connection with the File Adapter.

> **Note:**
>
> To create a connection, a trusted public certificate may be required. Typically, the certificate is included with Oracle Integration Cloud Service. If you cannot locate the public certificate, contact your administrator. Rename the public certificate file extension to `.crt`. To upload the certificate, see Uploading an SSL Certificate.

- Make sure that the target server is publicly accessible and not behind a firewall. If the target server is behind a firewall, make sure it has been opened for outside client access.
- Make sure that you have write permissions on the server directory to which the files are transferring.
- You must create an agent group before you can configure the adapter connection. See Creating an Agent Group and About Agents and Integrations Between On-Premises Applications and Oracle Integration Cloud Service.

Uploading 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 Cloud Service, an exception is thrown. In that case, you must upload the appropriate

certificate. A certificate enables Oracle Integration Cloud Service to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration Cloud Service.

To upload a certificate:

1. From the Oracle Integration Cloud Service home page, click the **Administration** tab in the upper right corner.

   All certificates currently uploaded to the trust store are displayed in the Certificates dialog. A navigation panel on the left side of the dialog displays the following details:

   - **All**: Displays all certificates in Oracle Integration Cloud Service.
   - **System**: Displays the certificates automatically included in Oracle Integration Cloud Service. These certificates cannot be deleted.
   - **Uploaded**: Displays the certificates uploaded by individual users. These certificates can be deleted and updated.

2. Click **Upload Certificate** at the top of the page.
3. In the Upload Certificate dialog box, enter a unique identifier for the certificate.

   This is a name you can use to identify the certificate.

4. Click **Browse** to locate the certificate file (`.cer`).
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.

Creating 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 Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. Click **New Connection**.

   The Create Connection — Select Adapter dialog is displayed.

4. 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**.

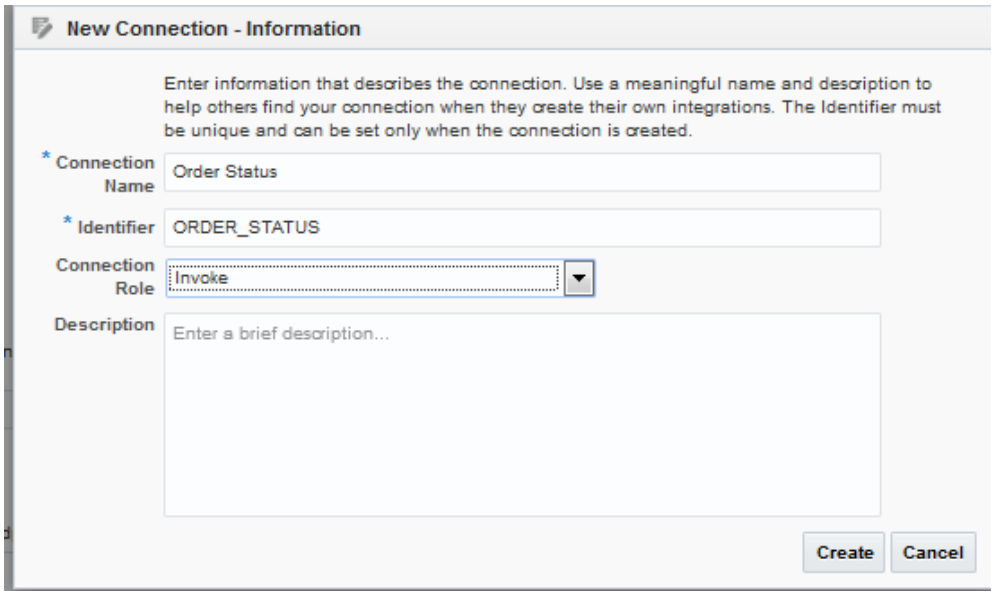
   The New Connection — Information dialog is displayed.

5. 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.
   - 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 RightNow Cloud Adapter as only an invoke, but drag the adapter to the trigger section).

- Enter an optional description of the connection.



6. Click **Create**.

   Your connection is created and you are now ready to configure connection details, such as email contact, connection properties, security policies, and connection login credentials.

Adding 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**.

Configuring an Agent Group

Configure an agent group for accessing your on-premises application.

1. Click **Configure Agents**.

   The Select an Agent Group page appears.
2. Click the name of the agent group.
3. Click **Use**.

4. Test the connection. See Testing the Connection.

Related Topics:

About Agents and Integrations Between On-Premises Applications and Oracle Integration Cloud Service

Managing Agent Groups and the On-Premises Agent

Monitoring Agents

Testing the Connection

Test your connection to ensure that it is successfully configured.

1. In the upper right corner of the page, click **Test**.

   If successful, the following message is displayed and the progress indicator shows 100%.

   ```
   The connection test was successful!
   ```

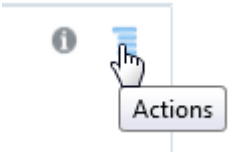
2. If your connection was unsuccessful, an error message is displayed with details. Verify that the configuration details you entered are correct.

3. When complete, click **Save**.

Editing a Connection

You can edit connection settings after creating a new connection.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Select **Edit** from the connection **Actions** menu or click the connection name.



   The Connection page is displayed.

5. To edit the notification email contact, change the email address in the **Email Address** field.
6. To edit the connection properties, click **Configure Connectivity**. Note that some connections do not include this button. If your connector does not include a **Configure Connectivity** button, then click the **Configure Credentials** button.

Cloning a Connection

You can clone a copy of an existing connection. It is a quick way to create a new connection.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Select **Clone** from the connection **Actions** menu.

   The Clone Connection dialog is displayed.

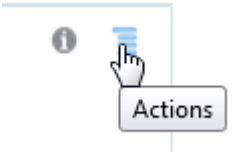
5. Enter the connection information.
6. Click **Clone**.
7. Click **Edit** to configure the credentials of your cloned connection. Cloning a connection does not copy the credentials.

See Editing a Connection for instructions.

Deleting a Connection

You can delete a connection from the connection menu.

1. In the Oracle Integration Cloud Service toolbar, click **Designer**.
2. On the Designer Portal, click **Connections**.
3. On the Connections page, search for the connection name.
4. Click **Delete** from the connection **Actions** menu.



   The Delete Connection dialog is displayed if the connection is not used in an integration.

5. Click **Yes** to confirm deletion.

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Creating an Integration

Integrations use the adapter connections you created to your applications, and define how information is shared between those applications. You can create, import, modify, or delete integrations; create integrations to publish or subscribe to messages; add and remove request and response enrichment triggers; and create routing paths for different invoke endpoints in integrations. Click the following topics for more information.

Topic

- Creating Integrations (in *Using Oracle Integration Cloud Service*)

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Adding the File Adapter Connection to an Integration

When you drag the File Adapter into the trigger or invoke area of an integration, the Adapter Endpoint Configuration Wizard appears. Use the wizard to configure File Adapter endpoint properties.

These topics describe the Adapter Configuration Wizard pages that you use to configure the File Adapter as a trigger and an invoke in an integration.

Topics

For more information about File Adapter, see About the File Adapter.

Configuring Basic Information Properties

You can enter a name and description on the Basic Info page of each trigger and invoke adapter in your integration.

Topics

What You Can Do from the Basic Info Page

You can specify the following values on the Basic Info page. The Basic Info page is the initial wizard page that is displayed whenever you drag an adapter to the section of the integration canvas supported by your adapter.

- Specify a meaningful name.
- Specify a description of the responsibilities.

What You See on the Basic Info Page

The following table describes the key information on the Basic Info page.

Element	Description
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 `righ(t)now4`) • 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.`
Do you want to define a schema for this endpoint?	Select **Yes** to define a schema format for the transfer files. Select **No** if a schema is not required and you want to send opaque files (for example, a GIF or PNG file).
Do you want to create a new schema or select an existing one?	Create a new schema with a CSV file, or select an existing schema from your local system.

Configuring File Adapter Trigger Configure File Read Properties

Enter the File Adapter trigger file read configuration values for your integration.

Topics

What You Can Do from the File Adapter Trigger Configure File Read Page

You can configure the following parameters on the trigger File Adapter Configure File Read page.

- Specify the directory path for file reading.
- Select the pattern name for input files.
- Specify the number of files to be processed in a single poll operation.
- Specify the polling operation frequency.
- Specify the polling operation frequency delay.

- Optionally select to delete files after they are read successfully.

What You Can See from the File Adapter Trigger Configure File Read Page

This table provides descriptions for the fields on the triggerFile Adapter Configure File Read Page.

Element	Description
Specify an Input Directory	Specifies the directory path for file reading.
Specify a File Name Pattern	Specifies the input file naming pattern.
Maximum Files	Specifies the number of files to be processed in a single poll operation.
Polling Frequency	Specifies the polling operation frequency.
Processing Delay	Specifies the polling operation frequency delay.
Delete Files After Successful Reading	When selected, files are deleted after they are successfully read.

Configuring File Adapter Invoke Configure File Write Properties

Enter the File Adapter invoke file write configuration properties for your integration.

Topics

What You Can Do from the File Adapter Invoke Configure File Write Page

You can configure the following parameters on the invoke File Adapter Configure File Write page.

- Specify the directory path for transferred files.
- Select the pattern name for transferred files.
- Optionally select to append files to an existing file name.

> **Note:** You can override the values for the output location and file name pattern in the mapper. Use XPath functions in the mapper to create the output location and file name.

What You See on the File Adapter Configure File Write Page

The following table describes the key information on the File Adapter Configure File Write page.

Element	Description
Specify an Output Directory	Specifies the directory path for file writing.
File Name Pattern	Specifies the file name pattern of files transferred to the output directory. Use the pattern inside %%. For example, Oracle %SEQ%ICS.txt creates files in sequence, such as Oracle1ICS.txt, Oracle2ICS.txt, and so on. For a list of supported file patterns, click the information icon.
Append to Existing File	When selected, the file name is appended to the existing file name and is not overwritten.

Configuring File Adapter Format Definition Properties

Enter the File Adapter format definition parameters.

Topics

What You Can Do from the File Adapter Format Definition Page

You can configure the following parameters on the File Adapter Format Definition page.

- Create a new schema file from a comma-separated value (CSV) file.
- Use an existing schema file.

What You See on the Oracle Cloud Adapter Format Definition Page

The following tables describe the key information on the Oracle Cloud adapter Format Definition page.

The fields that display on the Format Definition page are determined by your selection on the Basic Info page:

- Selected to create a new schema file
- Selected to use an existing schema file

Creating a New Schema File

Element	Description
Select a New Delimited Data File	Selects the delimited comma-separated value (CSV) file from which to create the schema file. This field appears if you selected to create a new schema on the Basic Info page of the wizard.

Element	Description
• **Enter the Record Name**	Enter the record name. This becomes the parent element in the created schema file for the record names selected as column headers from the CSV file.
• **Enter the Recordset Name**	Enter the recordset name. This becomes the root element of the created schema file.
• **Select the Field Delimiter**	Select the field delimiter used in the delimited file. The following values are supported: • Single space • Comma • Semicolon • Tab
• **Character Set**	Selects the encoding format for the sample data file.
• **Optionally Enclosed By**	In the sample data file, the text within the selected delimiter is ignored.
• **Use the First Row as the Column Headers**	Select to use the first row of the CSV file as the column headers.
• **Detach**	Select to edit the CSV file in a separate window.

Using an Existing Schema File

Element	Description
Select an Existing Schema from the File System	Select the existing schema file to use. This field appears if you selected an existing schema from the file system on the Basic Info page of this wizard.
• **Selected File Name**	Displays the selected schema file.
• **Select the Schema Element**	Select the schema element. This field is displayed after the schema file is selected. The element name is treated as the root element in the uploaded schema file.

Reviewing Configuration Values on the Summary Page

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

Topics

What You Can Do from the Summary Page

You can review configuration details from the Summary page. The Summary page is the final wizard page for each adapter after you have completed your configuration.

- View the configuration details you defined for the adapter. For example, if you have defined an inbound trigger (source) adapter with a request business object and immediate response business object, specific details about this configuration are displayed on the Summary page.
- Click **Done** if you want to save your configuration details.
- Click a specific tab in the left panel or click **Back** to access a specific page to update your configuration definitions.
- Click **Cancel** to cancel your configuration details.

What You See on the Summary Page

The following table describes the key information 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**.

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Creating Mappings and Lookups in Integrations

You must map data between trigger connections and invoke connections in integrations. You can also optionally create lookups in integrations.

Topics

- Mapping Integration Cloud Service Data (in *Using Oracle Integration Cloud Service*)
- Creating Lookups (in *Using Oracle Integration Cloud Service*)

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Administering Integrations

Oracle Integration Cloud Service provides you with the information and tools required to activate, monitor, and manage your integrations in the runtime environment.

Topic

- Administering Integration Cloud Service (in *Using Oracle Integration Cloud Service*)