

Oracle® Cloud

Using the Jira Adapter with Oracle Integration Generation 2



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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>.

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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
boldface	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 Jira Adapter

Review the following conceptual topics to learn about the Jira 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:

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

Jira Adapter Capabilities

The Jira Adapter enables you to create an integration with a Jira application. You can configure the Jira Adapter as a trigger or invoke connection in an integration in Oracle Integration.

The Jira Adapter provides the following benefits:

- Provides trigger (source) connection support for performing the following types of events against the selected project and issue type:
 - Comment Created
 - Comment Updated
 - Issue Created
 - Issue Updated
- Provides invoke (target) connection support for performing actions such as Create or Update, Query, and Delete on the following objects:
 - Issue attachments
 - Issue comments
 - Issues
 - Projects
 - Users
- Supports Jira webhooks.

- Supports declaratively defining and executing a Jira Query Language (JQL) query.
- Supports Jira APIs protected using Basic Authentication or Authorization Code Credentials.

The Jira Adapter is one of many predefined adapters included with Oracle Integration. You can configure the Jira Adapter as a trigger or invoke connection in an integration in Oracle Integration.

Jira Adapter Restrictions

Note the following Jira Adapter restrictions.

- The Jira Adapter only supports Jira Cloud. Jira Server is not supported.
- The Jira Webhooks JQL configuration (for trigger connections) has the following restrictions:
 - Only one webhook listener URL is allowed, per connected application per tenant. Therefore, if you want to configure multiple Jira inbound integrations, you must create multiple connections.
 - The webhook expiration period is 30 days from the time the webhook was created. See [Webhook expiration](#). If the Jira Adapter webhook integration does not process any notifications for more than 30 days, reactivate the integration.
 - Before you migrate (import/export) a Jira trigger integration (IAR) file from one Oracle Integration instance to another instance, you must deactivate the Jira trigger integration in the Oracle Integration instance. Select the **Delete Event Subscription** checkbox in the dialog that appears when you click the deactivate icon to deactivate the integration.
 - There are other restrictions. See [Supported JQL Queries](#).



Note:

There are overall service limits for Oracle Integration. A service limit is the quota or allowance set on a resource. See [Service Limits](#).

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 Jira 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.

This table lists the workflow steps for both adapter tasks and overall integration tasks, and provides links to instructions for each step.

Step	Description	More Information
1	Access Oracle Integration.	Go to https://instance_URL/ic/home
2	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.	Create a Jira Adapter Connection
3	Create the integration. When you do this, you add trigger (source) and invoke (target) connections to the integration.	Create Integrations in <i>Using Integrations in Oracle Integration Generation 2</i> and Add the Jira Adapter Connection to an Integration
4	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>
5	(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>
6	Activate the integration.	Activate Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
7	Monitor the integration on the dashboard.	Monitor Integrations in <i>Using Integrations in Oracle Integration Generation 2</i>
8	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>
9	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 Jira 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](#)
- [Create a Connection](#)
- [Upload an SSL Certificate](#)
- [Refresh Integration Metadata](#)

Prerequisites for Creating a Connection

You must satisfy the following prerequisites to create a connection with the Jira Adapter:

- [Purchase a Jira Subscription](#)
- [Prerequisites to Use the Basic Authentication Security Policy](#)
- [Prerequisites to Use the Authorization Code Credentials Security Policy](#)

Purchase a Jira Subscription

When you subscribe to Jira, you receive a Jira instance URL, username, and password. This information is required for creating a Jira Adapter connection in Oracle Integration.

See [Configure Connection Properties](#) and [Configure Connection Security](#).

Prerequisites to Use the Basic Authentication Security Policy

If you want to use the Basic Authentication security policy with your Jira Adapter connection, you must perform the following prerequisites.

Create an API Token

1. Log in to your Atlassian account using the URL:

```
https://id.atlassian.com
```

2. Click **Account Settings**.
3. Click **Security**.
4. Under **API token**, click **Create and manage API tokens**.
5. Click **Create API token**.
6. Enter a label and click **Create**. The API token is generated.

7. Copy the value. You'll need to enter this value in the **Password** field when you configure security for your Jira Adapter connection in Oracle Integration. See [Configure Connection Security](#).

Prerequisites to Use the Authorization Code Credentials Security Policy

If you want to use the Authorization Code Credentials security policy with your Jira Adapter connection, you must perform the following prerequisites.

- [Create an App and Obtain the Client ID and Client Secret](#)
- [Configure the OAuth 2.0 Authorization Code and Assign the Scopes](#)
- [Minimum Scopes for Creating a Connection](#)

Create an App and Obtain the Client ID and Client Secret

1. Log in to your Atlassian account using the following URL:

```
https://id.atlassian.com
```

2. Click your profile icon and select **Developer console**.
3. On the My apps page, click **Create**, and select **OAuth 2.0 integration**.
4. Enter a name for your app, select the **I agree** checkbox, and click **Create**. A new app is displayed in the **My apps** list.
5. Select your app.
6. In the left menu, click **Settings**. The client ID and client secret are displayed in the **Authentication details** section.
7. Copy the values for your client ID and client secret. You'll need to enter these values on the Connections page when you configure security for your Jira Adapter connection. See [Configure Connection Security](#).

Configure the OAuth 2.0 Authorization Code and Assign the Scopes

1. Open the app that you created in Jira.
2. In the left menu, click **Authorization**.
3. In the **Callback URL** field, enter the callback URL.
4. In the left menu, click **Permissions**.
5. Click **Add** next to the API you want to assign to your app.

Minimum Scopes for Creating a Connection

These are the minimum scopes required to configure a Jira Adapter connection in an integration. Ensure that the scopes you want to provide are configured in the Jira application.

Minimum scopes to configure the Jira Adapter as a trigger connection:

- Minimum older scopes:

```
read:jira-work manage:jira-webhook
```

- Minimum newer scopes:

Event Type	Required Scopes
Issue Created	<ul style="list-style-type: none"> - write:webhook:jira - write:issue:jira - read:webhook:jira - read:issuemeta:jira - read:field-configuration:jira - read:avatar:jira - read:issue-details:jira - read:field.default-value:jira - read:field.option:jira - read:field:jira - read:group:jira - read:project:jira - delete:webhook:jira - read:jql:jira
Issue Updated	<ul style="list-style-type: none"> - write:webhook:jira - read:webhook:jira - delete:webhook:jira - read:field:jira - read:project:jira - read:issue-meta:jira - read:avatar:jira - read:field-configuration:jira - read:issue-details:jira - read:field.default-value:jira - read:field.option:jira - read:group:jira - write:issue:jira - read:jql:jira

Event Type	Required Scopes
Comment Created	<ul style="list-style-type: none">- write:webhook:jira- read:webhook:jira- read:issue-meta:jira- read:field-configuration:jira- read:group:jira- read:project:jira- read:project-role:jira- read:user:jira- read:avatar:jira- read:issue-details:jira- read:field.default-value:jira- read:field.option:jira- read:field:jira- delete:webhook:jira- read:jql:jira- read:comment.property:jira- read:comment:jira- read:epic:jira-software- read:issue.property:jira- read:issue-type:jira- read:role:jira- read:status:jira

Event Type	Required Scopes
Comment Updated	<ul style="list-style-type: none"> - read:issue-meta:jira - read:avatar:jira - read:field-configuration:jira - write:comment:jira - write:comment.property:jira - write:attachment:jira - read:issue:jira - read:attachment:jira - read:user:jira - read:application-role:jira - read:comment:jira - read:comment.property:jira - read:project-role:jira - read:issue-security-level:jira - read:issue.vote:jira - read:issue.changelog:jira - read:status:jira - delete:comment:jira - delete:comment.property:jira - delete:attachment:jira - delete:issue:jira - read:issue.transition:jira - write:issue.property:jira - read:issue-type:jira - read:project.property:jira - read:issue-type-hierarchy:jira - read:project-category:jira - read:project-version:jira - read:project.component:jira - write:issue:jira - read:group:jira - read:project:jira - read:jql:jira - read:issue-details:jira - read:field.default-value:jira - read:field.option:jira - read:field:jira

Minimum scopes to configure the Jira Adapter as an invoke connection:

- Minimum older scopes:

```
read:jira-work read:jira-user write:jira-work
```

- Minimum newer scopes:
Required scopes:

- read:issue-meta:jira
- read:avatar:jira
- read:field-configuration:jira

- write:comment:jira
- write:comment.property:jira
- write:attachment:jira
- read:issue:jira
- read:attachment:jira
- read:user:jira
- read:application-role:jira
- read:comment:jira
- read:comment.property:jira
- read:project-role:jira
- read:issue-security-level:jira
- read:issue.vote:jira
- read:issue.changelog:jira
- read:status:jira
- delete:comment:jira
- delete:comment.property:jira
- delete:attachment:jira
- delete:issue:jira
- read:issue.transition:jira
- write:issue.property:jira
- read:issue-type:jira
- read:project.property:jira
- read: issue-type-hierarchy:jira
- read:project-category:jira
- read:project-version:jira
- read: project.component:jira
- write:issue:jira
- read:group:jira
- read:project:jira
- read:jql:jira
- read:issue-details:jira
- read:field.default-value:jira
- read:field.option:jira
- read:field:jira

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 Properties

Enter connection information so your application can process requests.

1. Go to the **Connection Properties** section.
2. In the **Hostname** field, enter the Jira instance hostname.

Configure Connection Security

Configure security for your Jira Adapter connection.

1. Go to the **Security** section.
2. From the **Security Policy** list, select the security policy to use:
 - **Basic Authentication**
 - **Authorization Code Credentials**
3. If you selected **Basic Authentication**:
 - a. In the **Username** field, enter the username.
 - b. In the **Password** field, enter the API token. An API token is used (instead of your account password) as a password whenever you programmatically authenticate with basic authentication. See [Create an API Token](#).

 **Note:**

The Basic Authentication security policy can be used for invoke connections only.

4. If you selected **Authorization Code Credentials**:
 - a. In the **Client Id** field, enter the client ID that you obtained when creating an app. See [Create an App and Obtain the Client ID and Client Secret](#).
 - b. In the **Client Secret** field, enter the client secret key that you obtained when creating an app. See [Create an App and Obtain the Client ID and Client Secret](#).
 - c. In the **Scope** field, enter `read:jira-work manage:jira-webhook` for your Jira Adapter trigger connection, and enter `read:jira-work read:jira-user write:jira-work` for your Jira Adapter invoke connection. These are the minimum older scopes required to configure a connection. However, you can enter new Jira scopes. See [Minimum Scopes for Creating a Connection](#).

You can also enter other space-separated scopes that you need to configure. Ensure that the scopes you want to provide are configured in the Jira application. See [Configure the OAuth 2.0 Authorization Code and Assign the Scopes](#).

 **Note:**

- The Authorization Code Credentials security policy can be used for trigger and invoke connections.
- The **Scope** field is not marked with an asterisk (*). This incorrectly implies that this field is not mandatory. This field is mandatory.

- d. Click **Provide Consent**. You are redirected to the Jira login page.
- e. Log in to the Jira account with your credentials. Once you successfully log in, the following message appears:

Access Allowed! Please switch back to connection page to proceed with testing and saving connection configuration.

Test the Connection

Test your connection to ensure that it's configured successfully.

1. In the page title bar, click **Test**.
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			
Name	Type	Category	Status
mykey3 <small>EXPIRES IN 1 MONTH</small>	X.509	Identity	Configured
mykey2 <small>EXPIRES</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

- Click **Upload** at the top of the page. The Upload Certificate dialog box is displayed.
- Enter an alias name and optional description.
- 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)

- Select a certificate category.
 - Trust:** Use this option to upload a trust certificate.
 - Click **Browse**, then select the trust file (for example, `.cer` or `.crt`) to upload.
 - Identity:** Use this option to upload a certificate for two-way SSL communication.
 - Click **Browse**, then select the keystore file (`.jks`) to upload.
 - 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.

- Enter the password of the keystore being imported.
- Click **Upload**.

SAML (Authentication & Authorization)

- 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**.

Refresh Integration Metadata

You can manually refresh the currently-cached metadata available to adapters that have implemented metadata caching. Metadata changes typically relate to customizations of integrations, such as adding custom objects and attributes to integrations. There may also be cases in which integrations have been patched, which results in additional custom objects and attributes being added. This option is similar to clearing the cache in your browser. Without a manual refresh, a staleness check is only performed when you drag a connection into an integration. This is typically sufficient, but in some cases you may know that a refresh is required. For these cases, the **Refresh Metadata** menu option is provided.

To refresh integration metadata:



Note:

The **Refresh Metadata** menu option is only available with adapters that have implemented metadata caching.

1. In the left navigation pane, click **Home > Integrations > Connections**.
2. Go to the row of the connection to refresh.

3. Select **Refresh Metadata** from the  menu.

A message is displayed indicating that the refresh was successful.

```
Metadata refresh for connection "connection_type" has been
initiated successfully.
```

3

Add the Jira Adapter Connection to an Integration

When you drag the Jira Adapter into the trigger or invoke area of an integration, the Adapter Endpoint Configuration Wizard is invoked. This wizard guides you through configuration of the Jira Adapter endpoint properties.

The following sections describe the wizard pages that guide you through configuration of the Jira Adapter as a trigger or invoke in an integration.

Topics:

- [Basic Info Page](#)
- [Trigger Operations Page](#)
- [Invoke Action Page](#)
- [Invoke Operations Page](#)
- [Summary Page](#)

Basic Info Page

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

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 hyphens in the name. You can't include the following characters: <ul style="list-style-type: none">• No blank spaces (for example, My Inbound Connection)• No special characters (for example, #;83& or righ(t)now4) except underscores and hyphens• No multibyte characters
What does this endpoint do?	Enter an optional description of the connection's responsibilities. For example: <code>This connection receives an inbound request to synchronize account information with the cloud application.</code>

Trigger Operations Page

Select the project and event you want to perform in the Jira application.

Element	Description
Select project	Select a project that you created in the Jira application. The projects you create in the Jira application are displayed for selection.
Select issue type	Select an issue type such as Task, Bug, Story, Epic, Sub-task, Custom_Issue_Type , and so on. The issue types that are displayed for selection are based on your project selection.
Select Event	Select an event such as Issue Created, Issue Updated, Comment Created, and Comment Updated .
Webhook JQL	<p>You can enter a query or paste a query from the Jira application as per your requirement. In the query, the project and issue type field values are added based on your selection. You can select another value if required. However, don't delete these values. You can add your query next to these values.</p> <p>Enter a valid JQL query in the text box. For example:</p> <pre>project=Team And issueType=Task</pre>
Validate	Click to validate the query against the Jira application. The query response is displayed for a successful query and the request fields are displayed accordingly in the request schema. If the query is invalid, you receive a response for the errors in the query.

Invoke Action Page

Select the type of action to perform.

Element	Description
Select action type	<ul style="list-style-type: none">• Query: Retrieves information from the Jira application corresponding to the selected object and operation.• Create or update: Creates new records or updates the existing records in the Jira application.• Delete: Deletes records from the Jira application.

Invoke Operations Page

Enter the details based on the action you selected on the Action page.

- [Query](#)
- [Create or update](#)
- [Delete](#)

Note:

- The Jira Adapter does not currently support the **Get Issue**, **Transition Issue**, **Bulk Get Users**, and **Bulk Create Issue** operations.
- If you configured the Authorization Code Credentials security policy for your Jira Adapter connection, you must ensure that the respective API scope is assigned in the Jira application before you configure the related operation. Otherwise, you receive an error during the runtime. See [Configure the OAuth 2.0 Authorization Code and Assign the Scopes](#).

Query

Element	Description
If you selected Query on the Action page to get records based on a selected object and operation or want to enter a Jira Query Language (JQL) request from/to the Jira application, the following options are displayed.	<ul style="list-style-type: none"> • Retrieve: Retrieves records based on a selected object and operation from the Jira application. • Jira Query Language (JQL): Enables you to define a JQL-based query to send a request for querying and retrieving the information, which is queried from the Jira application.

The following fields are displayed if you select **Retrieve**.

Element	Description
Select object	Select an object within the selected action.
Filter by object name	Type the initial letters of the object name to filter the display of names in the list.
Select operation	Select an operation name, such as Get Attachment , Search Projects , and so on.
Filter by operation name	Type the initial letters of the operation name to filter the display of names in the list.

The following options are displayed when you select **Jira Query Language (JQL)**.

Element	Description
Select project	Select a project that you created in the Jira application. The projects you create in the Jira application are displayed for selection.

Element	Description
Select issue type	Select an issue type such as Task, Bug, Story, Epic, Sub-task, Custom Issue Type , and so on. The issue types that are displayed for selection are based on your project selection.
Edit query	<p>Select this check box to enter a valid JQL query in the text box. For example:</p> <pre>project=Demo And issueType=Sub-task OR priority=Low</pre> <p>You can enter a query or paste a query from the Jira application as per your requirement. In the query, the project and issue type field values are added based on your selection. You can select another value if required. However, don't delete these values. You can add your query next to these values.</p> <p>The query can also include custom fields and parameters.</p>
Binding parameters	<p>Displays any binding parameter, if included, in the specified query. For example:</p> <pre>'priority'</pre> <p>is a parameter in the following query:</p> <pre>project=Demo And issueType=Sub-task OR priority=&priority</pre> <p>Enter a query with a parameter and press the Refresh button above Binding Parameters. A text box in which to enter a test value for the parameter is displayed.</p> <p>Note: If any field value contains the ampersand (&) symbol (for example, <code>project=te&st</code>), you must enter the ampersand (&) symbol (for example, <code>te&&st</code>).</p>
Test Query	<p>Click to validate the query against the Jira application. The query response is displayed for a successful query and the response fields are displayed accordingly in the response schema. If the query is invalid, you receive a response for the errors in the query. See Error When Testing a JQL Query.</p>

Create or update

Element	Description
Select project (displayed if you select the Issues object and the Create Issue operation)	Select a project that you created in the Jira application. The projects you create in the Jira application are displayed for selection.
Select issue type (displayed if you select the Issues object and the Create Issue operation)	Select an issue type such as Task , Bug , Story , Epic , Custom Issue Type , and so on.
Select object Filter by object name	Select an object within the selected action. Type the initial letters of the object name to filter the display of names in the list.
Select operation Filter by operation name	Select an operation name, such as Create Issue , Update Comment , and so on. Type the initial letters of the operation name to filter the display of names in the list.

Delete

Element	Description
Select object Filter by object name	Select an object within the selected action. Type the initial letters of the object name to filter the display of names in the list.
Select operation Filter by operation name	Select an operation name, such as Remove Attachment , Remove User , and so on. Type the initial letters of the operation name to filter the display of names in the list.

Summary Page

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

Element	Description
Summary	<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 Back.</p> <p>To cancel your configuration details, click Cancel.</p>

4

Implement Common Patterns Using the Jira Adapter

You can use the Jira Adapter to implement the following common patterns.

Topics:

- [Synchronize ServiceNow Incidents With Jira Issues](#)
- [Use the Pagination Concept in an Integration](#)
- [Retrieve Issue Details Using the Jira Query Language \(JQL\)](#)



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.

Synchronize ServiceNow Incidents With Jira Issues

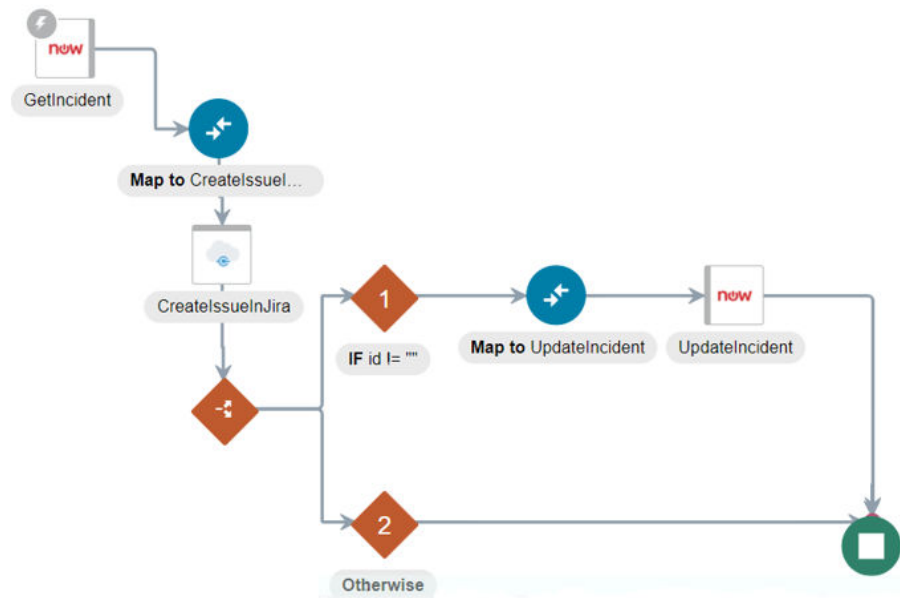
You can synchronize ServiceNow incidents with Jira issues. The integration is invoked when the incident is created in ServiceNow and the details of the incident are added as an issue in Jira. This implementation pattern provides an overview of the steps.

1. Create an app-driven orchestrated integration.
2. Drag a ServiceNow Adapter into the integration as a trigger connection.
3. Configure the ServiceNow endpoint:
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Applications page, select the **Incident** module, and click **Next**.
 - c. On the Fields page, select the required fields from **Available Fields**, and click **Next**.
 - d. On the Conditions page, select **Created**, and click **Next**.
 - e. On the Summary page, review your selections, and click **Done**.
4. Drag a Jira Adapter into the integration canvas.
5. Configure the Jira endpoint:
 - a. On the Basic Info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Create or update**, and click **Next**.

- c. On the Operations page, select the **Issues** object, project, issue type, and then select the **Create Issue** operation. Click **Next**.
 - d. Review your selections on the Summary page, and click **Done**.
6. In the mapper, perform the required mappings to create an issue in Jira.
 7. Drag a switch action and specify the condition if the issue is created in Jira.

If id != ""

8. Drag a second ServiceNow Adapter into the integration canvas and configure it with the **Create, Update Or Delete Information** action.
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Create, Update or Delete Information**, and click **Next**.
 - c. On the Operations page, select the **Update an existing record in the selected Module or Table, identified by the mandatory sys_id field** operation and select the **Incident** module. Click **Next**.
 - d. On the Summary page, review your selections, and click **Done**.
9. Update the **Additional comments** field as a response in ServiceNow (that is, **Successful** when the issue gets created in Jira). The completed integration looks as follows.



10. Activate the integration.
 - a. At the end of the row for the integration, click the **Switch to Activate** icon.
 - b. If needed, check the **Enable Tracing** check box. The **Include Payload** check box is displayed.
 - c. If needed, check the **Include Payload** check box.
 - d. Click **Submit Now**. The integration is deployed.

Use the Pagination Concept in an Integration

When you must fetch a large number of results in Jira, you can use the Jira Adapter's pagination feature. Pagination helps you segregate the total number of results. You can specify the number of results per page according to your requirement while triggering an integration and receive sorted results.

This use case describes how to use pagination to sort results while fetching product results. Similarly, you can use pagination for the Issue attachments object, Issue comments object, and Users object. To perform this operation, you create an integration for the Jira Adapter in Oracle Integration using pagination with the orchestrator.

1. Create a scheduled orchestrated integration.
2. Drag an assign action to the workspace.
3. Provide a unique name for this action, and click **Create**.
4. Assign the following two variables to your integration. Specify the values to variables as follows.

```
$startAt="0"
```

```
$Max ="2"  
$Flag="false"
```

5. Click **Validate**, and then click **Close**.
6. Drag a while action below the assign action.
7. Provide a unique name for this action, and click **Create**.
8. Set the condition for the specified variables as follows.

```
$Flag !="true"
```

9. Click **Validate**, then click **Close**.
10. Drag a Jira Adapter inside the while action.
11. Specify the following details in the Adapter Endpoint Configuration Wizard.
 - a. On the Basic Info page, provide an endpoint name, and click **Next**.
 - b. On the Actions page, select **Query**, and click **Next**.
 - c. On the Operations page, select the **Projects** as an object, and select **Search Projects** as an operation.
 - d. On the Summary page, review your selections, and click **Done**.
12. In the mapper, map **\$Max** to **maxResults** and **\$startAt** to **startAt**.
13. Drag an FTP Adapter connection and configure the FTP endpoint to write the response to a file.
 - a. On the Basic Info page, provide a name, and click **Next**.
 - b. On the Operations page, select **Write File** from the **Select Operation** list.
 - c. Select **Binary** in the **Select a Transfer Mode** field.

- d. Specify the output directory, file name pattern, and download directory, and click **Next**.
- e. On the Scheme page, select **No** in the **Do you want to specify the structure for the contents of the file** field, and click **Next**.
- f. Review your selections on the Summary page, and click **Done**.

14. Perform the required mapping.

15. Drag a switch action and specify the following IF condition:

```
contains( nextPage, "startAt") = "true"
```

16. Drag an assign action to update the specified variables as follows:

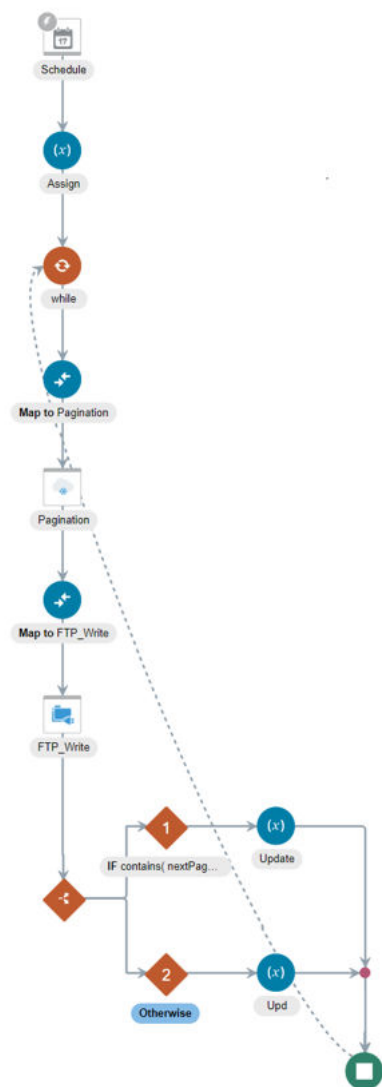
```
startAt + $Max
```

17. Drag an assign action into the **Otherwise** branch of the switch action to update the specified variables as follows:

```
$Flag="true"
```

18. When complete, save and activate the integration.

The completed integration looks as follows.



19. After successful activation, you can submit the integration and monitor the runtime in Oracle Integration. The integration keeps running until it completes all cycles of fetching project results, respectively, to each page in the FTP location.

Retrieve Issue Details Using the Jira Query Language (JQL)

The Jira Adapter enables you to define a Jira Query Language (JQL)-based query to send a request to query and retrieve issue details from the Jira application. This use case describes how to use the Jira Adapter to send a JQL query and write the response to a target file location.

In this use case, an FTP Adapter is used to write the data that you receive from Jira to a file. However, you can also use other applications.

1. Create a scheduled orchestrated integration.
2. Drag and drop an assign action into the integration canvas and create three variables:
 - `$startAt="0"`

- `$Max="2"`
- `$Flag="false"`

3. Drag a while action and specify the condition as follows:

```
$Flag!="true"
```

4. Drag a Jira Adapter inside the while action and configure it with the JQL operation.
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Query**, and click **Next**.
 - c. On the Operations page, select **Jira Query Language (JQL)**.
 - d. Select a project, an issue type, and enter or paste a query.
 - e. If required, add a binding parameter in the query, click **Refresh**, and enter a value for the parameter in the text box.
 - f. Click **Test Query** to validate the query, then click **Next**.
 - g. On the Summary page, review your selections, and click **Done**.
5. In the mapper, map the **\$maxResults** variable to **maxResults** and the **\$startAt** variable to **startAt**.
6. Drag an FTP Adapter and configure it to write the data that you receive from Jira.
 - a. On the Basic info page, provide an endpoint name.
 - b. On the Operations page, select **Write File** from the **Select Operation** list.
 - c. Select **Binary** from the **Select a Transfer Mode** list.
 - d. Provide the output directory and file name pattern.
 - e. On the Schema page, select **No**.
 - f. On the Summary page, review your selections, and click **Done**.
7. Perform the required mapping.
8. Drag a switch action and specify the following IF condition.

```
issues != ""
```

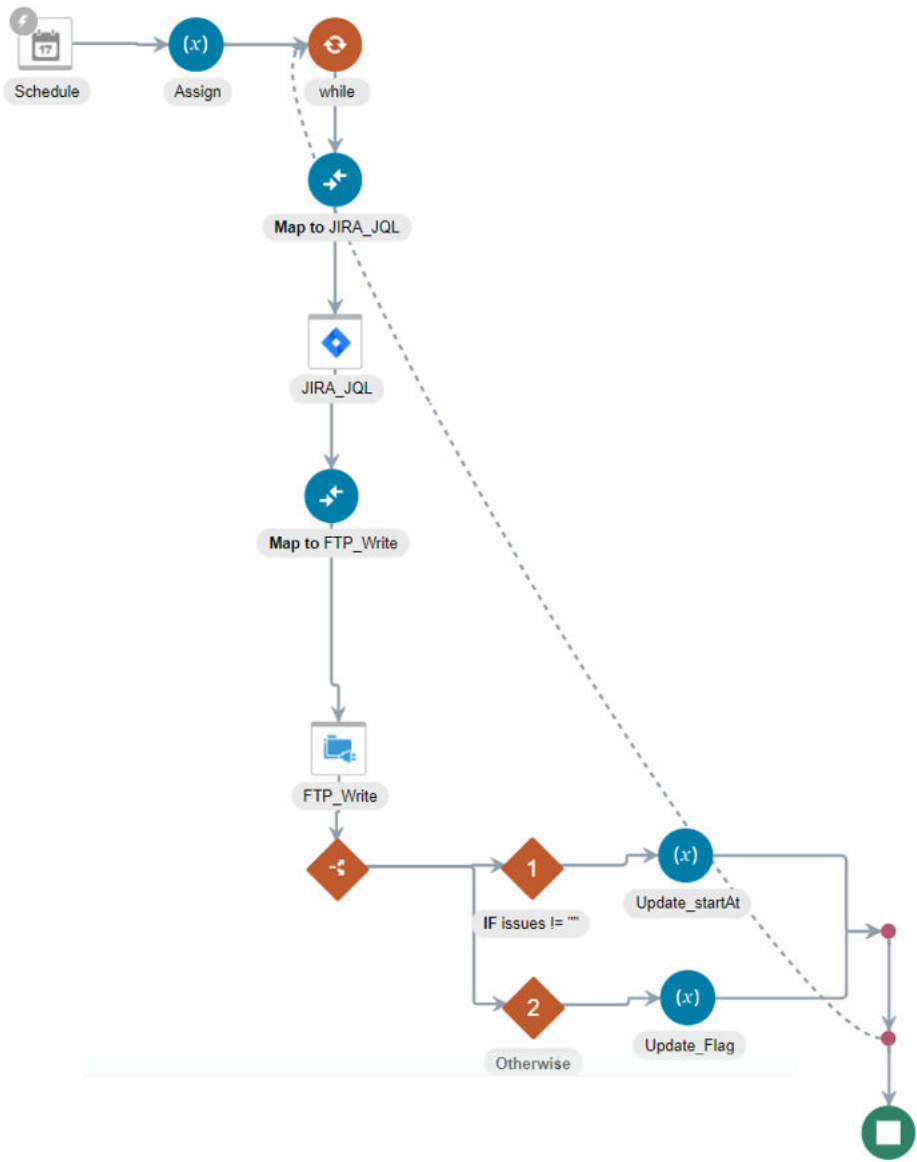
9. Drag an assign action to update the specified `$startAt` variable as follows:

```
startAt + $Max
```

10. Drag an assign action into the **Otherwise** branch of the switch action to update the specified variable as follows:

```
$Flag="true"
```

11. When complete, save and activate the integration.
The completed integration looks as follows.



- 12. After successful activation, you can submit the integration and monitor the runtime behavior in Oracle Integration. The integration keeps running until it completes all cycles of fetching results, respectively, to each page in the FTP location.
Further in your orchestration, you can add adapters and actions as per your business requirement.

5

Troubleshoot the Jira Adapter

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

Topics:

- [Error When Testing a JQL Query](#)

Additional integration troubleshooting information is provided. See Troubleshoot Oracle Integration in *Using Integrations in Oracle Integration Generation 2* and the [Oracle Integration Troubleshooting page](#) in the Oracle Help Center.

Error When Testing a JQL Query

The following error occurs when you test a Jira Query Language (JQL) query on the Operations page of the Adapter Endpoint Configuration Wizard and there is any null value present in the JQL result.

```
(issuelinks) Array element is empty. Please add more than one element in  
this  
array and then do the json sampling. Check the error stack and fix the cause  
of the error.  
Contact oracle support if error is not fixable.
```

Solution: Replace all the null values (that is, []) with double quotation marks ("") in the JQL result.