Oracle® Cloud

Using the Salesforce REST Adapter with Oracle Integration 3

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Contents

About This Content

1 Understand the Salesforce REST Adapter

Salesforce REST Adapter Capabilities 1
What Application Version Is Supported? 2
Workflow to Create and Add a Salesforce REST Adapter Connection to an Integration 2

2 Create a Salesforce REST Adapter Connection

Prerequisites for Creating a Connection 1
Create a Connection 5
- Configure Connection Properties 6
- Configure Connection Security 7
- Configure the Endpoint Access Type 7
- Test the Connection 8

Upload a Certificate to Connect with External Services 9

3 Add the Salesforce REST Adapter Connection to an Integration

Trigger Basic Info Page 1
Trigger Streaming API Page 1
Invoke Basic Info Page 3
Invoke Action Page 4
Invoke Operations Page 4
- Operations Page - Create, Update, Upsert, or Delete 4
- Operations Page - Query Information 8
- Operations Page - Core or Utility Operations 11
- Operations Page - Invoke Apex Services 12
- Operations Page – Download Attachment 13
- Operations Page - Perform Bulk Data Operations 14

Summary Page 15

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4 Implement Common Patterns Using the Salesforce REST Adapter

Process Large Data Sets Asynchronously with Different Bulk Data Operations (CRUD) 1
Get Successful, Failed, and Unprocessed Records with the Bulk Operations 4
Retrieve a Large Data Set with the Bulk Query Operation 6
Abort or Delete a Salesforce Bulk Job with the Salesforce REST Adapter 10
Download Binary Files Using a URL or Record Identifier with the Download Attachment Operation 12

5 Troubleshoot the Salesforce REST Adapter

Invalid Session ID or Session Not Found Error 1

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About This Content

This guide describes how to configure this adapter as a connection in an integration in Oracle Integration.

Audience

This guide is intended for developers who want to use this adapter in integrations in Oracle Integration.

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Related Resources

See these Oracle resources:

- Oracle Cloud at `http://cloud.oracle.com`
- *Using Integrations in Oracle Integration 3*
- *Using the Oracle Mapper with Oracle Integration 3*
- Oracle Integration documentation on the Oracle Help Center.

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.
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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1

Understand the Salesforce REST Adapter

Review the following topics to learn about the Salesforce REST 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:

- Salesforce REST Adapter Capabilities
- What Application Version Is Supported?
- Workflow to Create and Add a Salesforce REST Adapter Connection to an Integration

Salesforce REST Adapter Capabilities

The Salesforce REST Adapter enables you to create an integration in Oracle Integration that connects to a Salesforce application. You can configure the Salesforce REST Adapter as a trigger or invoke connection in an integration in Oracle Integration.

The Salesforce REST Adapter provides the following capabilities:

- For trigger endpoints:
  - Subscribes to platform events published on Salesforce.com.
  - Subscribes to change data capture events published on Salesforce.com.
- For invoke endpoints:
  - Supports implementing secure egress (dedicated NAT gateway) to establish a connection by using a private endpoint. See Configure a Private Endpoint for Your Instance in *Provisioning and Administering Oracle Integration 3* and Configure the Endpoint Access Type.
  - Performs operations such as Create, Update, Upsert, and Delete and on the Standard, Recommended, or Custom business objects.
  - Performs Salesforce Object Query Language (SOQL) and Salesforce Object Search Language (SOSL) queries, and retrieve query operations across all business objects.
  - Supports Core or Utility operations such as:
    - Get User Info
    - Get Deleted
    - Get Updated
    - Approval Process
    - Send Email
  - Invokes Apex Services
  - Allows attachments to be fetched from Salesforce and downloaded to any other application or server.

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  - Facilitates the bulk data operations (Bulk CRUD and Bulk Query) on all business objects and allows you to get the successful/failed/unprocessed records.
  - Facilitates the downloading of attachments or files from supported business objects using either a direct URL or a record identifier.
  - Allows for the retrieval of binary (BLOB) data and provides access to the corresponding file content for further processing.
- Supports external client apps using the Client Credentials, Authorization Code Credentials, and Authorization Code Credentials (PKCE) security policies.

> **Note**
>
> - External client apps are the new standard for connected apps in Salesforce. With their rollout, traditional connected apps are disabled by default.
> - Following the Salesforce Spring 2026 release, the option to create new connected apps has been disabled. You can also migrate your existing connected apps to external client apps. See Create an External Client App from a Connected App.

The Salesforce REST Adapter supports OAuth 2.0 client credentials and OAuth 2.0 authorization code credentials authentication, referred to as a Web App Integrations Security Policy.

The Salesforce REST Adapter is one of many predefined adapters included with Oracle Integration. See the Adapters page in the Oracle Help Center.

What Application Version Is Supported?

For information about which application version is supported by this adapter, see the Connectivity Certification Matrix.

Workflow to Create and Add a Salesforce REST 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	Decide where to work	• Work in a project (see why working with projects is preferred in *Using Integrations in Oracle Integration 3*). • Work outside a project.
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 Salesforce REST Adapter Connection

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Step	Description	More Information
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 *Using Integrations in Oracle Integration 3* and Add the Salesforce REST Adapter Connection to an Integration
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in *Using Integrations in Oracle Integration 3*
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 *Using Integrations in Oracle Integration 3*
6	Activate the integration.	Activate an Integration in *Using Integrations in Oracle Integration 3*
7	Monitor the integration on the dashboard.	Monitor Integrations During Runtime in *Using Integrations in Oracle Integration 3*
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Track Integration Instances in *Using Integrations in Oracle Integration 3*
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in *Using Integrations in Oracle Integration 3*

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2

Create a Salesforce REST Adapter Connection

A connection is based on an adapter. You define connections to the specific cloud applications that you want to integrate.

Topics:

- Prerequisites for Creating a Connection
- Create a Connection
- Upload a Certificate to Connect with External Services

Prerequisites for Creating a Connection

You must satisfy the following prerequisites to create a connection with the Salesforce REST Adapter.

- Obtain the Salesforce Domain URL
- Obtain the Current Salesforce API Version
- Configuring OAuth – External Client App in Salesforce
- Configure Client Credential Flow Policies for External Client Apps
- Obtain the Client ID and Client Secret
- Create an External Client App from a Connected App
- Select Entities for Change Data Capture Events
- Assign Permissions

Obtain the Salesforce Domain URL

1. Log in to the Salesforce sandbox instance.
2. Find the domain name by performing the following steps:
    a. Go to your profile name.
    b. Select **Set up**.
    c. In the **Quick find** search field, enter `Domain`.
    d. Select **My Domain** from the **Domain Management** list.
    e. In the My Domain Settings page, copy the value for the **Current My Domain Name URL**.
    f. Append `https://` to the domain name URL to complete the Salesforce domain URL. For example , if your **Current My Domain Name URL** value is `yourDomain.my.salesforce.com`, this is the complete Salesforce domain URL:

    ```
    https://yourDomain.my.salesforce.com/
    ```


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Obtain the Current Salesforce API Version

1. Log in to the Salesforce sandbox instance.
2. Click **Setup** in the header or click your user name, then select **Setup**. See Explore the Salesforce Setup Menu.
3. Search for `API` in the **Quick Find** field, then select **API** under **Develop**.
4. Click **Generate Enterprise WSDL**.
5. On the Generate Enterprise WSDL page, click **Generate**. The WSDL opens in a new browser tab and your current API version appears in the **Commented-out** section. For example:

   ```
   Salesforce.com Enterprise Web Services API Version 35.0
   ```

> **Note**
>
> If you're using the Lightning Experience UI on your Salesforce instance, switch to the Salesforce Classic UI. See Toggle or switch between Lightning Experience and Salesforce Classic.

To learn more, visit Find your current API version.

Configuring OAuth – External Client App in Salesforce

Follow these steps to configure the OAuth - External Client App.

1. Log in to your Salesforce account (Enterprise, Unlimited, or Developer Edition) and switch to Lightning Experience.
2. Click **Setup** (**gear** icon in the header).
3. In the **Quick Find** field, search for `External Client App`, and select **External Client App Manager**.
4. Click **New External Client App**.
5. On the New External Client App page, enter the required details under **Basic Information**, and enable **OAuth Settings**.
6. Configure the OAuth Settings.
   a. Obtain the client ID and client secret from **Consumer Key** and **Secret**.
   b. Enter the callback URL:

      ```
      https://your_server/icsapis/agent/oauth/callback
      ```

   c. Select the following OAuth scopes:
      - Access the identity URL service (**id**, **profile**, **email**, **address**, and **phone**).
      - Access and manage your data through APIs (**api**).
      - Perform requests on your behalf at any time (**refresh_token** and **offline_access**).

      These scopes (**api**, **id**, and **refresh_token**) are the minimum required to configure a connection in Oracle Integration using the Authorization Code Credentials or Authorization Code Credentials (PKCE) security policy.

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7. Enable the following OAuth flows:
   - **Client Credentials Flow**
   - **Authorization Code and Credentials Flow**
8. Configure the security settings as follows:
   a. Enable **Require secret for Web Server Flow**.
   b. Enable **Require secret for Refresh Token Flow**.
   c. If you are using Client Credentials or Authorization Code Credentials, ensure **Require Proof Key for Code Exchange (PKCE) extension for supported Authorization Flows** is disabled (unchecked).
   d. If you are using Authorization Code Credentials (PKCE), ensure that you enable **Require Proof Key for Code Exchange (PKCE) extension for supported Authorization Flows**.
   e. Ensure **Enable Refresh Token Rotation** is disabled (unchecked).
9. Click **Save** and **Continue** to save the configuration.
10. After saving, configure the Client Credentials Flow policies for the External Client App.

Configure Client Credential Flow Policies for External Client Apps

1. Navigate to the **Policies** tab of your newly-created external client app, expand the **OAuth Policies** drop-down list, and click **Edit**.
2. Enable **Client Credentials Flow**.
   To allow Salesforce to return access tokens, you must select an execution user for the flow. This user must have the API Only User permission.
3. Set **Run As** to select the user to which you want to assign the client credentials flow.
4. Click **Save**.

Obtain the Client ID and Client Secret

Follow these steps to retrieve the client ID (consumer key) and client secret from Salesforce.

1. Log in to your Salesforce account (Enterprise, Unlimited, or Developer Edition) and switch to Lightning Experience.
2. Click **Setup** (**gear** icon in the header).
3. In the **Quick Find** field, search for `External Client App`.

> **Note**
>
> If you do not have an External Client App, you can create a one. See Configuring OAuth – External Client App in Salesforce.

4. Select **External Client App Manager**.
5. From the list, select your External Client App.
6. Go to the **Settings** tab.
7. Under **App Settings**, click **Consumer Key** and **Secret**.
8. Copy the client ID (consumer key) and client secret.

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Create an External Client App from a Connected App

Use the automated process to create External Client Apps that replace your existing locally-connected apps. After migration, the old, connected app remains as a read-only version in App Manager.

1. From **Setup**, in the **Quick Find** box, enter `App Manager`, and then select **App Manager**.
2. Open the connected app by clicking the name. If the connected app is eligible for migration, the **Migrate to External Client App** button is available.
3. Click **Migrate to External Client App**.
4. Confirm that the app is local and that it doesn't use the username-password flow.
5. Click **Migrate**.
   A window opens with a link to the new External Client App.

Select Entities for Change Data Capture Events

To receive notifications using change data capture (CDC) events, you must select the entity/entities. Once selected, these objects are displayed for use on the Operations page of the Adapter Endpoint Configuration Wizard when configuring the Salesforce REST Adapter as a trigger connection.

1. Navigate to **Setup**.
2. Search for `Change Data Capture` in the **Quick Find** field, then select **Change Data Capture**.
3. Select the required entities (business objects) for which you want to receive change event notifications.
4. Click **Save**.
5. Assign permissions to these objects to enable any change data capture events See Assign Permissions .

Assign Permissions

You must assign appropriate permissions to users to enable seamless interaction with Salesforce. You can navigate to each user's profile page and define access levels such as for read, write, delete, view all, and modify all for both standard and custom data objects.

Also, ensure that users have permissions to publish or subscribe to platform events. To configure permissions for objects involved in Change Data Capture events, you must first select entities for Change Data Capture Events and then define the required access levels for relevant standard and custom data objects.

1. Navigate to **Setup**:
2. In the **Quick Find** field, search for `Profiles`.
3. Select the profile of the user you want to modify.
4. Click **Edit**.
   You can now edit/assign the permissions to standard and custom objects for basic access and data administration operations.
   - Basic Access (Read, Create, Edit, and Delete)
   - Data Administration (View all Records, modify all Records, and View all Fields)
5. Enable Basic Access permissions for **Platform Events**.

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- Read (Allows user to subscribe to the event)
- Create (Allows user to publish the event)

6. Save the changes.

Create a Connection

Before you can build an integration, you must create the connections to the applications with which you want to share data.

> **Note**
>
> You can also create a connection in the integration canvas. See Define Inbound Triggers, Outbound Invokes, and Actions.

To create a connection in Oracle Integration:

1. Decide where to start:
   - Work in a project (see why working with projects is preferred).
     a. In the navigation pane, click **Projects**.
     b. Select the project name.
     c. Click **Integrations**.
     d. In the **Connections** section, click **Add** if no connections currently exist or **+** if connections already exist. The Create connection panel opens.
   - Work outside a project.
     a. In the navigation pane, click **Design**, then **Connections**.
     b. Click **Create**. The Create connection panel opens.
2. 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.
3. Enter the information that describes this connection.

Element	Description
Name	Enter a meaningful name to help others find your connection when they begin to create their own integrations.
Identifier	Automatically displays the name in capital letters that you entered in the **Name** field. If you modify the identifier name, don't include blank spaces (for example, `SALES_OPPORTUNITY`).

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Element	Description
Role	Select the role (direction) in which to use this connection. **Note**: *Only* the roles supported by the adapter you selected are displayed for selection. Some adapters support all role combinations (trigger, invoke, or trigger and invoke). Other adapters support fewer role combinations. 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, assume 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.
Keywords	Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
Description	Enter an optional description of the connection.
Share with other projects	**Note**: This field only appears if you are creating a connection in a project. Select to make this connection publicly available in other projects. Connection sharing eliminates the need to create and maintain separate connections in different projects. When you configure an adapter connection in a different project, the **Use a shared connection** field is displayed at the top of the Connections page. If the connection you are configuring matches the same type and role as the publicly available connection, you can select that connection to reference (inherit) its resources. See Add and Share a Connection Across a Project.

4. Click **Create**.

   Your connection is created. You're now ready to configure the connection properties, security policies, and (for some connections) access type.

5. Follow the steps to configure a connection.
   The connection property and connection security values are specific to each adapter. Your connection may also require configuration with an access type such as a private endpoint or an agent group.

6. Test the connection.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Properties** section.

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2. In the **Salesforce Domain URL** field, enter your subdomain. See Obtain the Salesforce Domain URL.
3. In the **API Version** field, enter your current API version. See Obtain the Current Salesforce API Version.

Configure Connection Security

Configure security for your Salesforce REST Adapter connection.

1. Go to the **Security** section.
2. From the **Security Policy** list, select the security policy:
   - **Client Credentials**
   - **Authorization Code Credentials**
   - **Authorization Code Credentials (PKCE)**

> **Note**
>
> Salesforce is enforcing the use of PKCE for OAuth grant types starting in July 2026. This change is applicable to external client apps or connected apps that are created in July 2026 or later. You are advised to use PKCE while using the OAuth Flows. See OAuth Security Controls Are Enforced for New External Client Apps and Connected Apps.

3. If you select **Client Credentials**.
   - Enter the client ID and client secret values in the respective fields.
4. If you select **Authorization Code Credentials** or **Authorization Code Credentials (PKCE)**.
   a. Enter scopes in the **Optional Security** field.
   b. Enter the client ID and client secret in the respective fields.
   c. Click **Provide Consent** to verify the connection properties.

      The Salesforce login page appears.
   d. Enter the credentials. Once you see an `Authenticated !!` message, you can test your connection.

> **Note**
>
> To obtain the required client ID and client secret, see Obtain the Client ID and Client Secret. To obtain the mandatory scopes, see Configuring OAuth – External Client App in Salesforce.

Configure the Endpoint Access Type

Configure access to your endpoint. Depending on the capabilities of the adapter you are configuring, options may appear to configure access to the public internet, to a private endpoint, or to an on-premises service hosted behind a fire wall.

- Select the Endpoint Access Type

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- Ensure Private Endpoint Configuration is Successful

Select the Endpoint Access Type

1. Go to the **Access type** section.
2. Select the option for accessing your endpoint.

Option	This Option Appears If Your Adapter Supports ...
Public gateway	Connections to endpoints using the public internet.
Private endpoint	Connections to endpoints using a private virtual cloud network (VCN). **Note**: To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3* and Troubleshoot Private Endpoints in *Using Integrations in Oracle Integration 3*.

Ensure Private Endpoint Configuration is Successful

- To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3*.
- When configuring an adapter on the Connections page to connect to endpoints using a private network, specify the fully-qualified domain name (FQDN) and *not* the IP address. If you enter an IP address, validation fails when you click **Test**.

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 adapter connection uses a Web Services Description Language (WSDL) file. Only some adapter connections use WSDLs.

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: • **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.

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- If the test failed, then edit the configuration details you entered. Check for typos and verify URLs and credentials. Continue to test until the connection is successful.

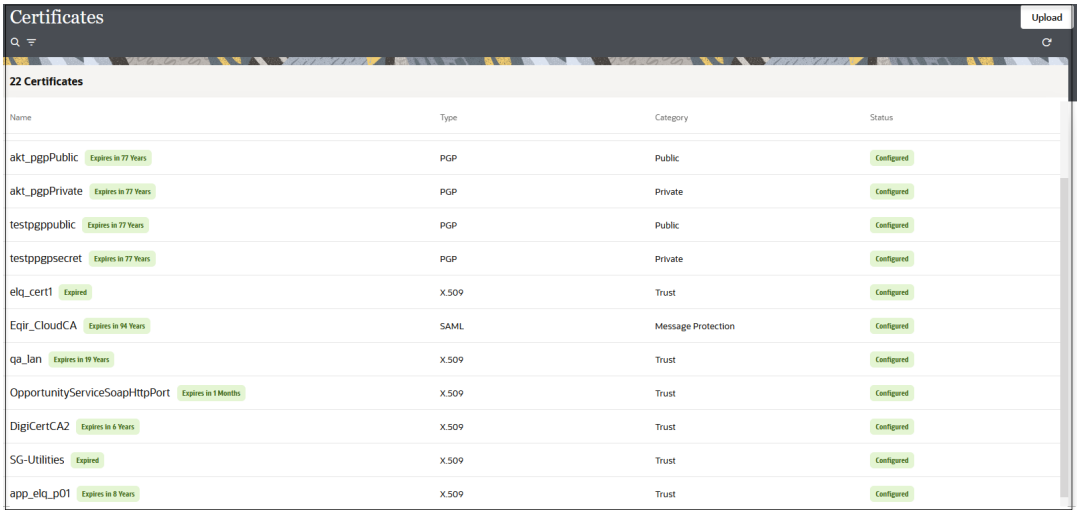
3. When complete, click **Save**.

Upload a Certificate to Connect with External Services

Certificates allow Oracle Integration to connect with external services. If the external service/endpoint needs a specific certificate, request the certificate and then import it into Oracle Integration.

If you make an SSL connection in which the root certificate does not exist in Oracle Integration, an exception error 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.

1. Sign in to Oracle Integration.
2. In the navigation pane, click **Settings**, then **Certificates**.
   All certificates currently uploaded to the trust store are displayed on the Certificates page.
3. Click **Filter** to filter by certificate expiration date, status, and type. Certificates installed by the system cannot be deleted.



4. Click **Upload** at the top of the page.
   The Upload certificate panel is displayed.
5. Enter an alias name and optional description.
6. In the **Type** field, select the certificate type. Each certificate type enables Oracle Integration to connect with external services.
   - Digital Signature
   - X.509 (SSL transport)
   - SAML (Authentication & Authorization)
   - PGP (Encryption & Decryption)
   - Signing key

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Digital Signature

The digital signature security type is typically used with adapters created with the Rapid Adapter Builder. See Learn About the Rapid Adapter Builder in Oracle Integration in *Using the Rapid Adapter Builder with Oracle Integration 3*.

1. Click **Browse** to select the digital certificate. The certificate must be an X509Certificate. This certificate provides inbound RSA signature validation. See RSA Signature Validation in *Using the Rapid Adapter Builder with Oracle Integration 3*.
2. Click **Upload**.

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.

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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. The following supported cipher algorithms are FIPS-compliant:

- AES128
- AES192
- AES256
- TDES

c. Click **Upload**.

Signing key

A signing key is a secret key used to establish trust between applications. Signing keys are used to sign ID tokens, access tokens, SAML assertions, and more. Using a private signing key, the token is digitally signed and the server verifies the authenticity of the token by using a public signing key. You must upload a signing key to use the OAuth Client Credentials using JWT Client Assertion and OAuth using JWT User Assertion security policies in REST Adapter invoke connections. Only PKCS1- and PKCS8-formatted files are supported.

1. Select **Public** or **Private**.
2. Click **Browse** to upload a key file.
   If you selected **Private**, and the private key is encrypted, a field for entering the private signing key password is displayed after key upload is complete.
3. Enter the private signing key password. If the private signing key is not encrypted, you are not required to enter a password.
4. Click **Upload**.

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3

Add the Salesforce REST Adapter Connection to an Integration

When you drag the Salesforce REST 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 Salesforce REST Adapter endpoint properties.

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

Topics:

- Trigger Basic Info Page
- Trigger Streaming API Page
- Invoke Basic Info Page
- Invoke Action Page
- Invoke Operations Page
- Summary Page

Trigger Basic Info Page

Specify a name and description on the Basic Info page of each trigger connection in your integration.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the connection. For example, if you are creating a database connection for adding new employee data, you may want to name it `CreateEmployeeInDB`. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following: • Blank spaces (for example, `My DB 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.

Trigger Streaming API Page

Select the platform event or change data capture event to use.

Select the streaming event type appropriate to your integration requirements.

- Subscribe to platform events published on Salesforce.com

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Select to receive event notifications from the Salesforce application based on the events you defined in Salesforce.com.

You must have already defined the platform events in Salesforce.com. See Define Your Platform Event in *Using the Salesforce Adapter with Oracle Integration 3*.

- Subscribe to change data capture events published on Salesforce.com
  Select to receive change event notifications, whenever a data change in Salesforce occurs, for the entities (business objects) you selected in Salesforce.com

  You must have already selected the change data capture events in Salesforce.com. See Select an Entity (Business Object) in *Using the Salesforce Adapter with Oracle Integration 3*.

> **Note**
>
> The Overflow event is not supported.

Subscribe to platform events published on Salesforce.com

Element	Description
Select a platform event	Displays the list of platform events you defined in Salesforce.com. Select the platform event to receive notifications from the Salesforce application. **Note**: • For a new integration, the Salesforce REST Adapter receives event notifications from the last 72 hours for the selected platform event channel because the subscription occurs with `replayId` set to -2. • For an existing integration, which was inactive for the last 72 hours or more and then activated again, it receives only new platform events for the subscribed channel because the subscription occurs with `replayId` set to -1.
Filter by: *<KEYWORD>*	Type a keyword or the initial letters of the event to filter the display of names in the list.

Subscribe to change data capture events published on Salesforce.com

Element	Description
Select a change event type	Select one or both options: • **Normal**: Select to receive the common change events notifications whenever a data change in Salesforce occurs. • **Gap**: Select this option if you want to receive gap event notifications. Gap events are generated instead of change events in special situations. See Gap Events.

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Element	Description
Select a change type	• **Create**: Select to receive notifications whenever a new record is created under the selected entity. • **Update**: Select to receive notifications whenever a record is updated under the selected entity. • **Delete**: Select to receive notifications whenever a record is deleted under the selected entity. • **Undelete**: Select to receive notifications whenever a record is undeleted under the selected entity.
Select a business object	Displays the list of entities (business objects) you selected in Salesforce.com. Select the business object to receive change event notifications whenever a data change in Salesforce occurs for the selected entity.
Filter by: *<KEYWORD>*	Type a keyword or the initial letters of the event to filter the display of names in the list.

Invoke Basic Info Page

Specify a name and description on the Basic Info page of each invoke connection in your integration.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the connection. For example, if you are creating a database connection for adding new employee data, you may want to name it `CreateEmployeeInDB`. You can include English alphabetic characters, numbers, underscores, and dashes in the name. You cannot include the following: • Blank spaces (for example, `My DB 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.

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Invoke Action Page

Select an action for the invoke connection to perform in your integration.

Element	Description
Select an appropriate action from the below categories	• **Create, Update, Upsert, or Delete Information** • **Query Information** • **Core or Utility Operations** • **Invoke Apex Services** • **Download Attachment** • **Perform Bulk Data Operations**

Invoke Operations Page

Select an operation for the invoke connection to perform in your integration.

- Operations Page - Create, Update, Upsert, or Delete
- Operations Page - Query Information
- Operations Page - Core or Utility Operations
- Operations Page - Invoke Apex Services
- Operations Page – Download Attachment
- Operations Page - Perform Bulk Data Operations

Operations Page - Create, Update, Upsert, or Delete

Configure the **Create, Update, Upsert, or Delete** selection.

Select an operation type:

- Create
- Update
- Upsert
- Delete

Create

This selection creates multiple records for different business objects.

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Element	Description
Filter By object name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **Recommended**: Displays the most frequently used objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **All**: Displays all objects.
Select Business Objects	Select a single or multiple business objects to include in the operation. For example: • **Account** • **Asset** • **Campaign** • **Case** • **Contact** • **Prospect/Lead** • **Opportunity** • **Price Book** If the operation supports multiple objects, you can select up to ten objects for one operation. You can use the arrow buttons to move the objects to the **Your Selected Business Objects** list.
All or None	Specifies the transactional behavior for Salesforce application operations. • If selected, it maps to `UnexpectedErrorFault`. • If unselected, it returns the whole response even if it contains error elements along with success elements in the response.
Configure header properties (Optional)	Specify the duplicate rule to see if the record being created is a duplicate of an existing record. • **Select to ignore the duplicate management rule**: This selection allows you to save duplicate records. If not selected, duplicate management rules are followed. • **Select to run the duplicate management rule**: This selection allows the rule to run according to the current user's sharing rules. If not selected, the system's sharing rules are used. • **Assignment Rule**: This selection specifies the assignment rules to use while performing a **Create** operation on **Account**, **Case**, or **Lead** business objects. You can either use the **Default Assignment Rule** or mention a specific **Assignment Rule ID**. If **Default Assignment Rule** is set to **True**, then default (active) assignments are used. If set to **False**, then default (active) assignments are not used.

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Update

This selection updates multiple records for different business objects.

Element	Description
Filter By Object Name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **Recommended**: Displays the most frequently used objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **All**: Displays all objects.
Select Business Objects	Select a single or multiple business objects to include in the operation. For example: • **Account** • **Asset** • **Campaign** • **Case** • **Contact** • **Prospect/Lead** • **Opportunity** • **Price Book** If the operation supports multiple objects, you can select up to ten objects for one operation. You can use the arrow buttons to move the objects to the **Your Selected Business Objects** list.
All or None	Specifies the transactional behavior for Salesforce application operations. • If selected, it maps to `UnexpectedErrorFault`. • If unselected, it returns the whole response even if it contains error elements along with success elements in the response.

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Element	Description
Configure header properties (Optional)	Specify the duplicate rule to see if the record being updated is a duplicate of an existing record. • **Select to ignore the duplicate management rule**: This selection allows you to save duplicate records. If not selected, duplicate management rules are followed. • **Select to run the duplicate management rule**: This selection allows the rule to run according to the current user's sharing rules. If not selected, the system's sharing rules are used. • **Assignment Rule**: This selection specifies the assignment rules to use while performing an **Update** operation on **Account**, **Case**, or **Lead** business objects. You can either use the **Default Assignment Rule** or mention a specific **Assignment Rule ID**. If **Default Assignment Rule** is set to **True**, then default (active) assignments are used. If set to **False**, then default (active) assignments are not used.

Upsert

This selection creates or updates multiple records using an external ID field for the same business object.

Element	Description
Filter By Object Name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **Recommended**: Displays the most frequently used objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **All**: Displays all objects.
Select Business Objects	Select a business object to include in the operation. For example: • **Account** • **Asset** • **Campaign** • **Case** • **Contact** • **Prospect/Lead** • **Opportunity** • **Price Book**
Select external ID field	Select the external ID for the selected business object.

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Element	Description
All or None	Specifies the transactional behavior for Salesforce application operations. • If selected, it maps to `UnexpectedErrorFault`. • If unselected, it returns the whole response even if it contains error elements along with success elements in the response.
Configure header properties (Optional)	Specify the duplicate rule to see if the record being upserted is a duplicate of an existing record. • **Select to ignore the duplicate management rule**: This selection allows you to save duplicate records. If not selected, duplicate management rules are followed. • **Select to run the duplicate management rule**: This selection allows the rule to run according to the current user's sharing rules. If not selected, the system's sharing rules are used. • **Assignment Rule**: This selection specifies the assignment rules to use while performing an **Upsert** operation on **Account**, **Case**, or **Lead** business objects. You can either use the **Default Assignment Rule** or mention a specific **Assignment Rule ID**. If **Default Assignment Rule** is set to **True**, then default (active) assignments are used. If set to **False**, then default (active) assignments are not used.

Delete

This selection deletes multiple records for different business objects.

Element	Description
All or None	Specifies the transactional behavior for Salesforce application operations. • If selected, it maps to `UnexpectedErrorFault`. • If unselected, it returns the whole response even if it contains error elements along with success elements in the response.

Operations Page - Query Information

Configure the **Query Information** selection.

Select an operation type:

- SOQL/SOSL Query
- Retrieve

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SOQL/SOSL Query

Execute a SOQL or SOSL query to fetch records or perform text-based searches across multiple business objects in Salesforce based upon the specified criteria.

Element	Description

Enter a SOQL (Salesforce Object Query Language) or SOSL (Salesforce Object Search Language) Query Statement	Enter a valid query statement. SOQL statements evaluate to a list of sObjects, a single sObject, or an integer for `count` method queries. The following examples are provided:
	
	`“SELECT Id FROM Contact WHERE Name LIKE 'A%' AND MailingCity = 'California'”`
	
	`SELECT COUNT() FROM Contact`
	
	SOSL statements evaluate to a list of sObjects, where each list contains the search results for a particular sObject type. For example:
	
	`“SELECT a.name, a.id, a.accountNumber, c.name from Contact c, c.Account a”`

Refresh	Click to display any binding parameters.
Binding Parameters	Displays any parameters included in the query. For example, `orgId` is a parameter in the following query: `SELECT a.name, a.id, a.accountNumber, c.name from Contact c, c.Account a WHERE a.name = "#orgId"` This query displays a binding parameters text box in which to enter a test value for `orgId`.
Test My Query	Click to validate the query against the Salesforce application. Query results are displayed. If errors occur, you receive results about how to correct the query.
Configure header properties (Optional)	Specify the number of records to return in a query call. The minimum value is `200` and the maximum value is `2000`.

Retrieve

Retrieve multiple records of the same business object.

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Element	Description
Filter By Object Name	Type the initial letters to filter the display of business objects. You can also select a filter type: • **Recommended**: Displays the most frequently used objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **All**: Displays all objects.
Select Business Object	Select a business object to include in the operation.

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Operations Page - Core or Utility Operations

Configure the **Core or Utility Operations** selection.

Element	Description
Choose operation	• **Get User Info**: Retrieves information about the current user being used in the Salesforce connection configuration. This operation does not take any input data. This operation returns user information such as **userId**, **userFullName**, **userEmail**, **profileId**, **roleId**, **organizationId**, and so on. • **Get Deleted**: Retrieves deleted IDs of the Salesforce record of a selected object for a limited time period (maximum of one month). • **Get Updated**: Retrieves IDs of an updated Salesforce record of a selected object for a limited time period (maximum of one month). • **Approval Process**: Related to the approval process in Salesforce.com. An approval process automates how records are approved, rejected, or removed in Salesforce.com. With the help of the Salesforce REST Adapter, you can use two process modes to submit the approval request and process the requests approval action. **Process mode**: – **ProcessSubmitRequest** – **ProcessWorkitemRequest** • **Send Email**: Triggers a single email message request to Salesforce. This operation takes most standard email attributes, **templateIds**, **targetObjectIds**, and other attributes as input. This operation responds with the Boolean element **Success** that defines the status of the message triggered. If the email message is successfully triggered, it responds with **true**. Otherwise, it responds with **false**. – **Send Mass Email**: Triggers a mass email message request to Salesforce. This operation takes most standard email attributes, **templateIds**, multiple **targetObjectIds**, and other attributes as input. This operation returns the Boolean element **Success** that defines the status of the message triggered. If the email message is successfully triggered, it responds with **true**. Otherwise, it responds with **false**.

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Element	Description
Filter By Object Name (Displays if **Get Deleted** or **Get Updated** was selected.)	Type the initial letters to filter the display of business objects. You can also select a filter type: • **Recommended**: Displays the most frequently used objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **All**: Displays all objects.
Select Business Object (Displays if **Get Deleted** or **Get Updated** was selected.)	Select a business object to include in the operation.

Operations Page - Invoke Apex Services

Configure the **Invoke Apex Services** selection.

Element	Description
What is the endpoint's relative resource URI?	Specify the relative path associated with the resource. The path can contain template parameters specified with curly braces (for example, `{order-id}`). A resource is any source of specific information that can be addressed. The resource path follows a fixed, prefixed URL appended with the specified relative path. By default, the URL is prefixed with the following path: `https://yourInstance.salesforce.com/services/apexrest/`
What action do you want to perform on the endpoint?	Select a single HTTP action (method) for the endpoint to perform: • **GET**: Retrieves (reads) information (for example, makes queries). If you select this option, you cannot configure a request payload for this endpoint. • **PUT**: Updates information. • **POST**: Creates information. • **DELETE**: Deletes information. If you select this option, you cannot configure a request payload for this endpoint. • **PATCH**: Partially updates existing resources (for example, when you only need to update one attribute of the resource).

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Element	Description
Select any options that you want to configure	Based on your selections, you can add parameters or configure a request and/or response for this endpoint. • **Add and review parameters for this endpoint**: Click **Configure** to specify the query parameters and view the template request parameters created as part of the resource URI for this endpoint. If you select this option, the Query and Template Parameters page is displayed. • **Configure a request payload for this endpoint**: Click **Configure** to configure the request payload for this endpoint, including specifying the JSON sample location. If you select this option, the Sample Request Payload page is displayed. **Note**: Only **PUT** and **POST** actions support this (**Configure a request payload for this endpoint**) option. Therefore, this option is displayed when you select the **PUT** or **POST** action. • **Configure this endpoint to receive the response**: Click **Configure** to configure the response payload for this endpoint, including specifying the JSON sample location. If you select this option, the Sample Response Payload page is displayed.

Operations Page – Download Attachment

Configure the **Download Attachment** selection.

Element	Description
Select an operation type	• **Download using URL** • **Download using Record Identifier**
Description	Describes the operation type selected.
Select Business Object (Appears only when **Download using Record Identifier** is selected.)	Select only those business objects that support BLOB fields. These are: • **Attachment** • **Document** • **Content Version**
Select BLOB field (Appears only when **Download using Record Identifier** is selected.)	Select the BLOB field associated with the selected business object.

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Operations Page - Perform Bulk Data Operations

Configure the **Perform Bulk Data Operations** selection.

Element	Description
Select an operation type	• **Bulk CRUD** • **Bulk Query**
Select an operation (Displays the list of operations if you select **Bulk CRUD** as the operation type.)	• **Create** • **Update** • **Upsert** • **Delete** • **Final Job** • **Get Job Status** • **Get Successful Records** • **Get Failed Records** • **Get Unprocessed Records**
Select an operation (Displays the list of operations if you select **Bulk Query** as the operation type.)	• **Create a Job**: Creates a job ID for the SOQL query requested. • **Get Info for a Job**: Gets the status of the job. • **Get Result for a Job**: Gets the result of the job as a stream reference. • **Abort a Job**: Terminates all jobs except the ones in a completed state. • **Delete a Job**: Deletes a Bulk Query job.
Description	Describes the operation type selected.
Select Business Object (Appears only when the **Create**, **Update**, **Upsert**, or **Delete** operation has been selected.)	Type the initial letters to filter the display of business objects. You can also select a filter type: • **All**: Displays all objects. • **Custom**: Displays objects you created. Custom business objects are appended with **__c** (two underscores). • **Standard**: Displays business objects delivered as part of the Salesforce application. • **Recommended**: Displays the most frequently used objects.
Select column delimiter (to generate CSV for query results) (Appears only when the **Create a Job** operation has been selected.)	Select the column delimiter from the list.
Enter a SOQL Query Statement (Appears only when the **Create a Job** operation has been selected.)	Enter the SOQL query.
Include deleted records (Appears only when the **Create a Job** operation has been selected.)	Select this checkbox to include deleted records as part of the bulk query result.

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Summary Page

You can review the specified adapter configuration values 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 **Go back**. To cancel your configuration details, click **Cancel**.

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4

Implement Common Patterns Using the Salesforce REST Adapter

You can use the Salesforce REST Adapter to implement the following common patterns.

Topics:

- Process Large Data Sets Asynchronously with Different Bulk Data Operations (CRUD)
- Get Successful, Failed, and Unprocessed Records with the Bulk Operations
- Retrieve a Large Data Set with the Bulk Query Operation
- Abort or Delete a Salesforce Bulk Job with the Salesforce REST Adapter
- Download Binary Files Using a URL or Record Identifier with the Download Attachment Operation

Process Large Data Sets Asynchronously with Different Bulk Data Operations (CRUD)

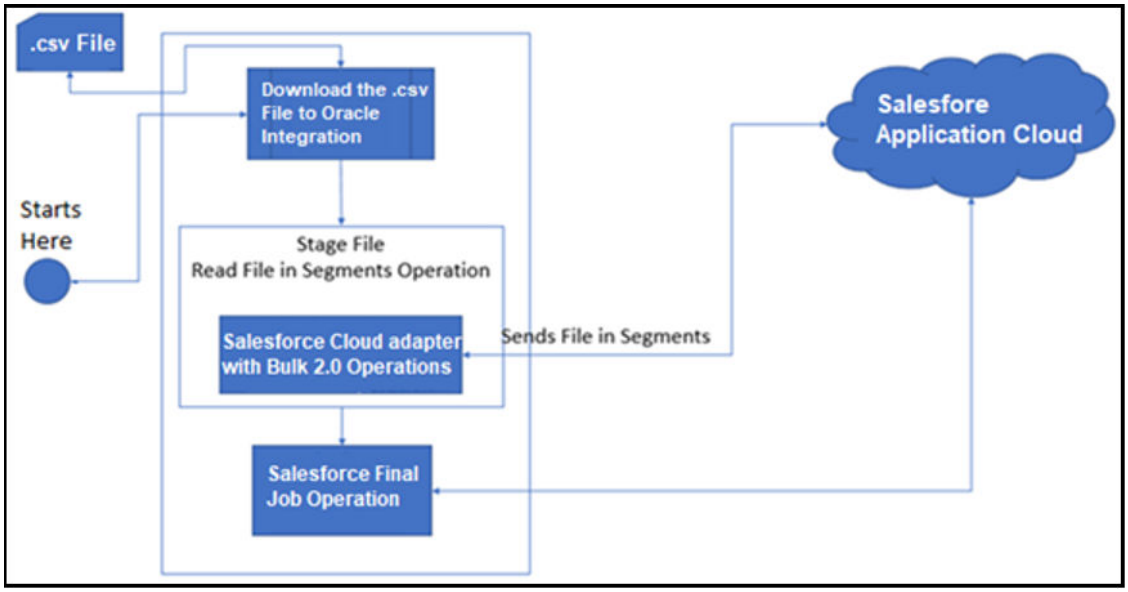
The Salesforce REST Bulk API version 2.0 enables you to handle huge data sets asynchronously with different bulk operations. For every bulk operation, the Salesforce application creates a job that is processed in batches. A job contains one or more batches in which each batch is processed independently.

This use case describes how to configure the Salesforce REST Adapter to create many account records in Salesforce Cloud.

To perform this operation, you can create FTP Adapter and Salesforce REST Adapter connections in Oracle Integration.

In this use case, a CSV file is used as input. However, you can also use other format files. The Salesforce REST Adapter transforms the file contents into a Salesforce REST recognizable format. Follow these steps to recreate this use case in your Oracle Integration instance.

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1. Create a schedule integration.
2. Drag an FTP Adapter into the integration canvas.
3. Configure the FTP Adapter as follows:
   a. On the Basic Info page, provide a name.
   b. On the Operations page, select **Download File** from the **Select Operation** list.
   c. Select **Binary** from the **Select a Transfer Mode** list.
   d. Provide the input directory, file name, and download directory.
   e. On the Summary page, review your selections.
4. Drag a stage file action into the integration canvas below the FTP Adapter. The stage file action helps the Salesforce REST Adapter fetch data in the form of segments (a single segment contains 200 to 2000 records).
   a. On the Basic Info page, provide a name.
   b. On the Configure Operations page, select **Read Files in Segments** from the **Choose Stage File Operation** field.
   c. Specify the XPath expression for the file name in the **Specify the File Name** field.
   d. Specify the directory name in the **Specify the Directory to read from** field (downloaded to Oracle Integration using FTP).
   e. On the Scheme Options page, Select **Yes** in the **Do you want to specify the structure for the contents of the file** field and select **Sample delimited document (e.g. CSV)** in the **Which one of the following choices would be used to describe the structure of the file contents** field.
   f. On the Format Definition page, click **Choose File** and upload the sample CSV file in the **Select a New Delimited Data File** field.
   g. Enter the record name and record set name.
   h. On the Summary page, review your selections.
5. Drag a Salesforce REST Adapter inside the stage file action and configure it with the required bulk operation.

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a. On the Basic Info page, provide a name.

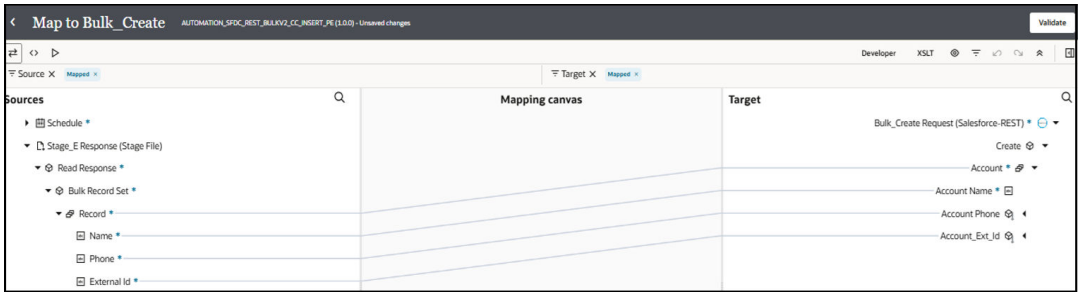
b. On the Action page, select **Perform Bulk Data Operations (Create, Upsert, Update, Delete)**.

c. On the Operations page, select **Bulk**, then select the required operation (for this example, **Create**) in the **Select an operation** field.

d. Select the required business objects (for this example, **Account**) in the **Select Business Objects** field.

e. On the Summary page, review your selections.

6. In the mapper, map the source stage file action elements to the target Salesforce REST input payload elements.



7. Drag a Salesforce REST Adapter below the stage file action and configure it with the **Final Job** operation.

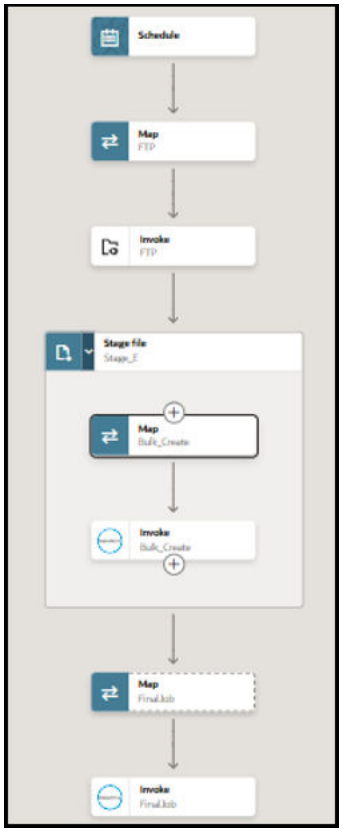
a. On the Basic Info page, provide a name.

b. On the Action page, select **Perform Bulk Data Operations**.

c. On the Operations page, select **Bulk**, then select **Final Job** in the **Select an operation** field.

When complete, the integration looks as follows.

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8. Specify the tracking variable.

   a. Click **Business Identifiers** (I).

   b. Drag the required variable to use for the tracking reference (for this example, **startTime** is selected).

9. Activate the integration.

   After successful activation, you can submit the integration and monitor the runtime in Oracle Integration.

Get Successful, Failed, and Unprocessed Records with the Bulk Operations

For every bulk operation, the Salesforce REST application creates a job ID. Once you receive the reference bulk job ID in the final batch response, you can get the details of the records using the Get Successful Records, Get Failed Records, and Get Unprocessed Records operations available under the Bulk operation.

This use case provides an overview of how to request all the details of the successful records for the respective job.

This use case uses the following bulk operation:

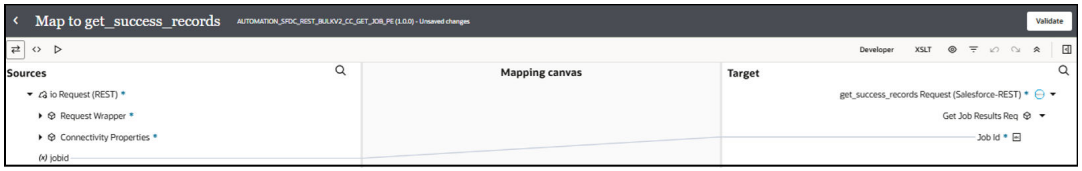
- Get Successful Records: Requests all the details of the successful records for the respective job.

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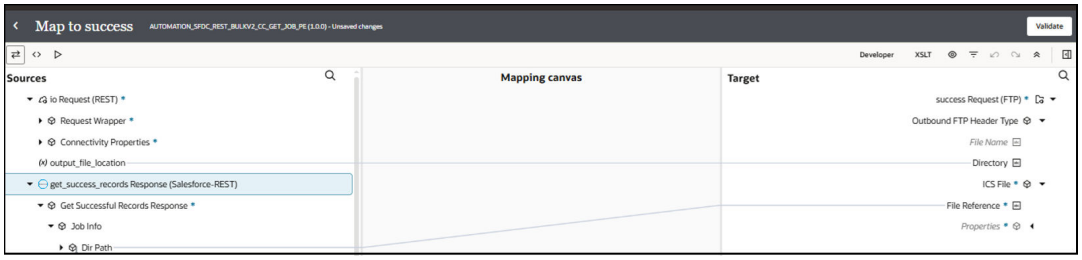
You can also request all details about the failed or unprocessed records using the following operations:

- Get Failed Records: Requests all the details of the failed records for the respective job.
- Get Unprocessed Records: Requests all the details of the unprocessed records for the respective job.

1. Create an application integration.
2. Drag the REST Adapter into the integration canvas.
3. Configure the REST Adapter.
4. Drag a Salesforce REST Adapter and configure it with the required bulk operation.
   a. On the Basic Info page, provide a name.
   b. On the Action page, select **Perform Bulk Data Operations**.
   c. On the Operations page, select **Bulk**, then select the required operation (for this example, **Get Successful Records**) in the **Select an Operation** field.
   d. Review your selections on the Summary page.
5. In the mapper for the Salesforce REST Adapter invoke connection, map the source **jobid** element to the target **Job Id** element.



6. Drag an FTP Adapter into the integration canvas.
7. Configure the FTP Adapter as follows:
   a. On the Basic Info page, provide a 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 (.csv).
   e. On the Schema page, select **No**.
   f. On the Summary page, review your selections.
8. In the mapper for the FTP Adapter invoke connection, map the source **Dir Path** element to the target **File Reference** element.



9. Specify the tracking variable.

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a. Click **Business Identifiers** (I).

b. Drag the required variable to use for the tracking reference (for this example, **Input1** is selected).

10. Activate the integration.

When complete, the integration looks as follows.



Retrieve a Large Data Set with the Bulk Query Operation

Bulk query refers to the Bulk API's ability to retrieve large volumes of data efficiently and asynchronously. Bulk query supports an SOQL query to fetch millions of records for analysis or integration with other systems. You can also use bulk query for data migrations and regular backups of Salesforce records. Bulk query improves performance by requiring only a single API call to fetch all data.

This use case describes how to configure the Salesforce REST Adapter to query a large number of account records from Salesforce Cloud using the Bulk Query operation.

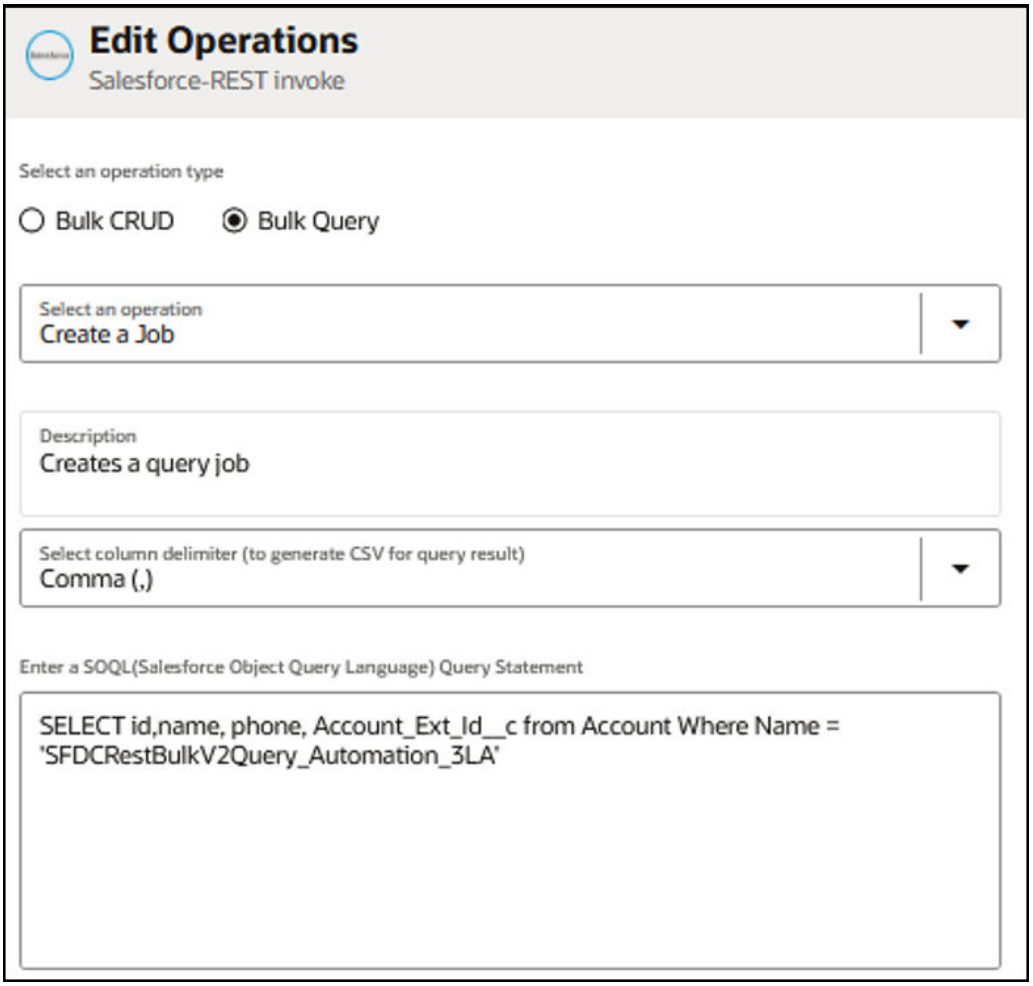
In this use case, you perform the following tasks:

- Query the records to fetch using the **Create a Job** operation.
- Obtain the runtime status of the bulk query process using the **Get Info for a Job** operation.
- Use the **Get Result for a Job** operation to write the result into a file.

Follow these steps for more details:

1. Create an application integration.
2. Drag the REST Adapter into the integration canvas.
3. Configure the REST Adapter.
4. Drag the Salesforce REST Adapter and configure it with the required bulk operation.
   a. On the Basic Info page, provide a name.
   b. On the Action page, select **Perform Bulk Data Operations**.
   c. On the Operations page, select **Bulk Query** as the **Operation Type**, **Create a Job** as the operation, and a suitable delimiter in the **Select** column delimiter field.
   d. Enter a valid SOQL query, then click **Refresh** and **Test My Query**.

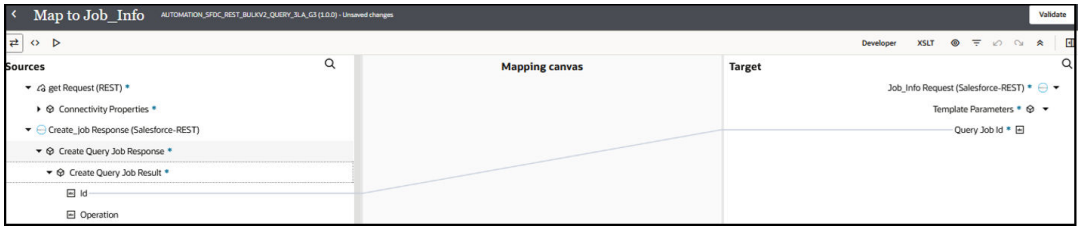
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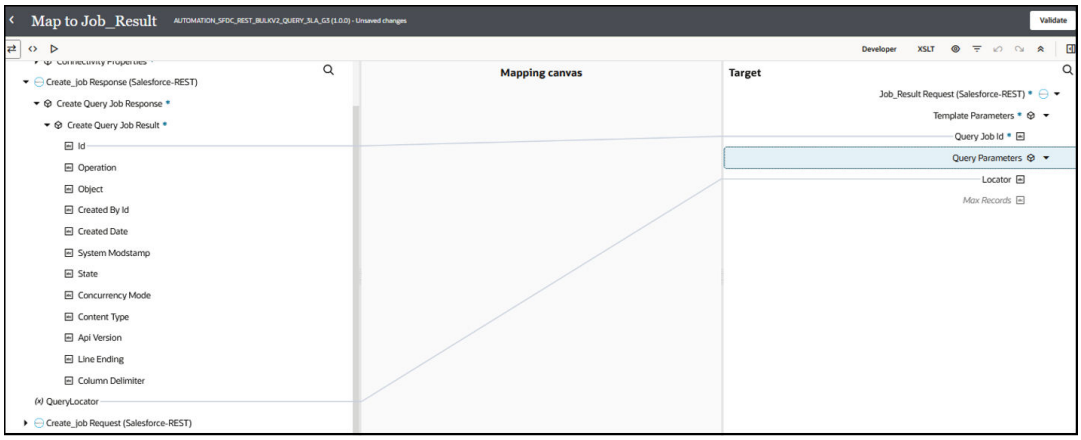
e. On the Summary page, review your selections.

5. In the integration canvas, drag a data stitch action and add three variables:
   a. Set **Loop1Variable** to **true**.
   b. Set **Loop2Variable** to **true**.
   c. Set **QueryLocator** to **‘’**.
6. Drag a while action and set the **Loop1Variable** condition to **true**.
7. Drag the Salesforce REST Adapter invoke connection inside the loop.
   a. Select **Perform Bulk Data Operations**.
   b. Select the **Bulk Query** operation type and the **Get Info for a Job** operation.
   c. Review your selections on the summary page.
8. In the mapper, map the source **Id** element under **Create_job Response** to the target **Query Job Id** element.

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9. Drag a switch action into the integration canvas and add two routes.
   - In the first route:
     a. Set **condition state** = **InProgress**.
     b. Add a data stitch action and assign **Loop1Variable** to **true**.
     c. Add a wait action and set it to ten seconds.
   - In the second route:
     a. Set **condition state** = **JobComplete**.
     b. Add a data stitch inside the route.
     c. Assign **Loop1Variable** to **false**.
10. Exit the first while action.
11. Add a second while action and set the condition **Loop2Variable** to **true**.
12. Inside the second while action, add another Salesforce REST Adapter connection.
    a. Select the **Perform Bulk Data** operation.
    b. On the Operations page, select the **Bulk Query** operation type and the **Get Result for a Job** operation.
    c. On the Summary page, review your selections.
13. In the mapper, map the source **Id** element under **Create Query Job Result** to the target **Query Job Id** element and the source **QueryLocator** variable to the target **Locator** element under **Query Parameters**.



14. Drag an FTP Adapter into the integration canvas.
15. Configure the FTP Adapter as follows:
    a. On the Basic Info page, provide a name.

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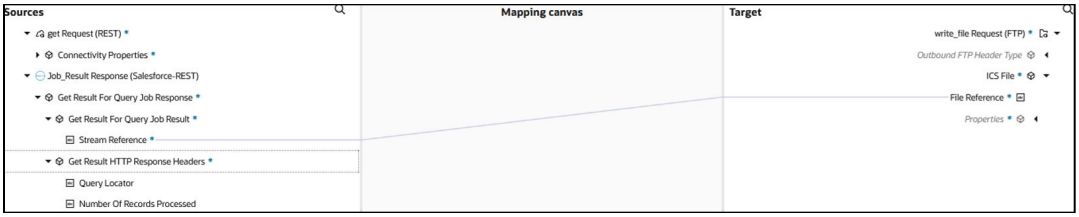
b. On the Operations page, select **Write File** from the **Select Operation** list.

c. Select **Binary** from the **Select a Transfer Mode** list.

d. Provide the output directory and file name pattern, then select **No** from the **Do you want to specify the structure for the contents of the file?** list.

e. On the Summary page, review your selections.

16. In the mapper, map the source **Stream Reference** element under **Get Result for Query Job Response** to the target **File Reference** element under **Request (FTP)**.



17. Add a switch action inside the loop and configure one **Route** path and the **Otherwise** path.

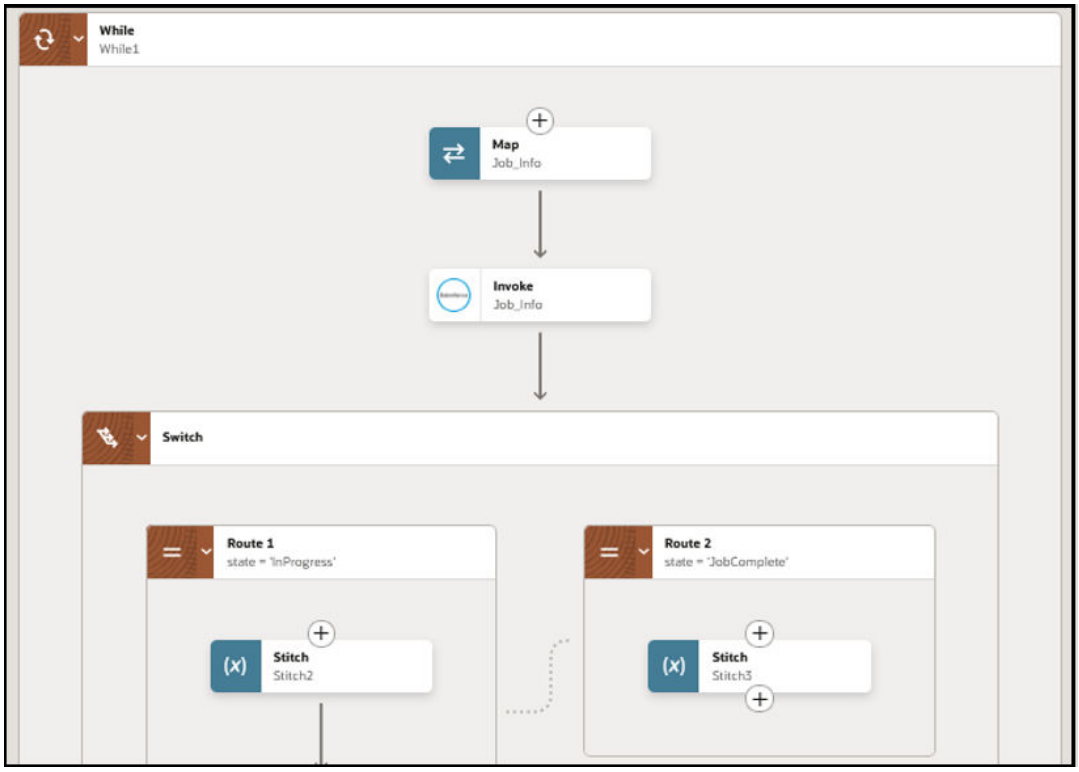
- In the **Route** path:
  a. Set the condition **QueryLocator** to **!=’null’**.
  b. Add a data stitch action and assign **QueryLocator** = **queryLocator** and **Loop2Variable** = **true**.
- In the **Otherwise** path:
  a. Add a data stitch action.
  b. Assign **Loop2Variable** = **false**.

18. Click **Business Identifiers** (I) and specify the tracking variable.

19. Activate and run the integration.

When complete, this part of the integration looks as follows.

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Abort or Delete a Salesforce Bulk Job with the Salesforce REST Adapter

For every Bulk version 2.0 query operation, Salesforce assigns a unique job ID. You can perform postprocessing operations on this job using the Abort or Delete operation available in the Salesforce REST Adapter.

This use case describes how to configure an application integration that performs either of the following operations:

- Abort a Job: Aborts a query job.
  When a job is aborted, no more records are processed. If changes to data have been committed, they aren't rolled back.
- Delete a Job: Deletes a query job.
  When a job is deleted, job data stored by Salesforce is deleted and job metadata information is removed. The job no longer appears on the Bulk Data Load Jobs page in Salesforce.

1. Create an application integration.
2. Drag a REST Adapter into the integration canvas.
   - Configure the REST Adapter to receive the job ID as input.
3. Drag a Salesforce REST Adapter invoke connection into the integration canvas.
   a. On the Basic Info page, provide a name (for example, `Abort Job`).
   b. On the Action page, select **Perform Bulk Data Operations**.
   c. On the Operations page, select the **Bulk Query** operation type.

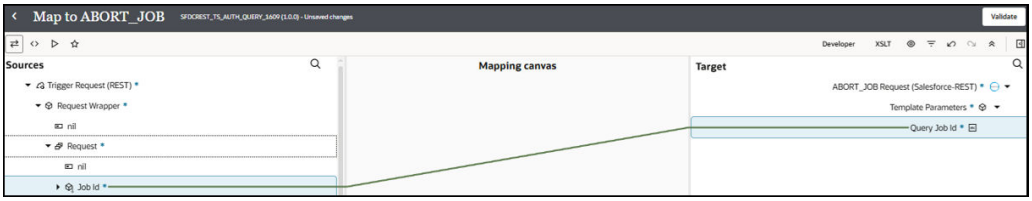
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d. Select **Abort a Job/Delete a Job** from the **Select an operation** list.

e. Review your selections on the Summary page.

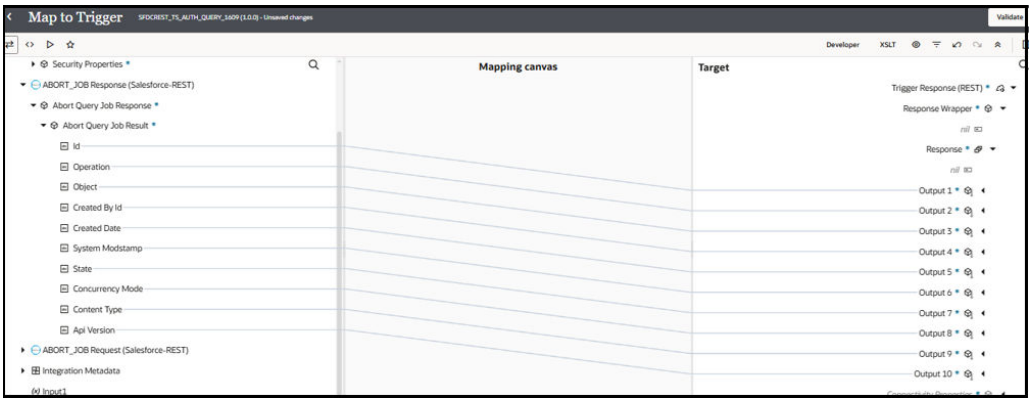
4. Open the mapper for the Salesforce REST Adapter invoke connection.

- Map the **Trigger Request (REST)** source **Job id** element to the **Request (Salesforce REST)** target **Query Job id** element.



5. Add a response action (if REST Adapter-triggered).

- Map the **Response (Salesforce REST)** source status (for example, **State** or **Message**) to the output target elements.



6. Specify the tracking variable.

a. Click **Business Identifiers** (I).

b. Drag the required variable to use for the tracking reference (for this example, **Input1** is selected).

When complete, the integration looks as follows:



7. Activate the integration.

Here are the key points to remember while creating this case:

- The job ID must be valid and present in Salesforce.
- You can only delete a job if its state is Job Complete, Aborted, or Failed.

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- You can only abort jobs in the following states: Upload Complete or InProgress.
- Any user with the correct permission can abort a job.
- Only a user who created a job is authorized to close it.

Download Binary Files Using a URL or Record Identifier with the Download Attachment Operation

The Salesforce REST Adapter does not facilitate downloading of binary files while performing CRUD operations. To retrieve these files, you must use the Download Attachment operation provided by the Salesforce REST Adapter. This use case describes how to download binary files by using a URL or record identifier.

- Download Using the URL
- Download Using the Record Identifier

Download Using the URL

You can obtain the Blob URL by using the existing Salesforce REST Adapter functionality (SOQL/SOSL query or retrieve). You can then use this URL as input and download the binary file content. Follow these steps for more details.

1. Create a schedule integration
2. Configure a schedule parameter (for this example, named **ParentId**).
3. Drag the Salesforce REST Adapter as an invoke connection into the integration canvas.
4. On the Action page, select **Query Information**.
5. Select **SOQL/SOSL Query** as the operation type.
6. Enter a valid SOQL query for binary large objects to retrieve the **Id**, **Name**, and **Body** using **ParentId**, or **Name** as a query condition/binding parameter.

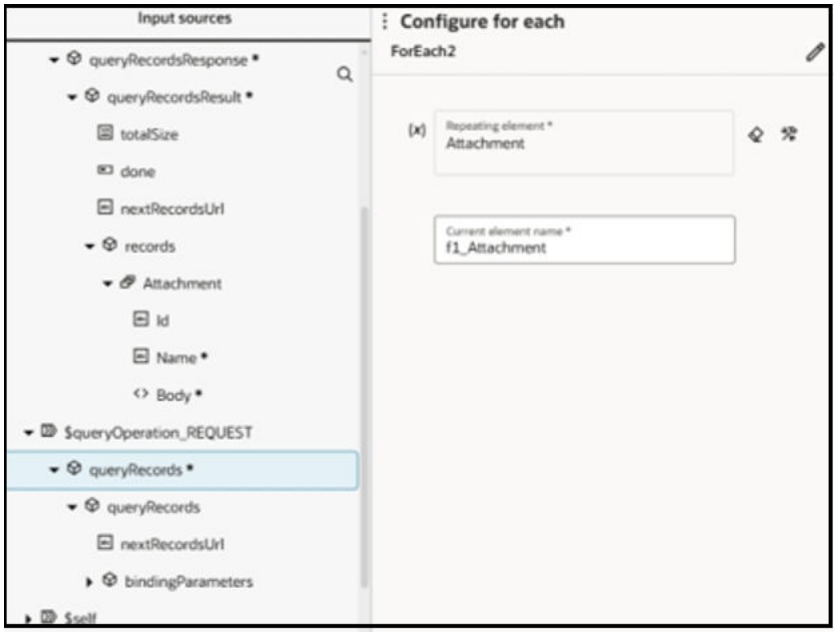
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a. If there are multiple attachments on **ParentId**, then perform the **Download Attachment** operation for each attachment.

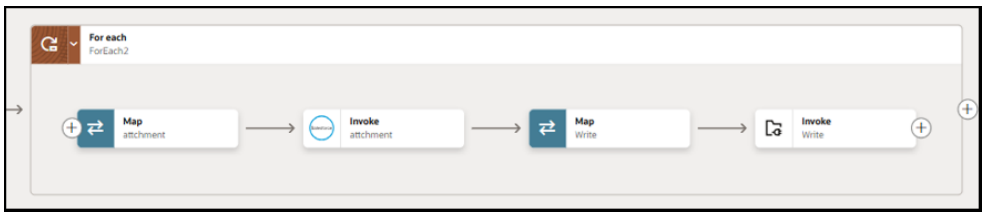
   i. Drag a for-each action into the integration canvas.

   ii. Add the Salesforce REST Adapter.



The for-each action looks as follows:

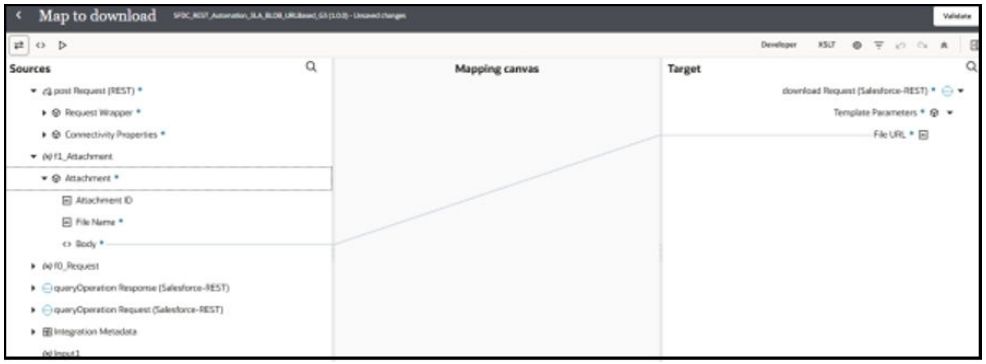
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iii. On the Action page, select **Download Attachment**.

iv. On the Operations page, select **Download Using URL** as the operation type.

v. In the mapper, map the source **Body** element under **Attachment** response to the target **File URL** element.



vi. Drag an FTP Adapter into the integration canvas after the map action.

vii. Use the **File URL** value obtained from the above step to write the file to any FTP location.

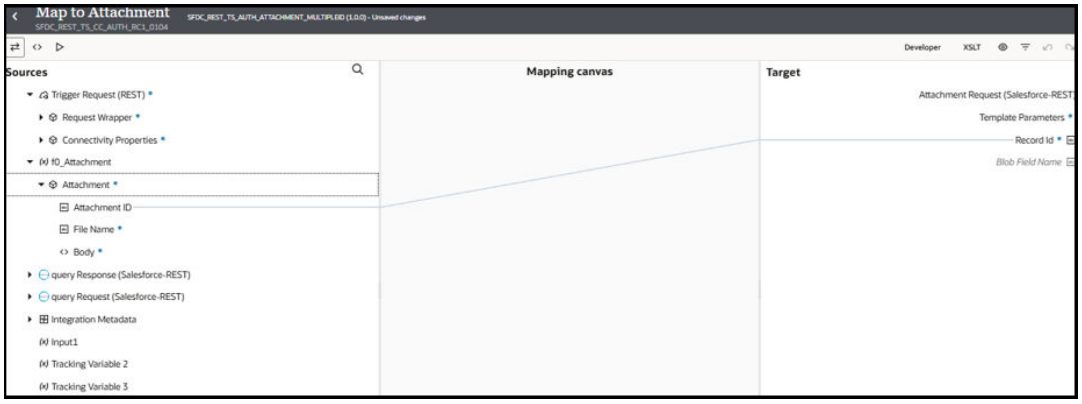
7. Click **Business Identifiers** (I) to specify the tracking variable.
8. Activate and run the integration.

Download Using the Record Identifier

You can use this operation to download binary file content of a specific record. Follow these steps for more details.

1. Create a schedule integration
2. Drag the Salesforce REST Adapter to the integration canvas.
3. On the Action page, select **Download Attachment**.
4. On the Operation page, select **Download Using Record Identifier** as the operation type.
5. Select the object that supports the blob field.
6. Select the blob field associated with the selected business object.
7. In the mapper, map the source **Attachment ID** element to the **Record Id** element.

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8. Click **Business Identifiers** (I) to specify the tracking variable.
9. Activate and run the integration.

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5

Troubleshoot the Salesforce REST Adapter

Review the following topic to learn about troubleshooting issues with the Salesforce REST Adapter.

Topics:

- Invalid Session ID or Session Not Found Error

Invalid Session ID or Session Not Found Error

You may encounter the following error when establishing a connection with the Salesforce REST Adapter using the Authorization Code Credentials security policy.



This is a known issue that occurs during connection security configuration. The issue is primarily caused by Salesforce enabling refresh token rotation by default. At present, this feature is not supported by the Salesforce REST Adapter.

As a temporary workaround, contact Salesforce Support and request that refresh token rotation be disabled for the connected application until support for this feature is available. You can also switch to the Client Credentials security policy to avoid this error. See Configure Connection Security.

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