Informatica

Informatica® Cloud Data Integration

Eloqua Bulk API Connector

Informatica Cloud Data Integration Eloqua Bulk API Connector
April 2024

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Table of Contents

Preface 4

Informatica Resources 4

- Informatica Documentation 4
- Informatica Intelligent Cloud Services web site 4
- Informatica Intelligent Cloud Services Communities 4
- Informatica Intelligent Cloud Services Marketplace 4
- Data Integration connector documentation 5
- Informatica Knowledge Base 5
- Informatica Intelligent Cloud Services Trust Center 5
- Informatica Global Customer Support 5

Chapter 1: Introduction to Eloqua Bulk API Connector 6

Eloqua Bulk API objects and operations 6

Chapter 2: Eloqua Bulk API Connections 8

Connect to Eloqua 8

- Before you begin 8
- Connection details 9
- Advanced settings 10

Activities or custom fields configuration 10

Adding fields which are not part of fields API to the custom objects 11

Understanding the time zone offset 17

Proxy server settings 17

Chapter 3: Synchronization Tasks with Eloqua Bulk API Connector 19

Eloqua Bulk API Sources in Synchronization Tasks 19

- Data Filters 20

Eloqua Bulk API Targets in Synchronization Tasks 20

Bulk API Limits 21

Synchronization Task Example 21

Chapter 4: Mappings and mapping tasks with Eloqua Bulk API Connector 24

Eloqua Bulk API sources in mappings 24

Eloqua Bulk API Targets in Mappings 25

Chapter 5: Troubleshooting 27

Troubleshooting Synchronization task and mapping task 27

Index 29

Preface

Use *Eloqua Bulk API Connector* to learn how to read from or write to the Eloqua application by using Cloud Data Integration. Learn to create a Eloqua Bulk API connection, develop and run synchronization tasks, mappings, and mapping tasks in Cloud Data Integration.

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CHAPTER 1

Introduction to Eloqua Bulk API Connector

You can use Eloqua Bulk API Connector to read data from the Eloqua application and write data to other applications. You can use Eloqua bulk API Connector to transfer a large amount of data.

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

Eloqua Bulk API objects and operations

Select the required operation when you create a connection. After you select the operation, you can select the required object to create the task. You can use Eloqua Bulk API Connector to upsert data in the Account, Contact, and custom objects.

You can perform read, data preview, and lookup operations on the following Eloqua Bulk API objects:

- Account
- BouncebackActivity
- Contact
- EmailOpenActivity
- EmailClickthroughActivity
- EmailSendActivity
- FormSubmitActivity
- PageViewActivity
- SubscribeActivity
- UnsubscribeActivity
- WebVisitActivity
- Custom objects

You can perform an upsert operation only on the following Eloqua Bulk API objects:

- Account
- Contact
- Custom objects

You cannot perform insert, update, and delete operations on these objects.

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

CHAPTER 2

Eloqua Bulk API Connections

Create an Eloqua Bulk API connection to read data from and write data to Eloqua Bulk API. You can use Coupa V2 connections in mappings and mappings tasks. You can use Eloqua Bulk API connections to specify sources and targets in mappings and mappings tasks.

Connect to Eloqua

Let's configure the Eloqua Bulk API connection properties to connect to Eloqua.

Before you begin

Before you configure the connection properties, you'll need to get information from your Oracle Eloqua account. You can configure basic and OAuth authentication types to access Oracle Eloqua.

To use basic authentication, you need your Oracle Eloqua base URL, domain name, user name, and password.

To use OAuth authentication, you additionally need the the client ID and client secret for your application.

For more information on how to generate these details, see the Oracle Eloqua documentation.

You can watch the following video to learn where to get the information you need:



Connection details

The following table describes the basic connection properties:

Property	Description
Connection Name	Name of the connection. Each connection name must be unique within the organization. Connection names can contain alphanumeric characters, spaces, and the following special characters: _ . + -, Maximum length is 255 characters.
Description	Description of the connection. Maximum length is 4000 characters.
Type	Eloqua Bulk API
Runtime Environment	The name of the runtime environment where you want to run the tasks. Select a Secure Agent, Hosted Agent, or serverless runtime environment.
Base URL	The base URL to connect to the Eloqua application. Use one of the following formats to specify the base URL: - `https://secure.eloqua.com` - `https://<host>.eloqua.com/api/bulk/<version number>` For the host, you can enter `secure`, `www02.secure`, or `secure.p03` based on the pod that hosts the Eloqua instance. In the `https://<host>.eloqua.com/api/bulk/2.0` URL, 2.0 represents the version number. When you do not mention the version number in the base URL, the Secure Agent considers the default version. For more information about the base URL to connect to the Eloqua application, see Determining Base URL.
Authentication Type	The type of user authentication to connect to the Eloqua application.
Domain Name	The company name of your Eloqua application.
User name	The user name of your Eloqua account.
Password	The password for your Eloqua account.
Client ID	The client ID to complete the OAuth 2.0 authentication to connect to Eloqua. Applies if you select the OAuth 2.0 authentication type.
Client Secret	The client secret key to complete the OAuth 2.0 authentication to connect to Eloqua. Applies if you select the OAuth 2.0 authentication type.

Advanced settings

The following table describes the advanced connection properties:

Property	Description
Time Zone Offset	The time zone in the Eloqua application relative to GMT. For more information, see "Understanding the time zone offset" on page 17
Enable Debug Logger	Determines if the debug logger registers the SOAP request and response in the session log. If you enable the debug logger in the connection and run a task, you can view only the response but not the request in the session logs for the read operation. For the write operation, the request appears in the session log, but the response does not appear in the session logs. Default is enabled.
Fetch Data for Preview	Fetches the first 10 rows of the first five columns in an Eloqua Bulk API object for preview. Default is enabled.
Activities or Custom Fields Configuration	The Activities object and custom fields of Contact and Account objects in Eloqua that you want to read from or write. Use the metadata populated in this field to read from or write to the Activities object and custom fields of Contact and Account objects. If you want to include other fields or metadata, ensure that you add them in the JSON format, beginning with an anonymous root structure. For example, { "address" : { "city": "city name", "state": "state name", }} For more information, see "Activities or custom fields configuration" on page 10. For more information about including fields in the custom objects that are not included in the fields API, see the "Adding fields which are not part of fields API to the custom objects" on page 11 topic.

Activities or custom fields configuration

You can read from or write to the Activities object and custom fields of Contact and Account objects.

Add the metadata information in JSON format in the **Activities or Custom Fields Configuration** property under the Eloqua Bulk connection properties. The specification of Activities object and custom fields contains the following sections:

Activities

Lists all the activities as a name-value pair, where the value is an array of field names. For example,

```
{"EmailAddress","johns@gmail.com"},
{"FirstName","Johns"}
```

ActivityItem

Defines an array of fields. Each field has the following name-value pairs:

- **name**: Name of the field. The field name must be the same as the field name that you enter in the Activities section.
- **internalName**: Name of the field label. Displays the name and unique name.

- **datatype**: Data type of the field. Default is String data type. The activities or custom fields supports the following data types:
  - Number or Integer
  - Date or Timestamp
  - String
- **maxLength**: Maximum length or precision of the data type field.
- **hasReadOnlyConstraint**: Indicates whether the field is read only.
- **hasNotNullConstraint**: Indicates whether the field is mandatory.
- **hasUniquenessConstraint**: Indicates whether the field is a key.
- **statement**: The statement used in Eloqua REST request.

ContactItem

Defines an array of Contact custom fields. Each field has a name-value pair for the ActivityItem section.

AccountItem

Defines an array of Account custom fields. Each field has a name-value pair for the ActivityItem section.

Adding fields which are not part of fields API to the custom objects

Perform the following steps to add the fields that are not part of standard fields in a custom object.

1. Edit the Eloqua Bulk connection.
2. In the **Activities or Custom fields Configuration** connection attribute, add the following JSON element to the JSON template available in the connection attribute:

```
"CustomObjects" :{
         "CO_CustomObject1": ["MappedEntityId","UniqueId"],
         "CO_CustomObject2": ["MappedEntityId","UniqueId"]
    }
```

   where CO_CustomObject1 and CO_CustomObject2 are the names of custom objects and MappedEntityId and UniqueId are the fields.
3. Now add the following field details to the JSON template:

   These are the details of the fields that you defined in the CustomObjects element added in the previous step.

```
"CustomItem": [
          {
             "name": "MappedEntityId",
             "internalName": "MappedEntityId",
             "dataType": "integer",
             "hasReadOnlyConstraint": true,
            "hasNotNullConstraint": false,
             "hasUniquenessConstraint": true,
              "statement": "{{CustomObject[id].MappedEntityId}}"
         },
         {
             "name": "UniqueId",
             "internalName": "UniqueId",
             "dataType": "integer",
```

```
                "hasReadOnlyConstraint": true,
                "hasNotNullConstraint": false,
                "hasUniquenessConstraint": true,
                 "statement": "{{CustomObject[id].UniqueId}}"
            }
    ]
```

After adding the above details, confirm that the JSON structure is valid.

4. Click **Test Connection**.
5. Click **Save**.

   Note: When you use the connection in a new mapping, the fields that you defined in the JSON template appear in the mapping. For an existing mapping from an earlier release, you must refresh the field mapping and map to the target.

6. For an existing mapping, if the above defined fields are required, then refresh the field mapping, and map to the target.

   The following example shows a sample Activities or Custom fields configuration:

```
{
    "Activities": {
        "EmailOpen": ["ActivityId", "ActivityType", "ActivityDate", "EmailAddress",
"ContactId", "IpAddress", "VisitorId", "EmailRecipientId", "AssetType", "AssetName",
"AssetId", "SubjectLine", "EmailWebLink", "VisitorExternalId", "CampaignId",
"ExternalId", "DeploymentId", "EmailSendType"],
        "EmailClickthrough": ["ActivityId", "ActivityType", "ActivityDate",
"EmailAddress", "ContactId", "IpAddress", "VisitorId", "EmailRecipientId",
"AssetType", "AssetName", "AssetId", "SubjectLine", "EmailWebLink",
"EmailClickedThruLink", "VisitorExternalId", "CampaignId", "ExternalId",
"DeploymentId", "EmailSendType"],
        "EmailSend": ["ActivityId", "ActivityType", "ActivityDate", "EmailAddress",
"ContactId", "EmailRecipientId", "AssetType", "AssetId", "AssetName", "SubjectLine",
"EmailWebLink", "CampaignId", "ExternalId", "DeploymentId", "EmailSendType"],
        "Subscribe": ["ActivityId", "ActivityType", "AssetId", "ActivityDate",
"EmailAddress", "EmailRecipientId", "AssetType", "AssetName", "CampaignId",
"ExternalId"],
        "Unsubscribe": ["ActivityId", "ActivityType", "AssetId", "ActivityDate",
"EmailAddress", "EmailRecipientId", "AssetType", "AssetName", "CampaignId",
"ExternalId"],
        "Bounceback": ["ActivityId", "ActivityType", "AssetId", "ActivityDate",
"EmailAddress", "AssetType", "AssetName", "CampaignId", "ExternalId"],
        "WebVisit": ["ActivityId", "ActivityType", "ActivityDate", "ContactId",
"VisitorId", "VisitorExternalId", "ReferrerUrl", "IpAddress", "NumberOfPages",
"FirstPageViewUrl", "Duration", "ExternalId"],
        "PageView": ["ActivityId", "ActivityType", "ActivityDate", "ContactId",
"CampaignId", "VisitorId", "VisitorExternalId", "WebVisitId", "Url", "ReferrerUrl",
"IpAddress", "IsWebTrackingOptedIn", "ExternalId"],
        "FormSubmit": ["ActivityId", "ActivityType", "ActivityDate", "ContactId",
"VisitorId", "VisitorExternalId", "AssetType", "AssetId", "AssetName", "RawData",
"CampaignId", "ExternalId"]
    },
    "CustomObjects": {
        "CO_CustomObject1": ["MappedEntityId", "UniqueId"],
        "CO_CustomObject2": ["MappedEntityId", "UniqueId"]
    },
    "ActivityItem": [{
            "name": "ActivityId",
            "internalName": "ActivityId",
            "dataType": "integer",
            "hasReadOnlyConstraint": true,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": true,
            "statement": "{{Activity.Id}}"
        },
        {
            "name": "ActivityType",
            "internalName": "ActivityType",
```

```
    "dataType": "string",
    "maxLength": 100,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Type}}"
},
{
    "name": "ActivityDate",
    "internalName": "ActivityDate",
    "dataType": "date",
    "hasReadOnlyConstraint": true,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.CreatedAt}}"
},
{
    "name": "EmailAddress",
    "internalName": "EmailAddress",
    "dataType": "emailAddress",
    "maxLength": 400,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(EmailAddress)}}"
},
{
    "name": "ContactId",
    "internalName": "ContactId",
    "dataType": "integer",
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Contact.Id}}"
},
{
    "name": "IpAddress",
    "internalName": "IpAddress",
    "dataType": "string",
    "maxLength": 50,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(IpAddress)}}"
},
{
    "name": "VisitorId",
    "internalName": "VisitorId",
    "dataType": "integer",
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Visitor.Id}}"
},
{
    "name": "EmailRecipientId",
    "internalName": "EmailRecipientId",
    "dataType": "string",
    "maxLength": 38,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(EmailRecipientId)}}"
},
{
    "name": "AssetType",
    "internalName": "AssetType",
    "dataType": "string",
    "maxLength": 100,
```

```
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Asset.Type}}"
    },
    {
        "name": "AssetName",
        "internalName": "AssetName",
        "dataType": "string",
        "maxLength": 100,
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Asset.Name}}"
    },
    {
        "name": "AssetId",
        "internalName": "AssetId",
        "dataType": "integer",
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Asset.Id}}"
    },
    {
        "name": "SubjectLine",
        "internalName": "SubjectLine",
        "dataType": "string",
        "maxLength": 500,
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Field(SubjectLine)}}"
    },
    {
        "name": "EmailWebLink",
        "internalName": "EmailWebLink",
        "dataType": "string",
        "maxLength": 8192,
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Field(EmailWebLink)}}"
    },
    {
        "name": "VisitorExternalId",
        "internalName": "VisitorExternalId",
        "dataType": "string",
        "maxLength": 38,
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Visitor.ExternalId}}"
    },
    {
        "name": "CampaignId",
        "internalName": "CampaignId",
        "dataType": "integer",
        "hasReadOnlyConstraint": false,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": false,
        "statement": "{{Activity.Campaign.Id}}"
    },
    {
        "name": "ExternalId",
        "internalName": "ExternalId",
        "dataType": "string",
        "maxLength": 20,
        "hasReadOnlyConstraint": false,
```

```
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.ExternalId}}"
},
{
    "name": "DeploymentId",
    "internalName": "DeploymentId",
    "dataType": "integer",
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(EmailDeploymentId)}}"
},
{
    "name": "EmailSendType",
    "internalName": "EmailSendType",
    "dataType": "string",
    "maxLength": 100,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(EmailSendType)}}"
},
{
    "name": "EmailClickedThruLink",
    "internalName": "EmailClickedThruLink",
    "dataType": "string",
    "maxLength": 8192,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(EmailClickedThruLink)}}"
},
{
    "name": "RawData",
    "internalName": "RawData",
    "dataType": "string",
    "maxLength": 64000,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(RawData)}}"
},
{
    "name": "ReferrerUrl",
    "internalName": "ReferrerUrl",
    "dataType": "string",
    "maxLength": 8192,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(ReferrerUrl)}}"
},
{
    "name": "WebVisitId",
    "internalName": "WebVisitId",
    "dataType": "integer",
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
    "hasUniquenessConstraint": false,
    "statement": "{{Activity.Field(WebVisitId)}}"
},
{
    "name": "Url",
    "internalName": "Url",
    "dataType": "string",
    "maxLength": 8192,
    "hasReadOnlyConstraint": false,
    "hasNotNullConstraint": false,
```

```
            "hasUniquenessConstraint": false,
            "statement": "{{Activity.Field(Url)}}"
        },
        {
            "name": "IsWebTrackingOptedIn",
            "internalName": "IsWebTrackingOptedIn",
            "dataType": "boolean",
            "hasReadOnlyConstraint": false,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": false,
            "statement": "{{Activity.Field(IsWebTrackingOptedIn)}}"
        },
        {
            "name": "NumberOfPages",
            "internalName": "NumberOfPages",
            "dataType": "integer",
            "hasReadOnlyConstraint": false,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": false,
            "statement": "{{Activity.Field(NumberOfPages)}}"
        },
        {
            "name": "FirstPageViewUrl",
            "internalName": "FirstPageViewUrl",
            "dataType": "string",
            "maxLength": 8192,
            "hasReadOnlyConstraint": false,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": false,
            "statement": "{{Activity.Field(FirstPageViewUrl)}}"
        },
        {
            "name": "Duration",
            "internalName": "Duration",
            "dataType": "string",
            "maxLength": 100,
            "hasReadOnlyConstraint": false,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": false,
            "statement": "{{Activity.Field(Duration)}}"
        }
    ],
    "ContactItem": [{
        "name": "ContactId",
        "internalName": "ContactId",
        "dataType": "integer",
        "hasReadOnlyConstraint": true,
        "hasNotNullConstraint": false,
        "hasUniquenessConstraint": true,
        "statement": "{{Contact.Id}}"
    }],
    "AccountItem": [],
    "CustomItem": [{
            "name": "MappedEntityId",
            "internalName": "MappedEntityId",
            "dataType": "integer",
            "hasReadOnlyConstraint": true,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": true,
            "statement": "{{CustomObject[id].MappedEntityId}}"
        },
        {
            "name": "UniqueId",
            "internalName": "UniqueId",
            "dataType": "integer",
            "hasReadOnlyConstraint": true,
            "hasNotNullConstraint": false,
            "hasUniquenessConstraint": true,
            "statement": "{{CustomObject[id].UniqueId}}"
```

```
            }
        ]
    }
```

Understanding the time zone offset

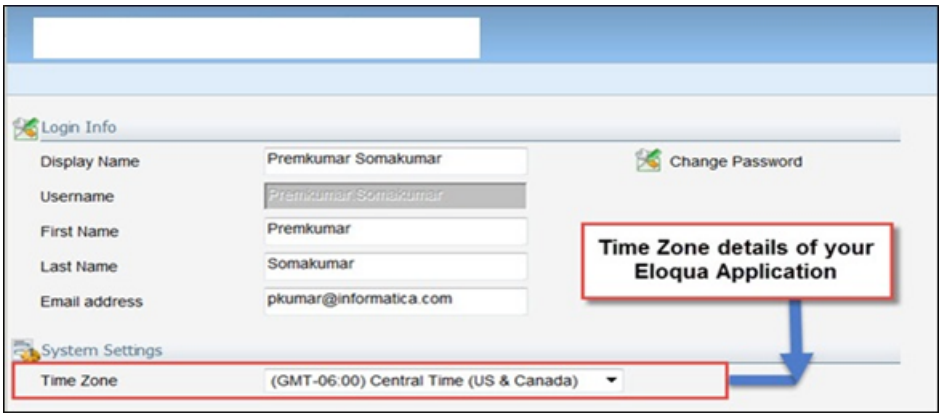
The time zone configured in the Eloqua Bulk API connection must synchronize with the time zone of your Eloqua application.

Perform the following tasks to configure the time zone of your Eloqua application:

1. Log in to Eloqua application account.
2. Click **Setup**.
3. Select **My Settings**.

   The My Settings page appears.
4. Click **Edit Agent Settings**, and enter the applicable time zone.

   The following image shows an example of the time zone set in Eloqua:



   For example, if the time zone of the Eloqua application is GMT+06:00, you need to enter +06:00 in this field.

   When daylight saving time is in effect, make adjustments to the time. For example, if the time zone is GMT-06:00, enter -06:00 into this field.

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 Eloqua Bulk API Connector

This chapter includes the following topics:

- Eloqua Bulk API Sources in Synchronization Tasks, 19
- Eloqua Bulk API Targets in Synchronization Tasks, 20
- Bulk API Limits, 21
- Synchronization Task Example, 21

Eloqua Bulk API Sources in Synchronization Tasks

You can use an Eloqua Bulk API object as a single source in a synchronization task.

You configure Eloqua Bulk API source properties on the **Source** page of the Synchronization Task wizard.

The following table describes the Eloqua Bulk API source properties:

Property	Description
Page Size	The field signifies the maximum number of records in a page.
Auto Delete of Definitions	When you enable the Auto Delete of Definitions option, the Secure Agent deletes the definitions after the duration specified by Eloqua Bulk API 2.0.
Duration for Auto Delete of Definitions	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to delete the definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of deleting the definitions automatically, the default value is P7D, which stands for seven days.
Duration for Data Retention	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to retain the data definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of retaining the data, the default value is P2D, which stands for two days.

Eloqua Bulk API 2.0 uses the ISO-8601 standard for specifying durations in the source properties. You can specify the following values for the durations:

- Minimum value: PT1H, which stands for one hour.

- Maximum value: P2W, which stands for two weeks.

When you read data from Eloqua, you can map upto 250 fields to the target.

Data Filters

You can use data filters to fetch specific data of a particular object. When you use the connector as source, you can use filter fields to filter the input.

You can use equals, not Equals, greater than, greater than or equals, less than, less than or equals basic filter operators in Eloqua Bulk API connector.

Eloqua Bulk API Targets in Synchronization Tasks

You can use an Eloqua Bulk API object as a single target in a synchronization task. When you write data to Eloqua Bulk API, you can map up to 100 fields to the target.

You configure Eloqua Bulk API target properties on the **Target** page of the Synchronization Task wizard.

The following table describes the Eloqua Bulk API target properties:

Property	Description
Batch Size	You can write or upsert data in a batch to Eloqua. Specify the number of rows to upsert in a batch to Eloqua.
Auto Delete of Definitions	When you enable the Auto Delete of Definitions option, the Secure Agent deletes the definitions after the duration specified by Eloqua Bulk API 2.0.
Duration for Auto Delete of Definitions	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to delete the definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of deleting the definitions automatically, the default value is P7D, which stands for seven days.
Duration for Data Retention	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to retain the data definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of retaining the data, the default value is P2D, which stands for two days.
Identifier Field Name	Mandatory. The Secure Agent searches for the specified identifier field name in the Eloqua application and the imported data. By default, the field is empty. If you specify a field that is not a part of the field list in the **Identifier Field Name** field, the Secure Agent considers the following default values for the Account and Contact objects: - For Account object, the default value is `M_Company`. - For Contact object, the default value is `C_EmailAddress`. For custom object, the following error message occurs: `'Identifier Field Name:' Must be a string value, at least 1 character and at most 100 characters long and must be contained within fields.`

Property	Description
Update Multiple Matched Records	When the connector fetches the records associated with the sepcified Identifier field name, the Secure Agent updates the matched records. You must set the Update Multiple Matched Record field to true to update the records. Default value is false.
Map DataCards SourceField	Specifies the field to use to match with the related object. Default value is the email address provided for Contact object.
Map DataCards CaseSensitive Match	Performs a case-sensitive search when you map custom object records to a contact.
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 rows file. Specify a directory path that is available on each Secure Agent machine in the runtime environment. By default, Data Integration writes the error rows file to the following directory: `<Secure Agent installation directory>/apps/Data_Integration_Server/data/error`

Eloqua Bulk API 2.0 uses the ISO-8601 standard for specifying durations in the target properties. You can specify the following values for the durations:

- Minimum value: PT1H, which stands for one hour.
- Maximum value: P2W, which stands for two weeks.

Bulk API Limits

Eloqua Bulk API import definition can include a maximum of 100 fields. If you specify more than 100 fields, the task fails to create import definition.

Eloqua Bulk API export definition can include a maximum of 250 fields. If you specify more than 250 fields, the task fails to create export definition.

Note: The fields you map in **Field Mapping** tab of a synchronization task correspond to the fields in Eloqua Bulk API import or export definitions.

Synchronization Task Example

You can create a synchronization task to read data from an Eloqua Bulk API source and write data to the Eloqua Bulk API target.

Perform the following task to create a synchronization task:

Note: You need to create an Eloqua Bulk API connection before you configure the synchronization task.

1. In Data Integration, click **New** > **Tasks**.
2. Select **Synchronization Task**, and click **Create**.

   The **Definition** tab appears.
3. Configure the following fields on the **Definition** tab:

Field	Description
Task Name	Name of the synchronization task.
Description	Description of the synchronization task. Maximum length is 255 characters.
Task Operation	Select the task operation that you want to perform.

4. Click **Next**.

   The **Source** tab appears.
5. Configure the following fields on the **Source** tab:

Field	Description
Connection	Select an Eloqua Bulk API source connection.
Source Type	Select the source type. By default, **Single** is selected.
Source Object	Select the required object from the list.
Display technical names instead of labels	Displays technical names instead of business names.
Display source fields in alphabetical order	Displays source fields in alphabetical order. By default, fields appear in the order returned by the source system.

6. Click **Next**.

   The **Target** tab appears.
7. Configure the following fields on the **Target** tab:

Field	Description
Connection	Select an Eloqua Bulk API target connection.
Target Object	Select the target object.
Display target fields in alphabetical order	Displays target fields in alphabetical order. By default, fields appear in the order returned by the target system.

8. Click **Next**.

   The **Data Filters** tab appears.

9. Select the filter object, filter field, and filter operator to create a data filter on the **Data Filters** page.
10. Click **Next**.

    The **Field Mapping** tab appears.
11. Click **Automatch** on the **Field Mapping** tab to map source fields to target fields accordingly.
12. Click **Validate Mapping** to validate the mapping.
13. Click **Next**.

    The **Schedule** tab appears where you can schedule the task for each requirement and save.
14. Configure the advanced source properties on the **Schedule** tab.
15. Click **Save** > **Finish**.
16. Select the synchronization task from the **Explore** page and click **Actions** > **Run**.

    In Monitor, you can monitor the status of the logs after you run the task.

CHAPTER 4

Mappings and mapping tasks with Eloqua Bulk API Connector

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

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

Eloqua Bulk API sources in mappings

You can use an Eloqua Bulk API object as a single source in a mapping.

You configure Eloqua Bulk API source properties on the **Source** page of the Mapping Task wizard.

The following table describes the Eloqua Bulk API source properties:

Property	Description
Page Size	The field signifies the maximum number of records in a page.
Auto Delete of Definitions	When you enable the Auto Delete of Definitions option, the Secure Agent deletes the definitions after the duration specified by Eloqua Bulk API 2.0.
Duration for Auto Delete of Definitions	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to delete the definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of deleting the definitions automatically, the default value is P7D, which stands for seven days.
Duration for Data Retention	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to retain the data definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of retaining the data, the default value is P2D, which stands for two days.

Eloqua Bulk API Targets in Mappings

You can use an Eloqua Bulk API object as a single target in a mapping. When you write data to Eloqua Bulk API, you can map up to 100 fields to the target.

You configure Eloqua Bulk API source properties on the **Target** page of the Mapping Task wizard.

The following table describes the Eloqua Bulk API target properties:

Property	Description
Batch Size	You can write or upsert data in a batch to Eloqua. Specify the number of rows to upsert in a batch to Eloqua.
Auto Delete of Definitions	When you enable the Auto Delete of Definitions option, the Secure Agent deletes the definitions after the duration specified by Eloqua Bulk API 2.0.
Duration for Auto Delete of Definitions	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to delete the definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of deleting the definitions automatically, the default value is P7D, which stands for seven days.
Duration for Data Retention	When you do not enable the Auto Delete of Definitions option, specify a value in this field. The Secure Agent uses the value you specify to retain the data definitions. If you do not enable the Auto Delete of Definitions option and do not provide any value for duration of retaining the data, the default value is P2D, which stands for two days.
Identifier Field Name	Mandatory. The Secure Agent searches for the specified identifier field name in the Eloqua application and the imported data. By default, the field is empty. If you specify a field that is not a part of the field list in the **Identifier Field Name** field, the Secure Agent considers the following default values for the Account and Contact objects: - For Account object, the default value is `M_Company`. - For Contact object, the default value is `C_EmailAddress`. For custom object, the following error message occurs: `'Identifier Field Name:' Must be a string value, at least 1 character and at most 100 characters long and must be contained within fields.`
Update Multiple Matched Records	When the connector fetches the records associated with the sepcified Identifier field name, the Secure Agent updates the matched records. You must set the Update Multiple Matched Record field to true to update the records. Default value is false.
Map DataCards SourceField	The field name to map with the related object. The default value is the email address of the Contact object. To upsert data, you need to map the **Map DataCards SourceField** in the field mapping. The field that you map must be a child object field.
Map DataCards CaseSensitive Match	Performs a case-sensitive search when you map custom object records to a contact.

Property	Description
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 rows file. Specify a directory path that is available on each Secure Agent machine in the runtime environment. By default, Data Integration writes the error rows file to the following directory: `<Secure Agent installation directory>/apps/Data_Integration_Server/data/error`

You can use Contact as a related object to a custom object. When you use Contact as a related object, specify the following target connection properties:

- Contact as **Child Object**.
- Map DataCards SourceField
- Map DataCards CaseSensitive Match

Note: When you upsert data in the Account, Contact, and custom objects, the Secure Agent upserts data depending on the value of the **Batch Size** field that you specify in the target properties. For example, if you specify the value of the **Batch Size** field as 50, the Secure Agent upserts 50 rows in each batch.

CHAPTER 5

Troubleshooting

When you use the Eloqua Bulk API Connector to create a connection to perform a task, you may encounter the following scenarios where the task does not run as expected. You can troubleshoot the issues from the following solutions provided.

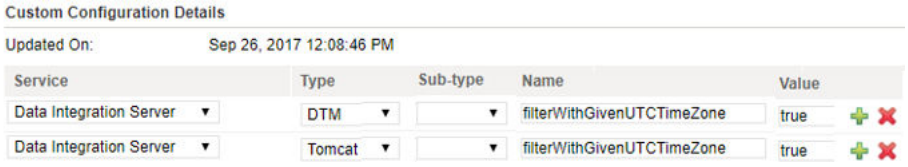
Troubleshooting Synchronization task and mapping task

When you run an Eloqua Bulk API synchronization task or mapping task, the Secure Agent does not convert the `$LastRunTime` variable based on the UTC time zone you specify in the Time Zone Offset field in the connection properties.

To solve this issue, you must add the `filterWithGivenUTCTimeZone` property and set the value as true in the `pmrdtm.cfg` and `tomcat.cfg` files.

To set the value of the `filterWithGivenUTCTimeZone` property, perform the following steps:

1. In Administrator, select **Runtime Environments**.
   The **Runtime Environments** page appears.
2. Select the Secure Agent for which you want to set the `filterWithGivenUTCTimeZone` property from the list of available Secure Agents.
3. In the upper-right corner, click **Edit**.
4. Select **System Configuration Details** in the **Custom Configuration Details** section.
5. Select the **Service** as **Data Integration Server** and **Type** as **DTM**.
6. Add `filterWithGivenUTCTimeZone` in the **Name** field and set the **Value** as true.
7. Click **+** icon to add another custom configuration property.
8. Select the **Service** as **Data Integration Server** and **Type** as **Tomcat**.
9. Add `filterWithGivenUTCTimeZone` in the **Name** field and set the **Value** as true.
   The following image shows the **Custom Configuration Details** section:



10. Restart the Secure Agent.

11. In the Eloqua Bulk API connection, set the **Time Zone Offset** property to Eloqua supported time zone.
12. Click **Save** to save the connection.

When you set the `filterWithGivenUTCTimeZone` property to true and run a task, the Secure Agent considers the UTC time zone you specify in the **Time Zone Offset** field regardless of whether you use a normal filter or filter with `$LastRuntime` variable.

When you set the `filterWithGivenUTCTimeZone` property to false and use normal filter in a synchronization task, the Secure Agent does not consider the UTC time zone you specify in the **Time Zone Offset** field. The Secure Agent considers the UTC time zone only if you use a filter with `$LastRuntime` variable.

When you set the `filterWithGivenUTCTimeZone` property to false and run a mapping task, the Secure Agent does not consider the UTC time zone you specify in the **Time Zone Offset** field regardless of whether you use a normal filter or filter with `$LastRuntime` variable.

INDEX

A

activities or custom fields
  configuration 10

B

Bulk API limits 21

C

Cloud Application Integration community
  URL 4
Cloud Developer community
  URL 4

D

Data Integration community
  URL 4

E

Eloqua Bulk API
  objects 6
  task operations 6
Eloqua Bulk API Connector
  administration 27
Eloqua Bulk API source
  mapping 24
  Synchronization tasks 19
Eloqua Bulk API source properties
  mapping 24
  Synchronization tasks 19
Eloqua Bulk API target
  mapping tasks 25
  Synchronization tasks 20
Eloqua Bulk API target properties
  mapping tasks 25
Eloqua Bulk API target properties *(continued)*
  Synchronization tasks 20

I

Informatica Global Customer Support
  contact information 5
Informatica Intelligent Cloud Services
  web site 4

M

maintenance outages 5

S

status
  Informatica Intelligent Cloud Services 5
Synchronization task
  example 21
system status 5

T

trust site
  description 5

U

upgrade notifications 5

W

web site 4