Informatica

Informatica® Cloud Data Integration

Adobe Experience Platform Connector

Informatica Cloud Data Integration Adobe Experience Platform Connector
October 2022

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Preface

Use *Adobe Experience Platform Connector* to learn how to read from or write to Adobe Experience Platform by using Cloud Data Integration. Learn to create an Adobe Experience Platform connection, develop and run mappings and mapping tasks in Cloud Data Integration.

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CHAPTER 1

Introduction to Adobe Experience Platform Connector

You can use Adobe Experience Platform Connector to connect to Adobe Experience Platform from Data Integration and securely read data from or write data to Adobe Experience Platform.

You can use Adobe Experience Platform objects as source or target in mapping tasks.

You can switch mappings to advanced mode to include transformations and functions that enable advanced functionality.

Note: This connector is a private connector and is not available as an add-on connector. To get access to this connector, contact Global Customer Support.

Adobe Experience Platform Connector assets

Create assets in Data Integration to integrate data using Adobe Experience Platform Connector.

You can perform insert operation with Adobe Experience Platform Connector.

When you use Adobe Experience Platform Connector, you can include the following Data Integration assets:

- Mapping
- Mapping task

Note: Lookup Transformation is not applicable for Adobe Experience Platform.

For more information about configuring assets and transformations, see *Mappings*, *Transformations*, and *Tasks* in the Data Integration documentation.

Introduction to Adobe Experience Platform

Adobe Experience Platform provides marketers and solution developers services to easily implement, manage, and build integrated Adobe and partner solutions.

As a customer data platform, the Adobe Experience Platform ingests and unifies customer data from all types of marketing, sales, and service channels. Adobe Experience Platform then maps the data to a standard schema within the Experience Data Model (XDM). The Adobe Experience Platform semantic data layer structures your data for common usage across all Adobe Experience Cloud solutions and core services.

Administration of Adobe Experience Platform Connector

You can use Adobe Experience Platform Connector after the organisation administrator performs the following tasks:

1. Create the Enterprise ID with administrative privileges for your organization to log in to the Adobe I/O Console and create a new Service Account Integration.
2. Generate a service integration to get the client ID, key, and the technical account from the Adobe Experience Platform.
3. Install the Secure Agent on a Linux machine or a 64-bit Windows machine and on the same network as the Adobe Experience Platform. The Secure Agent accesses the Adobe APIs using the Adobe I/O API gateway over HTTP to connect to the Adobe Experience Platform.
4. On a Windows machine, download the `winutils.exe` file. Winutils are Windows binaries for Hadoop versions that you can download from an open source like github.
   Place the `winutils.exe` file in the directory that the Secure Agent can access.

   Set the Hadoop home variable in the JVM options of the Secure Agent and point the variable to the directory that contains the `bin` folder. For example,

   ```
   -Dhadoop.home.dir="E:\\\a_IOD\\\Files\\\AdobeExperiencePlatform\\\Hadoop_Dir"
   ```

Generate a Service Integration

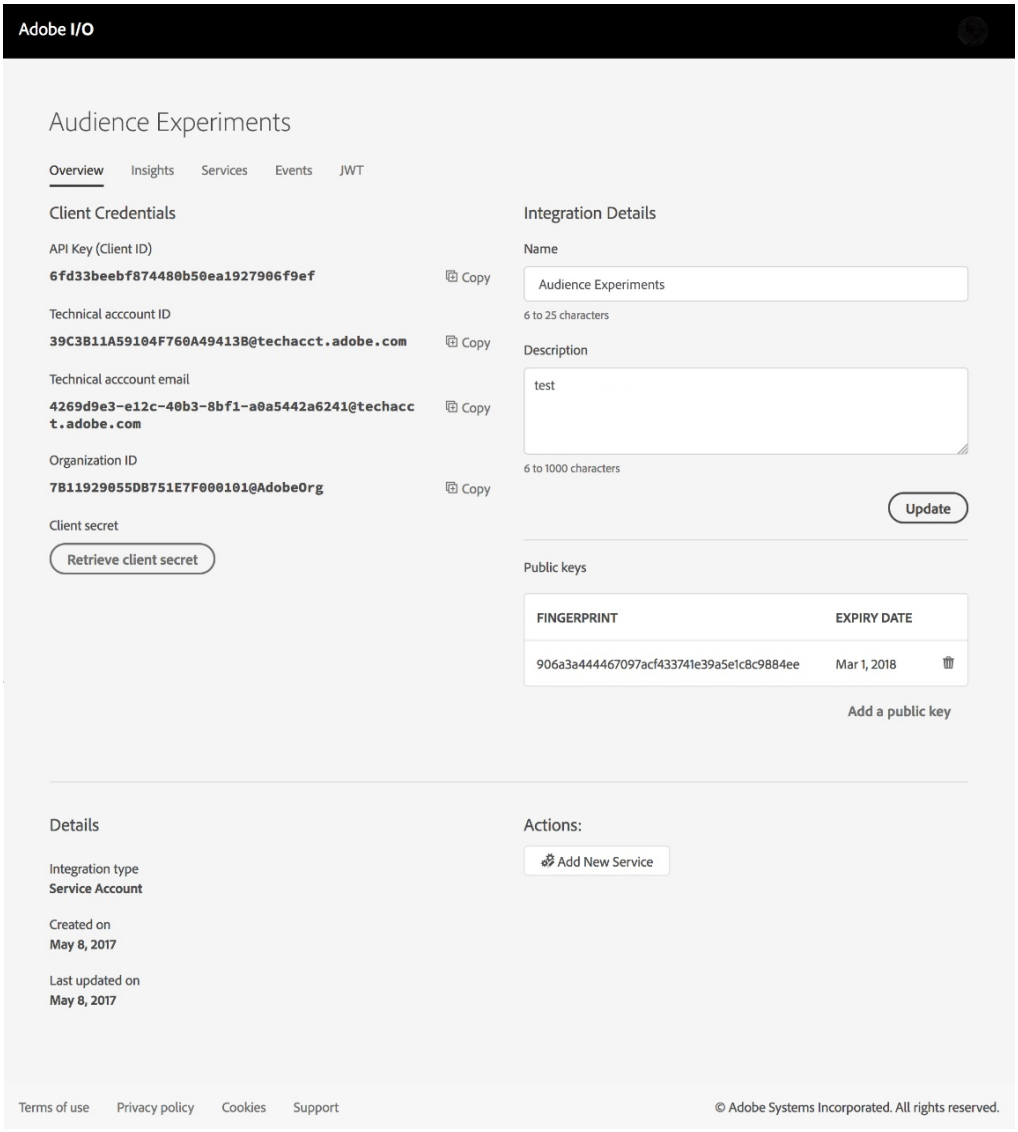
The Adobe Experience Platform uses a JWT-based authentication. You need to configure a Service Account Integration. Service accounts are similar to user accounts, but they are unique to your application and have additional security requirements.

Perform the following steps to generate a service integration:

1. Log in to the Adobe I/O Console with your Adobe credentials.
   The **Integrations** page appears. An Integration is a service account that is created for the selected IMS Organization. If you are associated with multiple organizations, you can select the appropriate organization from the menu.
2. On the **Integrations** tab, click **New Integration**.
3. Select **Access an API** and click **Continue**.
4. In the **Experience Cloud** section, select **Data Services**.
5. Click **New integration** to create a new integration for the service and click **Continue**.
6. Enter a name and description for the integration and upload a public certificate.
   When you generate a public certificate the private key is generated along with the certificate. The private key is required to generate the JWT and the certificate is used to create an API key.

   For more information about generating a public certificate, see *Adobe documentation*.
7. Click **Create integration**.

8. After creating the integration, you can get the client ID, technical account ID, and client secret key. The following image shows the service integration details:



CHAPTER 2

Adobe Experience Platform connections

Create an Adobe Experience Platform connection to read data from and write data to Adobe Experience Platform.

You can create an Adobe Experience Platform connection on the Connections page or when you create a mapping. Use the Adobe Experience Platform connection in mappings and mapping tasks.

Adobe Experience Platform connection properties

When you set up an Adobe Experience Platform connection, you must configure the connection properties.

After you generate a service integration, you can get the organization specific properties that are required to generate the access token.

To obtain access token for your integration, you must first create a JSON Web Token (JWT) that encapsulates your client credentials. For each API session, you can exchange your JWT for an access token from Adobe IMS. The token identifies your integration and grants access to the services you have configured.

The following table describes the Adobe Experience Platform connection properties that are required to generate a JWT token every time you connect to Adobe Experience Platform:

Property	Description
Environment	The Adobe Experience Platform environment. Select prod.
Private Key Path	Path of the private key on the Secure Agent machine. Enter the private key path without the drive name. For example, if the private key file resides in the C drive path `C:\a_IOD\Files\AdobeExperiencePlatform\key.der` then the private key path is: `file:///a_IOD/Files/AdobeExperiencePlatform/key.der`
Client Id	Client ID in Adobe Experience Platform required for generating a valid access token.
Client Secret	The client secret key in Adobe Experience Platform required for generating a valid access token.
Account Id	The Adobe Experience Platform Account ID.

Property	Description
IMS Org	The Adobe Identity Management System (IMS) Organization ID.
Sandbox Name	Optional. Name of the Adobe Experience Platform sandbox account that you want to connect to.

Adobe Experience Platform objects

A dataset represents an Adobe Experience Platform object. Each dataset entity includes the following information:

- Schema
  - Fields and their types
  - Field description
  - Enumeration values
- Creation or Modification dates and users
- Child objects, such as file entities
- Format

A dataset can have both a flat schema and a hierarchical schema. Hierarchical schemas have complex objects and arrays. Data for hierarchical schemas, most common in XDM schemas, is in parquet file format. Data for a flat schema is in delimited file format.

When you create a source or target connection, you can select a source or target object from the list. After you select the object, you can view the columns for the selected object on the Fields tab.

CHAPTER 3

Mappings and mapping tasks with Adobe Experience Platform Connector

You can add a mapping that contains an Adobe Experience Platform source or target to a mapping task and run the task based on a schedule. In advanced mode, the Mapping Designer updates the mapping canvas to include transformations and functions that enable advanced functionality.

Example

You are the marketing manager in an organization. Your organization uses Salesforce and the data from Salesforce comes into Adobe Experience Platform once every day.

Mapping task helps run the mapping on schedule or on demand, provides a single level of versioning, and allows a notification to be generated at runtime. Mapping task also allows the setting of performance and session related parameters.

Configure a mapping task to run daily and execute a mapping that reads data from Adobe Experience Platform Connector as the source. The task uses parameterized Adobe Experience Platform source properties to read only the new data. After reading the data, it performs all the transformations and maps it to an Adobe Experience Platform XDM schema, and then writes the data back to the Adobe Experience Platform using the Adobe Experience Platform Connector as a target.

Adobe Experience Platform sources in mappings and mapping tasks

In a mapping, you can configure a Source transformation to represent an Adobe Experience Platform object as the source to read data from Adobe Experience Platform.

The following table describes the Adobe Experience Platform source properties that you can configure in a Source transformation:

Property	Description
Connection	Name of the source connection.
Source Type	Type of the source object. Select Single to specify a single Adobe Experience Platform object.
Source Object	Name of the source object.

Request options

The following table describes the request message that you can configure in a Source transformation:

Property	Description
Request Message	It is mandatory to specify a blank JSON object {} in the request message.

Advanced properties

The following table describes the Adobe Experience Platform advanced source properties:

Property	Description
startTimeInMillis	Optional. Type: long Epoch time in milliseconds. The start time for the time period for which you want to read data.
durationInMillis	Optional. Type: long Epoch time in milliseconds. The duration for which you want to read data, starting from the start time that you set.

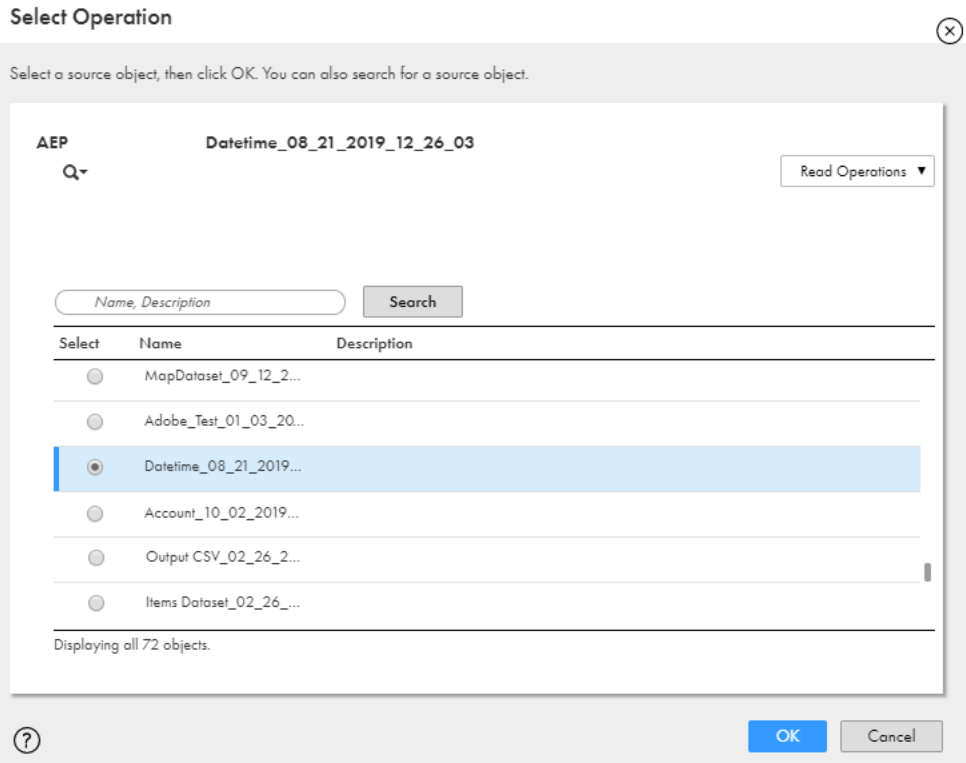
Source transformation mapping example

To read data from Adobe Experience Platform and write to a flat file, perform the following tasks:

1. Create an Adobe Experience Platform connection to read data from an Adobe Experience Platform source.
2. Create a flat file connection to write data to the flat file.
3. In Data Integration, click **New** > **Mapping** > **Create**.

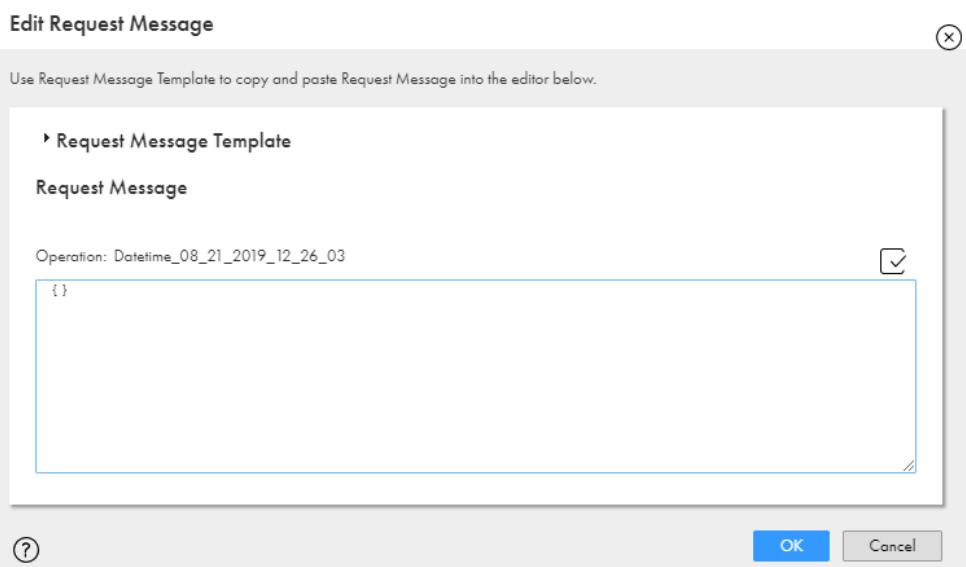
   The **New Mapping** dialog box appears.
4. Enter a name and description for the mapping.
5. Add a Source transformation. Specify a name and description in the general properties.
6. On the **Source** tab, perform the following steps:
   a. In the **Connection** field, select the configured Adobe Experience Platform connection to connect to Adobe Experience Platform.
   b. In the **Operation** field, select an object or a dataset.

      The following image shows the source objects and datasets:



c. In the **Request Options** section, specify a blank JSON object {} .

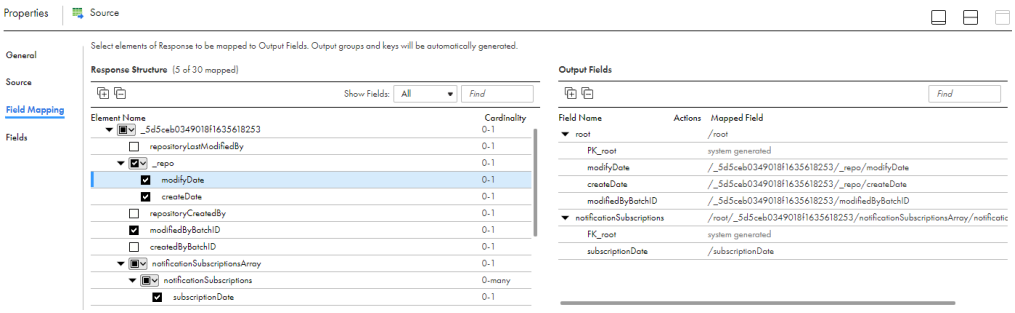
The following image shows a blank JSON object in the request message:



d. In the **Advanced** section, you can set the start time and duration for which you want to read the data.

7. On the **Field Mapping** tab, select the elements that you want to map to the output fields.

The following image shows the response structure on the left pane in a hierarchical format and the output groups on the right pane in a relational format:



The output groups and primary and foreign keys are auto-generated.

8. Add the Target transformation. Specify name and description in the general properties.
9. Select a flat file connection for the target transformation.
10. Draw a link to connect the Adobe Experience Platform source to the flat file.

    The following image shows the Adobe Experience Platform mapping:



11. On the **Field Mapping** tab, select the automatic field map option.
12. Save and run the mapping.

Adobe Experience Platform targets in mappings and mapping tasks

In a mapping, you can configure a Target transformation to represent an Adobe Experience Platform object as the target to write data to Adobe Experience Platform.

The following table describes the Adobe Experience Platform target properties that you can configure in a Target transformation:

Property	Description
Connection	Name of the target connection.
Target Type	Select Single.
Target Object	Target object for the mapping task.

Note: When you write data to Adobe Experience Platform, the column name must not contain Unicode characters.

Input settings properties

You can enable **Sorted Input** under Input Settings. Sorted Input indicates that input data is presorted. Default is disabled. Enable sorted input for better performance.

Note: When **Sorted Input** is enabled and the input is not sorted, the Secure Agent does not process input and the mapping fails.

Field mapping in a Target transformation

You can map fields that are in a relational structure to the hierarchical structure used by a Adobe Experience Platform target.

On the **Field Mapping** tab for the Target transformation, the fields in the **Target Fields** section appear in hierarchical format. The target fields are determined by the request message structure of the operation you select for the Target transformation.

Each source object displays as a group in the **Input Fields** area. You can select fields in the **Input Fields** section to map the fields to the request. If the input fields include multiple input groups, map the groups to the corresponding nodes in the request. Be sure to map all of the fields that you require in the request.

CHAPTER 4

Troubleshooting

Use the following sections to troubleshoot errors in Adobe Experience Platform Connector.

Mappings and mapping tasks

The session log shows errors, although the task is successful.

When you read data from or write data to Adobe Experience Platform, the session log might show errors, although the task is successful. In such cases, ignore the errors in the session log.

System properties

If you encounter issues while running a mapping task, set the debugging properties in the JVM arguments.

Configure the following Java system properties in the system configuration details of the Secure Agent to debug the issue:

System Property	Description
com.adobe.platform.connector.loggingLevel	Specify the Java logging level in String format. Default is INFO.

The following table lists other system properties that can be useful:

System Property	Description
adobeioEndPoint	Endpoint or host for all the Adobe Experience Platform APIs.
dataSet.max	The maximum number of datasets that you can fetch from Adobe Experience Platform. Default is -1 for all datasets.

CHAPTER 5

Data type reference

Data Integration uses the following data types in mapping tasks with Adobe Experience Platform:

Adobe Experience Platform native data types

Adobe Experience Platform data types appear in the Target transformations when you choose to edit metadata for the fields.

Transformation data types

Set of data types that appear in the transformations. They are internal data types based on ANSI SQL-92 generic data types, which the Secure Agent uses to move data across platforms. Transformation data types appear in all transformations in a mapping.

When Data Integration reads source data, it converts the native data types to the comparable transformation data types before transforming the data. When Data Integration writes to a target, it converts the transformation data types to the comparable native data types.

Adobe Experience Platform transformation data types

The following table describes the data types that Data Integration supports for Adobe Experience Platform sources and targets:

Adobe Experience Platform Data Type	Transformation Data Type
String	string
Boolean	integer
Integer	integer
BigInt	bigInteger
Decimal	decimal
Double	double
Long	bigInteger

Adobe Experience Platform Data Type	Transformation Data Type
Array	binary
Object	string
Binary	binary
Date	string
Datetime	string

Date and Datetime format

Use the following formats for Date and Datetime:

- Date - `YYYY-MM-DD`
  For example, `2020-10-14`
- Datetime - `YYYY-MM-DDThh:mm:ss.SSSZ`
  For example, `2004-10-23T12:00:00.123Z`

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