Informatica

Informatica® Cloud Data Integration

# OData Connector

Informatica Cloud Data Integration OData Connector
April 2024

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# Preface

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

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CHAPTER 1

# Introduction to OData Connector

Open Data Protocol (OData) is an OASIS standard that defines best practices to build and consume RESTful APIs.

You can focus on business logic and build RESTful APIs with OData instead of defining request headers, response headers, status codes, HTTP methods, URL conventions, media types, payload formats and the query options. OData guides you to track changes and define functions, or actions for reusable procedures and send asynchronous, or batch requests. Use OData for extension and to fulfill any custom needs of your RESTful APIs. OData builds on core protocols, such as HTTP and commonly recognized methodologies like REST.

OData Connector integrates Data Integration with systems, such as SharePoint, databases, SAP OData services, and Team Foundation Services. These systems are OData compliant, on-premise compliant or cloud applications compliant. OData Connector communicates with these systems in the OData protocol. OData Connector uses restful API calls to connect to an OData service. Rest calls can be in XML or JSON format. Choose the format that the OData service supports. Use OData Connector to connect to endpoints that support OData protocol version 2.

Create an OData connection to specify objects that are exposed in an OData service that you want to include in a task. You can use the OData connection in synchronization tasks, mappings, and mapping tasks.

You can configure a synchronization task using the Synchronization Task wizard. Create a synchronization task to synchronize data between a source and target. You can perform insert, update, upsert, or delete operations on OData objects.

Create a mapping task to process data based on the data flow logic defined in a mapping or integration template. You can switch mappings to advanced mode to include transformations and functions that enable advanced functionality.

## OData Connector assets

Create assets in Data Integration to integrate data using OData Connector.

When you use OData Connector, you can include the following Data Integration assets:

- Mapping
- Mapping task
- Synchronization task

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

CHAPTER 2

# OData connections

Create an OData connection to read data from or write data to an OData service.

Use the connection to specify sources and targets in mappings and mapping tasks.

## Connect to OData

Let's configure the OData connection properties to connect to OData.

### Before you begin

Before you configure the connection properties, keep the user name, password, and endpoint URI from the OData service handy.

### Connection details

The following table describes the basic connection properties:

| Property | Description |
|---|---|
| Connection Name | Name of the connection.<br>Each connection name must be unique within the organization. Connection names can contain alphanumeric characters, spaces, and the following special characters: _ . + -,<br>Maximum length is 255 characters. |
| Description | Description of the connection. Maximum length is 4000 characters. |
| Type | OData |
| Runtime Environment | Name of the runtime environment where you want to run tasks.<br>Select Secure Agent, Hosted Agent, or serverless runtime environment. |
| User Name | User name to connect to the OData service. |
| Password | Password associated with the user name. |
| Service Root URI | Root URI of the OData service.<br>The service root URI must follow the OData URI conventions. |

## Advanced settings

The following table describes the advanced connection properties:

| Property | Description |
|---|---|
| OData Parameter File Path | Absolute path to a file that you append to the URL. The file contains key value pairs separated by a new line. You can use this file to check additional parameter values required in the URL.<br>**Note:** Ensure that you use percent encoding to encode the key value pairs in the file. |
| Data Serialization Format | The format of data you want to transfer.<br>Choose from ATOM/XML or JSON.<br>Default is ATOM/XML. |

# Proxy server settings

If your organization uses an outgoing proxy server to connect to the Internet, the Secure Agent connects to Informatica Intelligent Cloud Services through the proxy server.

You can configure the Secure Agent to use the proxy server on Windows and Linux. You can use the unauthenticated or authenticated proxy server. The proxy settings applies to connections used in mappings and in mappings in advanced mode.

To configure the proxy settings for the Secure Agent, use one of the following methods:

- Configure the Secure Agent through the Secure Agent Manager on Windows or shell command on Linux.

  For instructions, see "Configure the proxy settings on Windows" or "Configure the proxy settings on Linux" in *Getting Started* in the Data Integration help .
- Configure the JVM options for the DTM in the Secure Agent properties. For instructions, see the Proxy server settings Knowledge Base article.

To configure proxy settings for the serverless runtime environment, see "Using a proxy server" in *Runtime Environments* in the Administrator help.

CHAPTER 3

# Synchronization tasks with OData Connector

Use the connection in the Synchronization Task wizard when you create a synchronization task. You can perform insert, update, upsert, or delete target operations in a synchronization task. You can also configure data filters based on your requirements.

When you configure a synchronization task to read from an OData service, you can configure the source properties. When you configure a synchronization task to write to an OData service, you can configure the target properties.

## OData sources in synchronization tasks

When you configure a synchronization task to read from an OData service, you can configure the source properties.

The source properties appear on the Source page of the Synchronization Task wizard when you specify an OData connection.

The following table describes the OData source properties:

| Source Property | Description |
|---|---|
| Connection Name | Name of the source connection. |
| Source Type | Source Type. Select Single for a single source object. |
| Source Object | Source object for the task. |

## OData targets in synchronization tasks

When you configure a synchronization task to write to an OData service, you can configure the target properties.

The target properties appear on the Target page of the Synchronization Task wizard when you specify an OData connection.

The following table describes the OData target properties:

| Target Property | Description |
|---|---|
| Connection | Name of the target connection. |
| Target Type | Target object for the task. |
| Child Object | Select a related child object to use more than one object as the target. |

CHAPTER 4

# Mappings and mapping tasks with OData Connector

Use the Data Integration Mapping Designer to create a mapping. When you create a mapping, you configure a source or target to represent an OData object.

Use the Mapping Task wizard to create a mapping task. The mapping task processes data based on the data flow logic you define in the mapping.

In advanced mode, the Mapping Designer updates the mapping canvas to include transformations and functions that enable advanced functionality.

## OData sources in mappings

To read data from an OData service, configure an OData resource object as the Source transformation in a mapping.

Specify the name and description of the OData source. Configure the source and advanced properties for the source object.

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

| Property | Description |
|---|---|
| Connection Name | Name of the source connection. |
| Source Type | Source type. Select Single for a single source object. |
| Object | Source object for the mapping. |

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

| Advanced Source Property | Description |
|---|---|
| Maximum Page Size | Set the number of records to be fetched per page when you read data.<br>You can set the page size when you want to read a large amount of data from a source. Default is 50.<br>**Note:** The value must be less than the default page size of the server. Else, the server might return duplicate rows in the target file when you run the mapping. |
| Tracing Level | Set the amount of detail that appears in the log file. You can choose terse, normal, verbose initialization, or verbose data. Default is normal. |

# OData targets in mappings

To write data to an OData service, configure an OData resource object as the Target transformation in a mapping.

Specify the name and description of the OData target. Configure the target and advanced properties for the target object.

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

| Property | Description |
|---|---|
| Connection | Name of the target connection. |
| Target Type | Target type. Select one of the following target types:<br>- Single Object<br>- Parameter. Select Parameter to define the target type when you configure the task. |
| Object | Name of the target object. |
| Operation | Target operation. Select one of the following operations:<br>- Insert<br>- Update<br>- Upsert<br>- Delete<br>- Data Driven. Configure an expression to specify an update strategy based on the data. You can use one of the following constants in an expression:<br>  - DD_INSERT<br>  - DD_UPDATE<br>  - DD_REJECT<br>  - DD_DELETE<br>**Note:** If you use the Data Driven operation, you cannot upsert. |
| Truncate Target | Truncates the target before loading data. |

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

| Advanced Property | Description |
|---|---|
| Primary Key Override | Column names that you want to use as the primary key. Use commas to separate multiple column names. |
| Success File Directory | Directory for the success file. Specify a directory path that is available on each Secure Agent machine in the runtime environment. By default, Data Integration writes the success file to the following directory: `<Secure Agent installation directory>/apps/Data_Integration_Server/data/success` |
| Error File Directory | Directory for the error file. Specify a directory path that is available on each Secure Agent machine in the runtime environment. By default, Data Integration writes the error file to the following directory: `<Secure Agent installation directory>/apps/Data_Integration_Server/data/error` |
| Forward Rejected Rows | Determines whether the transformation passes rejected rows to the next transformation or drops rejected rows. By default, the mapping task forwards rejected rows to the next transformation. |

# Rules and guidelines for OData mappings

You cannot configure an OData mapping to roll back transactions.

# Troubleshooting

When you configure the **Maximum Page Size** property to read data from a source, you might get an out of memory issue.

The issue occurs because client side pagination is enabled by default. Enable server side pagination to increase the memory.

Perform the following steps to enable server side pagination and increase the memory for the Java heap size:

1. In **Administrator**, select **Runtime Environments**.
2. Select the Secure Agent from the list of available Secure Agents.
3. In the upper-right corner, click **Edit**.
4. In the **System Configuration Details** section, select the**Type** as **DTM** for the Data Integration Server.
5. Set the value of JVMOption to **-DServerSidePagination=true**.
6. Restart the Secure Agent.

CHAPTER 5

# Data type reference

**OData native data types**

OData data types appear in the Fields tab for Source and Target transformations when you choose to edit metadata for the fields.

**Transformation data types**

Set of data types that appear in the remaining transformations. They are internal data types based on ANSI SQL-92 generic data types, which Data Integration uses to move data across platforms. Transformation data types appear in all remaining transformations in Data Integration tasks.

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

When the Data Integration application writes to a target, it converts the transformation data types to the comparable native data types.

## OData and transformation data types

The following table compares the OData native data type to the transformation data type:

| OData Data Type | Transformation Data Type |
|---|---|
| Boolean | Integer |
| Date | Date and time values.<br>Use the following formats for date and time:<br>- yyyy-MM-ddTHH:mm:ss<br>For example, 2015-04-30T07:08:06<br>- yyyy-MM-ddTHH:mm:ss:SSSZ<br>For example, 2015-04-30T07:08:06.879 or 2015-04-30T07:08:06.8798888 |
| Decimal | String/Decimal |
| Int16 | Integer |
| Int32 | Integer |
| String | String |

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