

Oracle® Cloud

Using the Zendesk 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

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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 Zendesk Adapter

Review the following conceptual topics to learn about the Zendesk 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:

- [Zendesk Adapter Capabilities](#)
- [What Application Version Is Supported?](#)
- [Workflow to Create and Add a Zendesk Adapter Connection to an Integration](#)

Zendesk Adapter Capabilities

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

The Zendesk Adapter provides the following benefits:

- Provides metadata caching support.
- Provides trigger (source) connection support and enables you to set ticket conditions for the trigger to run and receive notifications whenever a ticket is created or updated.
- Provides invoke (target) connection support for performing the following types of actions against the selected module and operation:
 - Create or Update (create or update records in Zendesk)
 - Query (get records from Zendesk)
 - Delete (delete records from Zendesk)
 - Bulk Import (import bulk records into Zendesk)
- Supports Zendesk APIs protected using OAuth 2.0 three-legged authentication.

The Zendesk Adapter is one of many predefined adapters included with Oracle Integration. You can configure the Zendesk Adapter as a trigger or invoke 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 [Connectivity Certification Matrix](#).

See [Connectivity Certification Matrix](#).

Workflow to Create and Add a Zendesk 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 Zendesk Adapter Connection
3	Create the integration. When you do this, you add trigger (source) and invoke (target) connections to the integration.	Understand Integration Creation and Best Practices in <i>Using Integrations in Oracle Integration Generation 2</i> and Add the Zendesk 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 Zendesk 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:

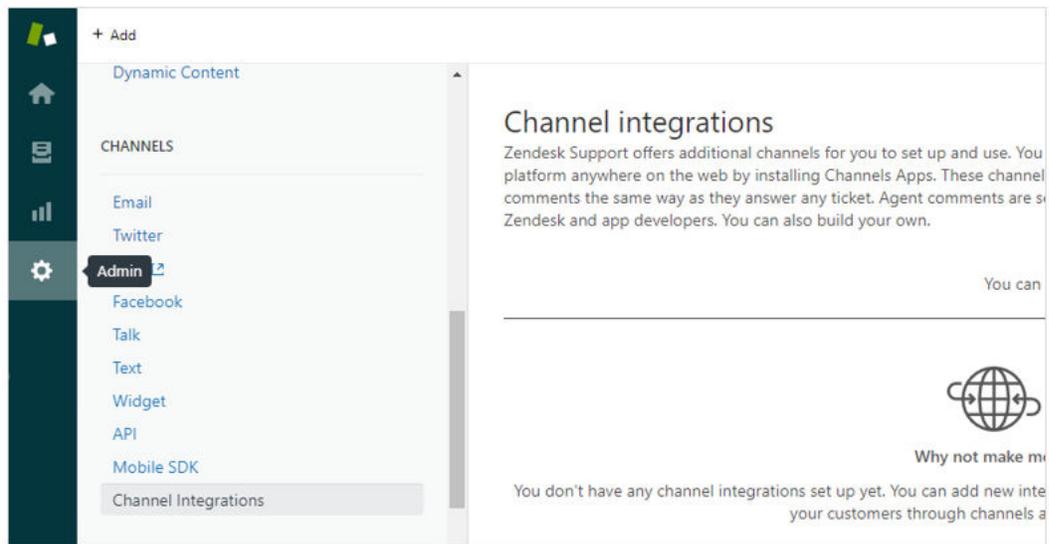
- [Prerequisites for Creating a Connection](#)
- [Create a Connection](#)
- [Upload an SSL Certificate](#)

Prerequisites for Creating a Connection

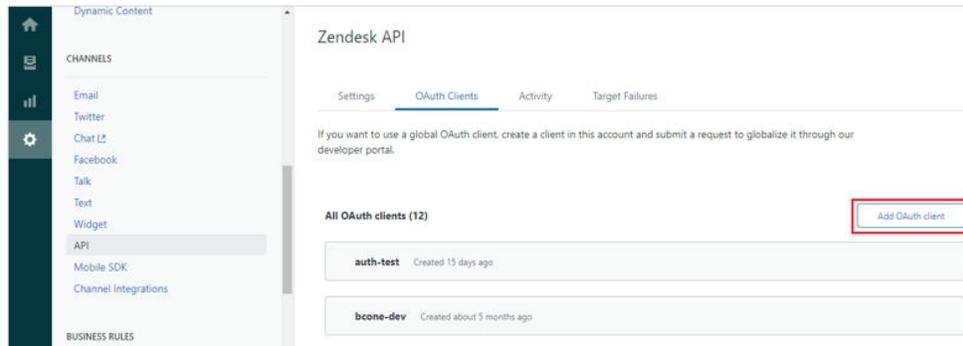
You must satisfy the following prerequisites to create a connection with the Zendesk Adapter:

Create an OAuth Client

1. Log in to your Zendesk admin account and click **Admin** ().



2. Under **Channels**, select **API**.
3. Click the **OAuth Clients** tab, and then click **Add OAuth Client**.



4. Enter the relevant information to create a client:
 - **Client Name:** Enter a name for your app. You must enter this value in the **Client Id** field when you configure security for your Zendesk Adapter connection in Oracle Integration. See [Configure Connection Security](#).
 - **Redirect URLs:** Enter the redirect URL or URLs in the following format:


```
https://{OIC_Host}:{OIC_SSL_PORT}/icsapis/agent/oauth/callback
```
5. Click **Save**.
The system generates the client secret.
6. Copy the secret value. You must enter this value in the **Client Secret** field when you configure security for your Zendesk Adapter connection in Oracle Integration. See [Configure Connection Security](#).
7. Click **Save**.

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 **Zendesk Host** field, enter the Zendesk instance host name. For example:

your_subdomain.zendesk.com

Configure Connection Security

Configure security for your Zendesk Adapter connection.

1. Go to the **Security** section.
2. In the **Client Id** field, enter the client ID that you obtained after performing the steps in the prerequisites section. See [Create an OAuth Client](#).
3. In the **Client Secret** field, enter the client secret that you obtained after performing the steps in the prerequisites section. See [Create an OAuth Client](#).
4. (Optional) In the **Scope** field, enter `write` to perform a create or update operation. To perform a create or update operation on a particular module, enter `module_name:write` (for example, `users:write`, `tickets:write`, and `organizations:write`). For multiple modules, you must ensure that space-separated or comma-separated scopes are provided in this field. For example, enter:

- `module_name1:write module_name2:write`
or
- `module_name1:write,module_name2:write`

If you do not provide any value for the scope, `read` is added by default. The default scope is `read`, which is required to access metadata APIs such as the following:

- GET `/api/v2/ticket_fields`
 - GET `/api/v2/user_fields`
 - GET `/api/v2/organization_fields`
5. Click **Provide Consent** to verify the connection properties and get an access token.
The Zendesk application login page is displayed.
 6. Enter your Zendesk login credentials.
 7. Once you see an access allowed message, you can test your connection.

Test the Connection

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

1. In the page title bar, click **Test**. What happens next depends on whether your connection uses a Web Services Description Language (WSDL) file.

If Your Connection...	Then...
Doesn't use a WSDL	The test starts automatically and validates the inputs you provided for the connection.
Uses a WSDL	A dialog prompts you to select the type of connection testing to perform: <ul style="list-style-type: none"> • 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.

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 Upload			
6 Certificates			
Installed By: User X			
Name	Type	Category	Status
mykey2 EXPIRES IN 1 MONTHS	X.509	Identity	Configured
mykey2 EXPIRED	X.509	Identity	Configured
recert1586867745048 EXPIRES IN 4 YEARS	X.509	Trust	Configured
recert1586863610817 EXPIRES IN 4 YEARS	X.509	Trust	Configured
recert1586857607511 EXPIRES IN 4 YEARS	X.509	Trust	Configured
recert1586857416600 EXPIRES IN 4 YEARS	X.509	Trust	Configured

2. Click **Upload** at the top of the page. The Upload Certificate dialog box is displayed.
3. Enter an alias name and optional description.
4. 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)

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

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

SAML (Authentication & Authorization)

1. 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**.

3

Add the Zendesk Adapter Connection to an Integration

When you drag the Zendesk 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 Zendesk Adapter endpoint properties.

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

Topics:

- [Basic Info Page](#)
- [Trigger Conditions 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 Conditions Page

Specify the ticket conditions that must be met for the trigger to run.

- **Trigger should meet ALL of the following conditions:** All trigger conditions must be met for the trigger to run.

- **Trigger should meet ANY of the following conditions:** Either condition must be met for the trigger to run.

Element	Description
Field	Select the application field names to use in the condition.
Operator	Select the operator to use for the trigger condition. Available operators depend on the field name selected.
Value	Enter or select the value. A trigger condition value is the value to which the selected field is compared.
Remove	Click to remove the selected condition.

Invoke Action Page

Select the type of action to perform.

Element	Description
Select action type	<ul style="list-style-type: none"> • Query information: Retrieves information from the Zendesk application corresponding to the selected module and operation. • Create, update, or delete information: Creates a new record, updates an existing record, or deletes a record in/ from the Zendesk application. Operations such as Create Ticket, Update User, Permanently Delete a Ticket, and so on are performed. • Import bulk data: Imports a large volume of records into Zendesk (for example, Bulk Update Users and Update Tickets in Batches).

Invoke Operations Page

Select the module and operation to perform on the Zendesk application.

Note:

If you cannot see one or more custom fields in the mapper or API response after you configured the operations related to the Tickets module, you must regenerate the Zendesk endpoint to see the missing fields.

Element	Description
Select Create, Update or Delete (Displayed if the Create, update, or delete information option is selected on the Action page.)	Displays the following options: Create , Update , and Delete .

Element	Description
Select module	Select a module, such as Tickets , Users , Organization , and so on.
Filter by module name	Type the initial letters of the module name to filter the display of names in the list.
Select operation	Select an operation name, such as Create Ticket .
Filter by operation name	Type the initial letters of the operation name to filter the display of names in the list.
Specify the number of records per page (Default:20 and Max:100)	Enter a numerical value between 1 - 100 as the number of records to return per API call. The default value is 20.

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 Zendesk Adapter

You can use the Zendesk Adapter to implement the following common pattern.

Topics:

- [Synchronize Zendesk Tickets With ServiceNow Incidents](#)
- [Synchronize ServiceNow Incidents and Attachments with Zendesk](#)



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 Zendesk Tickets With ServiceNow Incidents

This use case describes how to use the Zendesk Adapter to synchronize Zendesk tickets updated at or after a certain time with ServiceNow incidents. The tickets updated in Zendesk are fetched and the details of the ticket are added as an incident in ServiceNow. This implementation pattern provides an overview of the steps.

1. Create a scheduled orchestrated integration.
2. Create a schedule variable to store the last run time.

```
$lastrun=""
```

3. Drag and drop an assign action and create two variables:
 - Flag variable to check whether the loop has completed or not:

```
$flag="false"
```

- Link variable to store the next page's value:

```
$link=""
```

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

```
$flag="false"
```

5. Drag a Zendesk Adapter and configure it as follows.
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Query information**, and click **Next**.
 - c. On the Operations page, select the **Tickets** module and **Search Zendesk Modules** operation, provide a value for the number of records per page, and click **Done**.
 - d. On the Summary page, review your selections, and click **Done**.
6. In the mapper, enter the following expression for the **Query** request parameter.

```
concat (dvm:lookupValue ("tenant/resources/dvms/  
Zendesk_Query_Parameter",  
"QueryParameter", "Query", "zendesk", "" ), xp20:format-dateTime  
($lastrun, "[Y001]-[M01]-[D01]" ) )
```

Lookups are used here to pass the value `type:ticket updated>=` to the parameter `query`.

7. Drag a for-each action and assign **results** as the repeating element.
8. Drag a ServiceNow Adapter and configure it as follows:
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Query Information**, and click **Next**.
 - c. On the Operations page, select the **Get one or more records from the selected Module/Table based on provided filter parameters** operation, **Incident** application, and **Incident** module.
 - d. On the Summary page, review your selections, and click **Done**.
9. Perform the required mapping.
10. Drag a switch action into the canvas to check whether or not `sys_id` contains data.

```
sys_id=0.0
```

When `sys_id` is null, the incident is created. Otherwise, the existing incident is updated.

11. Drag a switch action and assign a condition to check whether or not `next_page` contains data.

```
next_page != ""
```

- a. If the condition statement evaluates to `true`, assign the link and flag variables as follows:

```
$link="next_page"
```

```
$flag="false"
```

- b. If the condition statement evaluates to `false`, assign the flag variable as follows:

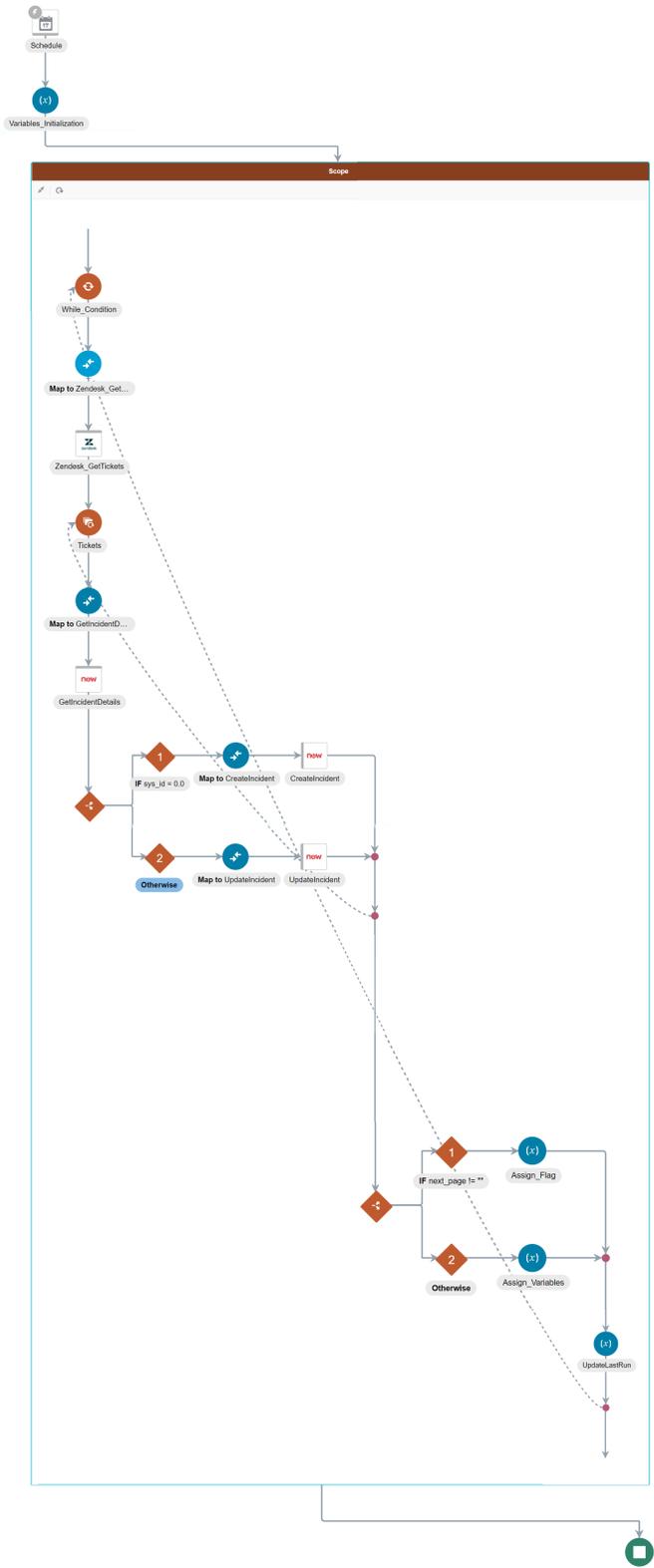
```
$flag="true"
```

- 12. Update the specified `lastrun` variable as follows:

```
$lastrun=startTime
```

- 13. When complete, save and activate the integration.

The completed integration looks as follows.



Synchronize ServiceNow Incidents and Attachments with Zendesk

This use case describes how to use the Zendesk Adapter to synchronize a ServiceNow incident and attachments with Zendesk. The details of the incident are added as a ticket in Zendesk, along with the attachments. This implementation pattern provides an overview of the steps.

1. Create an app-driven orchestrated integration.
2. Drag a ServiceNow Adapter into the integration canvas and configure it as follows:
 - a. On the Basic info page, provide an endpoint name, and click **Next**.
 - b. On the Applications page, select the **Incident** application, the **Incident** module, and click **Next**.
 - c. On the Fields page, select the required fields, and click **Next**.
 - d. On the Conditions Page, select **Created**, and click **Next**.
 - e. On the Response page, click **Next**.
 - f. On the Summary page, review your selections, and click **Done**.

3. Drag an assign action into the integration canvas and create three variables:

- Flag variable to check whether the loop is completed or not:

```
$flag="false"
```

- Link variable to store the next page's value:

```
$link=""
```

- Token variable to store the attachment token:

```
$token=""
```

4. Drag a while action into the integration canvas and specify the following condition:

```
$flag != "true"
```

5. Drag a ServiceNow Adapter into the integration canvas and configure it as follows:

- a. On the Basic Info page, provide an endpoint name, and click **Next**.
- b. On the Action page, select **Attachment Information**.
- c. On the Operations page, select the **Retrieve attachment /s metadata of a record /s** operation, the **Multiple Attachments Metadata** option, and click **Next**.
- d. Review your selections on the Summary page.

6. Drag a for-each action into the integration canvas and assign **result** as the repeating element.

7. Drag a ServiceNow Adapter into the integration canvas and configure it as follows:

- a. On the Basic Info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Attachment Information**.
 - c. On the Operations page, select the **Download attachment of a specific record from the module/table** operation, and click **Next**.
 - d. Review your selections on the Summary page.
8. Perform the required mapping.
 9. Drag a Zendesk Adapter connection into the integration canvas and configure the endpoint.
 - a. On the Basic Info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Create, update or delete Information**.
 - c. On the Operations page, select the **Tickets** module, the **Upload Attachment** operation, and click **Next**.
 - d. Review your selections on the Summary page.
 10. Drag an assign action into the integration canvas and assign a value to the token parameter as follows:

```
$token=token
```

11. Drag a switch action into the integration canvas to check whether or not `link` and `Pagination Object` contain data.

```
link !=0.0  
count( PaginationObject) !=0.0
```

- a. If the condition statement evaluates to `true`, assign the `link` and `flag` variables as follows:

```
$link=link
```

```
$flag="false"
```

- b. If the condition statement evaluates to `false`, assign the `flag` variable as follows:

```
$flag="true"
```

12. Drag a Zendesk Adapter connection into the integration canvas and configure the endpoint.
 - a. On the Basic Info page, provide an endpoint name, and click **Next**.
 - b. On the Action page, select **Create, update or delete Information**.
 - c. On the Operations page, select the **Tickets** module, the **Create Ticket** operation, and click **Next**.
 - d. Review your selections on the Summary page.
13. Perform the required mapping.
14. When complete, save and activate the integration.

The completed integration looks as follows.

