



Informatica® Data Integration - Free & PayGo

Marketo V3 Connector

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Preface

Use *Marketo V3 Connector* to learn how to read from Marketo by using Data Integration. Learn to create a connection, develop mappings, and run mapping tasks in Data Integration.

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CHAPTER 1

Introduction to Marketo V3 Connector

You can use Marketo V3 Connector to connect to Marketo from Data Integration.

Use Marketo V3 Connector to read data from Marketo and integrate data with other applications, databases, and flat files. You can use Marketo objects as sources in mappings and mapping tasks.

You can use Marketo source objects, such as lead, lead activity, list, campaign, opportunity, opportunity role, sales person, company, program, email, folder, tag, and channel in a task. The Secure Agent reads the data for the corresponding object stored in Marketo.

Marketo Connector assets, object types, and task operations

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

- Mapping
- Mapping task

The following table lists the objects and task operations that Marketo Connector supports:

Object	Read
Lead	Yes
LeadActivity	Yes
ActivityType	Yes
List	Yes
Campaign	Yes
Opportunity	Yes
OpportunityRole	Yes
SalesPerson	Yes

Object	Read
Company	Yes
Program	Yes
Email	Yes
Folder	Yes
Tag	Yes
Channel	Yes
Custom Object	Yes

Introduction to Marketo

Marketo is marketing automation software that you can use to create, automate, and measure campaigns across marketing channels with prospects and customers.

You can use Marketo to stimulate interest of leads in a product or service. Leads are qualified prospects who show buying behavior. You can track and measure the interest that a lead shows in a product or service. Marketo gives you detailed statistics on leads and their activities on Marketo pages, emails, and websites. Marketers gain analytic insights to understand which lead activity results in opportunities. Marketo assets include lists that help you understand which of the leads you want to target with the campaign. You can create a campaign for a specific set of leads from a program that contains all the marketing efforts. A campaign serves a specific goal within a program, and helps you choose a group of leads whose activities you can monitor.

Marketo helps you interact and respond with the targeted leads through dynamically generated and personalized communications in real time, engage the leads, and nurture them into customers.

Marketing teams can use Marketo to manage marketing activities across global teams in a single centralized marketing calendar.

Marketo V3 Connector example

You are a marketing analyst who manages a campaign for a data integration product. You want to get a comprehensive view of prospect interest and engagement in the product. Marketo helps you develop and qualify potential leads.

You use Marketo to create lists that include a group of specific leads whom you can generate interest in the product. Marketo tracks and stores the online activity of leads from email clicks, website visits, engagement programs, and social networking sites where you posted the campaign. Marketo provides a view of the high-score leads in a particular region who visited the data integration campaign website in the last two weeks, leads who registered for an upcoming conference on data integration, or prospects who visited random data integration websites.

You can then configure a mapping task to read data from Marketo and write data to a CRM system. The sales team can use the data to gain a sales opportunity.

Administration of Marketo Connector

As a user, you can use Marketo V3 Connector after the organization administrator performs the following tasks:

- Before the Secure Agent uses the Marketo REST APIs, create an API user and associate it with an API role. Roles define the API access permissions that govern which APIs you can invoke. Get the client ID and client secret details to generate an access token that the Secure Agent requires for authentication to the Marketo custom service. For more information about the API user, Client ID, and Client Secret, see the following website: <http://developers.marketo.com/documentation/rest/custom-service>
- For more information about the Marketo REST APIs, see the following website: <http://developers.marketo.com/documentation/rest>

CHAPTER 2

Marketo V3 connections

Create a Marketo connection to connect to Marketo so that the Secure Agent can read data from Marketo. You can specify the Marketo source in mappings and mapping tasks.

You create a Marketo connection on the **Connections** page. Use the connection when you create a mapping task.

Marketo V3 connection properties

When you set up a Marketo V3 connection, configure the connection properties.

The following table describes the Marketo V3 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	The Marketo V3 connection type.
Runtime Environment	Name of the runtime environment where you want to run the tasks. Specify a Secure Agent or a Hosted Agent.
client_ID	The client ID of the custom service required to generate a valid access token.
client_secret	The client secret of the Marketo custom service required to generate a valid access token.
grant_type	The access permissions for an administrator to invoke the Marketo REST APIs to read data from Marketo. Marketo supports only the client_credentials grant type.

Property	Description
REST API URL	The URL with which the Secure agent connects to the Marketo REST APIs. The URL has the following format: https://<Host name of the Marketo Rest API Server>. Contact the Marketo Administrator for the REST API URL.
Bypass Proxy	The option to use the proxy server settings defined in the proxy.ini file or use the Secure agent manager to connect to Marketo. When you select Bypass Proxy, you connect to Marketo using the Secure agent manager. When you clear Bypass Proxy, you connect to Marketo using the proxy server. Default is Bypass Proxy.

Configuring HTTP Proxy Server Settings

If your organization uses a proxy server to access the Internet, you can configure the HTTP proxy server authentication settings for the Secure Agent to connect to Marketo V3.

You must provide the proxy server details in the Secure Agent Manager.

After you provide the proxy server details, you can specify whether you want to use the proxy settings in the Marketo V3 connection properties.

Select **Bypass Proxy** when you want to bypass the proxy server settings defined for the Secure Agent. When you do not select **Bypass Proxy**, the Secure Agent uses the proxy server details to connect to Marketo V3, by default.

Set Proxy Server Details through the Secure Agent Manager

You can set the proxy server details for the Secure Agent in the Secure Agent Manager.

- Click **Start > All Program > Informatica Cloud Secure Agent > Informatica Cloud Secure Agent**.
You can also click the **Data Integration** icon in the Windows taskbar notification area to open the Secure Agent Manager.
The Secure Agent Manager displays the Secure Agent status.
- Click **Proxy** in the Secure Agent Manager page.
- Click **Use a Proxy Server** to enter the proxy server settings.
- Configure the following proxy server details:

Field	Description
Proxy Host	Required. Host name of the outgoing proxy server that the Secure Agent uses.
Proxy Port	Required. Port number of the outgoing proxy server.
User Name	User name to connect to the outgoing proxy server.
Password	Password to connect to the outgoing proxy server.

- Click **OK**.

6. Restart the Secure Agent to apply the settings.

CHAPTER 3

Marketo sources

You can use a Marketo V3 object as a source in a mapping task. Configure the advanced properties for the source object.

Marketo sources

When you configure a source in a mapping task, select the source object to read specific data about that source. Use the source objects to search for leads, lists, lead activities, campaigns, opportunities, opportunity roles, sales person, company, program, tag, channel, email, folder, or custom object data in Marketo. You can also search for leads in the Marketo database that match a requested activity type for a date and time you specify.

You can use the following source objects in a mapping task:

Lead

A lead is a potential sales contact. Use the lead source object in a task and specify the information that you want to read for leads from Marketo. You can retrieve lead details when you specify the filter field, filter values, list ID, or program ID in the advanced source properties of a task. You can also retrieve lead details when you specify the activity type ID and specific periods, such as since date time, start date and end time, and incremental extract.

LeadActivity

A `LeadActivity` object tracks the interaction of a lead with Marketo and marketing artifacts. For example, a `LeadActivity` results when a lead visits a page on a website, or opens a Marketo email. You can use Marketo to understand the interests of a lead and timely communicate with the lead.

Use the `LeadActivity` source object in a task and provide `ActivityType` IDs to retrieve the corresponding lead activities from Marketo.

Note: Retrieve the `ActivityType` IDs for your Marketo subscription by selecting `ActivityType` as a source object. For example, `ActivityType` ID 12 is for new leads while `ActivityType` ID 13 is for change data value. Use these `ActivityType` IDs to retrieve new leads or changed leads.

ActivityType

A `ActivityType` object retrieves metadata for the type of lead activities but does not provide the lead activity information.

When you choose the `ActivityType` source object in a task, you retrieve the following `ActivityType` metadata:

```
"id", "name", "description", "primaryAttribute_name", "primaryAttribute_dataType", "attributes_name", "attributes_dataType"
```

For example, ActivityType ID =13 includes the following details:

"13","Change Data Value","Changed attribute value for a person/record","AttributeName","integer","Source ","string"

Note: To retrieve lead activities, you must specify the LeadActivity source object and the corresponding ActivityType ID in the advanced source properties of a task.

List

A list is a collection of leads in Marketo. Marketo contains smart and static lists. A static list is a fixed list of leads, while a smart list is a dynamic collection of leads. Marketo V3 Connector supports static lists only.

You can retrieve list details such as ID, name, description, programName, createdAt, and updatedAt.

You can retrieve the list data but not the leads that are associated to the list from the list object. You can specify filters, such as the list ID, the list name, and the program name. A marketer uses a program to organize all marketing efforts. If you do not specify a filter, then all the lists are returned.

For example, the following table shows sample data retrieved for the List source object:

id	name	description	programName	createdAt	updatedAt	workspaceName
1113	SalesForceList	2013 Liz	-	2013-12-05T18:47:40Z	2015-03-09T19:46:34Z	North America
1114	ZuoraList	2013 MH	moni's list upload	2013-12-05T18:47:42Z	2013-12-05T18:49:06Z	North America

Campaign

A campaign serves a specific goal within a program that contains all the marketing efforts organized from a central location. For example, a program is an email blast, which can record when a lead is sent an email, when the lead opened the email, and whether the lead clicked a link in the email. In a campaign, you can choose a group of leads from a program to whom you can send the email blast, or notify a sales representative to follow up if a lead clicks a link within the email blast program.

For example, the following table shows sample data retrieved for the Campaign source object:

id	programName	createdAt	name	description	updatedAt	workspaceName
1037	Sales Insight - Interesting Moments	2013-11-20T18:23:02Z	Contact Me - Corporate - Decentralized and in PRGM	WWW contact me	2013-12-18T00:06:11Z	Default
2094	-	2015-09-15T16:24:14Z	InviteCampaign	-	2015-09-15T16:25:46Z	Default

Opportunity

An opportunity in Marketo represents a potential sales deal that is associated with a lead and an organization in Marketo. Leads and opportunities are related through the opportunity role object. Marketers deliver leads to sales in the form of an opportunity.

To read opportunity data from Marketo, you can use any searchable field. For example, you can use either the External Opportunity ID or the Marketo GUID. In the advanced properties, you need to specify the filter type as dedupeFields or MarketoGUID based on the field type.

The following table shows sample fields retrieved for the opportunity object:

marketoGUID	externalOppor tunityId	name	description	amount	source
da42707c-4dc4-4fc1-9fef-f30a3017240a	19UYA31581L00000	Chairs	Chairs	1604.47	Inbound Sales Call/Email
da42707c-4dc4-4fc1-9fef-f30a3017240b	29UYA31581L00000	Big Dog Day Care-Phase12	Big Dog Day Care-Phase12	1604.47	Email

OpportunityRole

An opportunity role is the intersection between a given lead and an organization. The opportunity role represents the function of a lead within the organization. A lead has an opportunity role related to an opportunity. OpportunityRole object has both leadId and externalopportunityid fields to create the relationship from lead to opportunity.

The following table shows sample data retrieved for the opportunity role object:

marketoGUID	externalOpportunityId	role	leadId	isPrimary
da42707c-4dc4-4fc1-9fef-f30a3017240a	19UYA31581L000000	Chairs	3445453	0
da42707c-4dc4-4fc1-9fef-f30a3017240b	19UYA31581L000000	Chairs	34454556	1

SalesPerson

Sales person records contain the name, email, and job title that you can use for filtering leads in Marketo. Marketo manages the relationship of a sales person at the lead level through the externalSalesPersonId field.

The following table shows sample data for the sales person object retrieved from Marketo:

createdAt	externalSalesPersonId	firstName	lastName	phone	title
8/25/2016 6:23	cflores0@narod.ru	Carl	Flores	7-(269)838-4689	Assistant Media Planner
8/25/2016 6:23	wholmes1@slideshare.net	Wanda	Holmes	44-(521)609-0247	Social Worker

Company

Company is the organization to which a person belongs.

The following table shows sample data of the company object retrieved from Marketo:

createdAt	externalCompanyId	billingCity	billingCountry	website	industry	annualRevenue
8/24/2016 5:43:29 AM	2a26a9df-fdce-9c30-67c5-56952b2b5c27	Boston	USA	stevesmith.com	Transportation	9460
8/24/2016 5:43:29 AM	23d89d7a-ea99-5635-0d26-56952b59b3d8	Paris	France	briellesonnew.com	Financial	92300

Program

A program helps a marketer organize marketing efforts from one central location. For example, an email blast is a program that records record about when a lead is sent an email, when the lead opens the email, and whether the lead clicked through a link in the email.

The following table shows sample program object data retrieved from Marketo when you specify the tag type and tag value:

id	name	createdAt	url	channel	folderValue	tagType	tagValue
1057	Chan-Webtrial Campaign	2013-12-06 19:52:58+0000	https://app.marketo.com/#ME1	Webinar	228	Team	Global
1057	Callis Campaign	2013-12-06 19:52:58+0000	https://app.marketo.com/#M1	Webinar	225	Product	SAP

Email

Emails are created initially from email templates and the query pattern for emails is similar as templates.

The following table shows sample email records retrieved from Marketo:

id	name	createdAt	subjectType	subjectValue	fromEmailType	fromEmailValue
1370	Test Email	2016-09-07 11:04:53+0000	Text	Congregation	Text	het@informatica.com
1007	2 Invitation	2012-10-12 00:01:21+0000	Text	Webinar Invite 2	Text	ynam@yourcomp.com

Folder

Folders are the core organizational asset in Marketo. Every asset in Marketo has at least one folder as a parent.

The following table shows sample data that you can retrieve from a folder object in Marketo:

id	folderId	type	folderType	parentId	parentType	path	workspace
3	3	Folder	Zone	3	Folder	/Marketing Activities	Default
143	143	Folder	Zone	3	Folder	/Marketing Activities/APJ	APJ
169	19	Folder	Zone	3	Folder	/Marketing Activities/ Default	EMEA

Tag

Tags are user-defined fields for programs and are identifiers to group data for reporting purposes. Tags help you categorize data and define how you want to report on your program. Each tag might apply to one or more program types.

The following table shows sample data for a tag object that you can retrieve from Marketo:

tagType	applicableProgramType	required
Area	[program,nurture,event,webinar,email_batch]	TRUE
Campaign Series	[program,nurture,event,webinar]	TRUE
Email Type	[program,email_batch,nurture,event,webinar]	TRUE

Channel

Channels are associated with a program. Each type of channel is used with a specific program type in Marketo. A channel provides the list of available valid statuses for program members.

The following table shows sample data for a channel object that you can retrieve from Marketo:

id	name	applicableProgramType	createdAt	progression_name
3	Blog	program	2013-10-01 02:14:45+0000	Not in Program
3	Blog	program	2013-10-01 02:14:45+0000	Visited

Custom Object

A custom object extends the out-of-box data model of Marketo. A custom object consists of fixed attributes, such as the object name, description, Marketo lead link field, linked field name, and one or more object specific fields.

You can use custom objects in a task to retrieve a list of custom object data based on the search criteria. The custom objects in Marketo are available as source objects in a mapping task. Specify the custom object filter type, custom object filter values, and custom object fields in the advanced properties of a task to capture data from a specific custom object.

For example, you can create a custom object to track the flight reservations for leads.

The following image shows the details of a reservation custom object that you can access from Marketo:

Marketo Custom Objects

FieldsUsed By

New Custom ObjectCustom Object Actions

Reservation

Details

Display Name:

Reservation

API Name:

reservation_c

Plural Name:

Reservations

State:

Published

Description:

Show in Lead Detail:

Show

Dedupe Fields:

PNR,TicketNumber

Link Field:

emailAddress

Linked Object Name:

Lead

Linked Field Name:

Email Address

Marketo Custom Objects

EHDemoCustomObject15112

Reservation

The following image shows the field attributes of a reservation object that you can access from Marketo:

Marketo Custom Objects

FieldsUsed By

New FieldField Actions

Display Name	API Name	Type	State
ArrivalDateTime	arrivalDateTime	datetime	Published
BookedOn	bookedOn	date	Published
Created At	createdAt	datetime	Published
DepartureDateTime	departureDateTime	datetime	Published
Destination	destination	string	Published
emailAddress	emailAddress	link	Published
Fare	fare	float	Published
FlightCode	flightCode	string	Published
FlightName	flightName	string	Published
Marketo GUID	marketoGUID	string	Published
NumberOfPassengers	numberOfPassengers	integer	Published
PNR	pNR	string	Published
PrimaryPassengerName	primaryPassengerName	string	Published
Source	source	string	Published
TicketNumber	ticketNumber	integer	Published
Updated At	updatedAt	datetime	Published

The following table shows sample data of the reservation custom object that you can retrieve for a lead from Marketo:

createdAt	marketoGUID	updatedAt	pnr	TicketNumber
12/4/2015 04:48:00	2cc3a035-4274-4b34- abc3-9338cda7a1e4	12/4/2015 04:48:00	BAF57HG1	1001
12/4/2015 04:48:00	c0d1297d- aacc-4d74-8ac7-89490b36d811	12/4/2015 04:48:00	TAU64GS5	1002

Extract lead data by filter field

When you configure a mapping task with the lead source object to read lead data from Marketo, you can enter a filter value to filter the records.

You must configure the following properties in the advanced lead source properties in a mapping task:

- **Lead - Filter Field.** Specify the field based on which you want to filter specific information about leads. You can specify any one of the following fields:
 - id
 - cookie
 - email
 - twitterId
 - facebookId
 - linkedInId
 - sfdcAccountId
 - sfdcContactId
 - sfdcLeadId
 - sfdcLeadOwnerId
 - sfdcOpptyId
 - custom field
- **Lead - Filter Values CSV File.** Provide the location of the file that contains the comma-separated list of field names on which you want to perform the search.
- **Lead - Filter Values.** Specify the filter values based on which you want to filter data from the lead object. You can specify more than one filter values for the lead object, each separated by a comma. For example, `Lead1@abc.com,Lead2@abc,Lead3@abc.com`.
Note: If you specify both the **Filter Values CSV File** and the **Filter Values** field, the Secure Agent considers the **Filter Values CSV File** field and uses the values in the CSV file to filter the lead data.
- **Results Batch Size.** Specify the number of records you want to retrieve in a single REST call. The maximum limit is 300.
- **General - Results Batch Size.** Specify the number of records you want to retrieve in a single REST call. The maximum limit is 300.

For example, you want to retrieve leads based on their IDs. In the advanced source properties of a task, specify `id` in the filter field, and provide the location of the .csv file `C:\Marketo\FilterValues_Id.csv` with filter IDs, such as 8781.

The following table shows a sample of the retrieved lead details:

id	firstName	salutation	middleName	lastName	email	phone
8781	Roger N	Mr.	Brandon	Gattis	gattis@baldor.com	4796464711
8782	Octavio	Mr.	Linus	Gutiérrez	jgb@grupocp.mx	5263790289
8787	Eric	Mr.	Lee	Olson	jgb@grupocp.mx	701-530-1400

Extract lead data by list ID

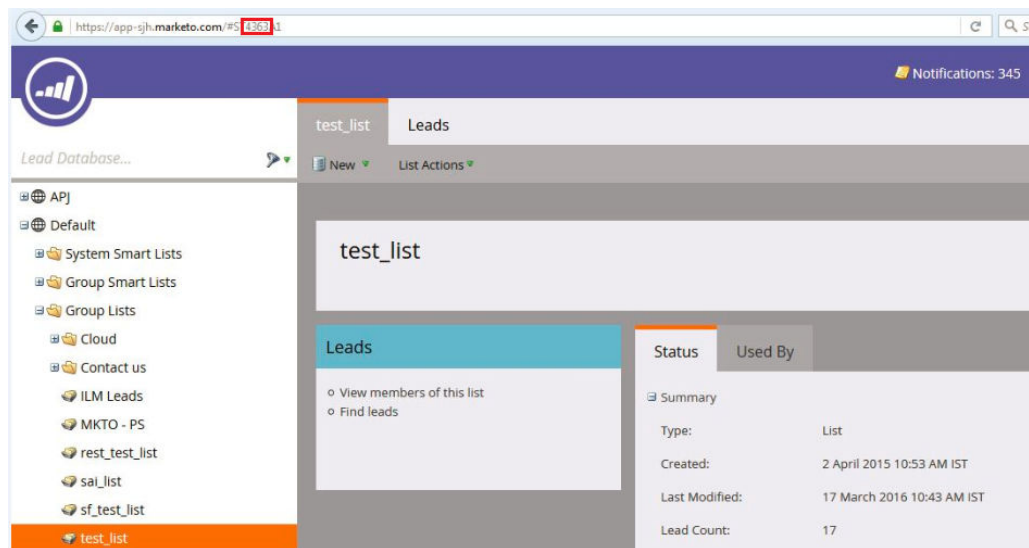
You can specify the List ID for leads to retrieve a list of leads.

To retrieve leads from a list, you must configure the following properties in the advanced source properties in a mapping task:

- **List ID for Leads.** Provide the list ID for which you want to extract the leads. You can specify only one list ID.

To get the list ID, select the list in Marketo. The list ID appears in the URL for that list.

For example, in the following image, 4363 in the URL is the List ID:



- **Results Batch Size.** Specify the number for records you want to retrieve in a single REST call. The maximum limit is 300.

When you run the mapping task, all leads from the specified list are retrieved.

For example, specify the List ID for Leads as 100 and the batch limit as 300 in the advanced source properties in a task.

To view the resultant output example, see [“Extract lead data by filter field” on page 19](#).

Extracting lead data by program ID

You can retrieve leads from a Marketo program. You must provide the program ID to retrieve leads from that program.

Configure the following properties in the advanced source properties in a mapping task for a lead object:

- **Program ID.** Specify the program ID for which you want to extract the leads.
- **Results Batch Size.** Specify the number for records you want to retrieve in a single REST call. The maximum limit is 300.

When you specify the program ID and you map the program ID in the task, you retrieve the following fields of the lead by default: progressionStatus, stream, nurtureCadence, isExhausted, acquiredBy, reachedSuccess, reachedSuccessDate, and membershipDate.

Capture lead details based on lead activities

You can capture lead details for specified activities since a specified date and time, since the last extracted period, or from a specified time period.

Select Lead as the source object and enter the ActivityType ID and date time parameters in the advanced source properties to capture details of leads who performed the specified activities.

The following table describes the advanced source properties to retrieve lead details:

Object: Advance Source Properties	Since Date Time	Incremental Extract	Start and End Date	Notes
Lead - ActivityType Id	See notes	See notes	See notes	Retrieve the ActivityType IDs for your Marketo subscription by selecting ActivityType as a source object. For example, ActivityType ID 12 is for new leads while ActivityType ID 13 is for change data value.
General - Since Date Time	Specify date/ time, or date	Enter the variable, \$LastRunTime	Leave blank	Specify the property in the following example formats: - 2016-04-01T17:00:00-0800 - 2016-10-06
General - Incremental Extract	No	Yes	No	If the value of Incremental Extract is Yes, you must enter the \$LastRunTime variable in Since Start Date. The Incremental Extract date-time is different for each of the mapping tasks. Default is No.
General - Start Date	Leave blank	Leave blank	Specify date only	Specify date in the following example formats: - 2019-06-09T00:00:00Z - 2016-10-06
General - End Date	Leave blank	Leave blank	Specify date only	End date is included in the output result. However, if you want to retrieve lead changes for a single day, specify the same date in Start Date and in End Date in the yyyy-mm-dd or yyyy-mm-ddT00:00:00Z format.

Capture lead activities

You can capture lead activities since a specified date and time, since the last extracted period, or from a specified time period.

Select LeadActivity as the source object and enter the ActivityType ID and date time parameters in the advanced source properties for retrieving lead activities. Provide the list ID to retrieve specific lead activities from the list. Specify the lead ID to retrieve activities for the specified lead. Provide the list IDs and lead IDs in the advanced source properties of a task with Marketo Connector.

Note: Each Marketo subscription might have different ActivityType IDs. You can enter a maximum of 10 ActivityType IDs for a task.

The following table describes the advanced source properties to retrieve lead activities:

Object: Advance Source Properties	Since Date Time	Incremental Extract	Start and End Date	Notes
Lead Activity - Activity Type Id	See notes	See notes	See notes	Retrieve the ActivityType IDs for your Marketo subscription by selecting ActivityType as a source object. For example, ActivityType ID 12 if for new leads while ActivityType ID 13 is for change data value.
General - Since Date Time	Specify date/ time, or date	Enter the variable, \$LastRunTime	Leave blank	Specify the property in the following example formats: - 2016-04-01T17:00:00-0800 - 2019-10-06
General - Incremental Extract	No	Yes	No	If Incremental Extract is Yes, you must enter the \$LastRunTime variable in Since Start Date. The Incremental Extract date-time is different for each of the mapping tasks. Default is No.
General - Start Date	Leave blank	Leave blank	Specify date only	Specify date in the following example format: - 2019-06-09T00:00:00Z - 2019-10-06
General - End Date	Leave blank	Leave blank	Specify date only	End date is included in the output result. However, if you want to retrieve lead changes for a single day, specify the same date in Start Date and in End Date in the yyyy-mm-dd or yyyy-mm-ddT00:00:00Z format.
Lead Activity - List Ids	See notes	See notes	See notes	Specify a comma-separated list of list IDs to filter activities for leads within a list.
Lead Activity - Lead Ids	See notes	See notes	See notes	Specify a comma-separated list of lead IDs to retrieve only those activities that belong to designated leads.

When you read the Lead Activity object from Marketo, the Secure Agent internally maps the following field names to corresponding field names in Data Integration:

Marketo Field Name	Field Name in the Mapping
LeadID	Id
marketoGuid	activityId

Retrieve lead or lead activities in bulk

You can retrieve lead or lead activity data in bulk from Marketo.

Based on the type of data you want to extract, select Lead source object or LeadActivity source object, and configure the following advanced list properties in a mapping task.

- **Bulk Extract Lead/Lead Activity.** Specify Yes to extract leads or lead activities in bulk from Marketo.
- **General - Start Date.** Specify the start date from when you want to extract lead or lead activities from Marketo. Specify the date in the yyyy-mm-dd or yyyy-mm-ddT00:00:00Z format.
- **General - End Date.** Specify the end date until when you want to extract lead or lead activities from Marketo. Specify the date in the yyyy-mm-dd or yyyy-mm-ddT00:00:00Z format.

Note: When you bulk extract records, ensure that the difference between the start date and end date does not exceed 31 days.

Retrieve list

You can retrieve lists from Marketo.

To retrieve lists, configure the following advanced list properties in a mapping task for a list source object:

- **List Id for List Details.** Specify the ID of the list from which you want to retrieve the details.
To get the list ID, select the list in Marketo. The list ID appears in the URL for that list.
- **List Name.** Specify the name of the list.
- **Program Name.** Specify the name of the program to which the list is associated.

You can specify more than one value for the specified advanced properties separated by a comma.

The following table shows the details of the retrieved list:

id	name	description	programName	createdAt	updatedAt
1113	Interested leads	2013 Liz	Product launch email	2013-12-05T18:47:40Z	2015-03-09T19:46:34Z
1114	Conference attendees	2013 MH	-	2013-12-05T18:47:42Z	2013-12-05T18:49:06Z

Retrieve program

You can retrieve details from a program in Marketo. You can specify either the program name, program ID, or tag type and tag value to filter specific programs from Marketo. When you do not specify these properties, the Secure Agent retrieves only the Engagement and Email programs from Marketo.

To retrieve program details, you can configure the following advanced properties in a mapping task for a campaign source object:

- **Program - Program Id.** Specify the program ID to retrieve the program details.
- **Program - Program Name.** Specify the program name for retrieving program details.
- **Program - Tag Type.** Specify the tag type for the program from which you want to retrieve the program details.
- **Program - Tag Value.** Specify the tag value for the program to retrieve the program details.

Note: If you specify a tag to retrieve program details, ensure that you specify both the tag name and tag value.

You can specify more than one value for the program ID, program name, tag name, and tag value, separated by a comma.

For example, you specify tag type as `Presenter,Demo` and tag value as `Program,Solutions` in a task to retrieve the program details.

The following table shows the details of the retrieved program:

id	name	createdAt	url	channel	folderValue	tagType	tagValue
1057	Mary Campaign	2013-12-06 19:52:58+0000	https://app.marketo.com/#ME1	Webinar	221	Program	Presenter
1057	Callang Campaign	2013-12-06 19:52:58+0000	https://app.marketo.com/#M1	Webinar	222	Solutions	Demo

Retrieve channels

You can retrieve channels in Marketo when you specify the channel name. You can specify more than one value for the channel name, separated by a comma.

For example, you specify the channel name in a task to retrieve the channel details.

The following table shows the details of the retrieved channel:

id	name	applicableProgramType	createdAt	progression_name
3	Blog	program	2013-10-01 02:14:45+0000	Not in Program
3	Blog	program	2013-10-01 02:14:45+0000	Visited

If you do not specify the channel name in the advanced source properties, all the channels are retrieved from Marketo.

When you read the channel object from Marketo, the Secure Agent internally maps the following field names to corresponding field names in Data Integration:

Marketo Field Name	Field Name in the Mapping
description	progression_Description
hidden	progression_Hidden
name	progression_name
step	progression_Step
success	progression_Success

Retrieve email records

You can retrieve email records from Marketo by the email ID.

When you specify the email ID in a task, the Secure Agent retrieves the records from that email from Marketo. Specify the email ID in the advanced properties in a mapping task. You can specify more than one email ID separated by a comma.

The following table shows the details of a retrieved email by the email ID:

id	name	createdAt	subjectType	subjectValue	fromEmailType	fromEmailValue
1370	Test Email	2016-09-07 11:04:53+0000	Text	Congregation	Text	ash@informat.com
1007	2 Invitation	2012-10-12 00:01:21+0000	Text	Webinar Invite 2	Text	ynam@yourcomp.com

Retrieve a folder structure

You can retrieve a folder structure from Marketo.

To retrieve a folder structure from Marketo, select the folder source object in a task.

You can optionally configure the following advanced properties in a mapping task:

- **Folder - Max Depth.** Specify the maximum number of levels to traverse in the folder hierarchy. Default is 2.
- **Folder - Workspace.** Specify the name of the workspace that you want to filter.

For example, you specify max depth as 3 and workspace as `Default` in a task to retrieve the program details.

The following table shows the details of the retrieved program:

id	folderId	type	folderType	parentId	parentType	path	workspace
3	3	Folder	Zone	3	Folder	/Marketing Activities	Default

Retrieve tags

You can retrieve tags from Marketo when you specify the tag name.

To retrieve tags, you must specify the name of the tag in Marketo. You can specify more than one value for the tag name, separated by a comma.

For example, you specify the tag type as `Area,Campaign Series,Email` in a task to retrieve the tag details.

The following table shows the details of the retrieved tag:

tagType	applicableProgramType	required
Area	[program,nurture,event,webinar,email_batch]	TRUE
Campaign Series	[program,nurture,event,webinar]	TRUE
Email Type	[program,email_batch,nurture,event,webinar]	TRUE

If you do not specify a tag name, all tags are retrieved from Marketo.

Retrieve campaign

You can specify the campaign ID or name to retrieve a campaign from Marketo.

To retrieve a campaign, you can configure one or both of the following properties in the advanced source properties in a mapping task:

- **Campaign ID.** Specify the campaign ID for a campaign to retrieve a campaign. If you specify the campaign ID, ensure that you provide the corresponding campaign name for the ID from Marketo.
- **Campaign Name.** Specify the name of the campaign to retrieve a campaign.

To retrieve multiple campaigns, specify the campaign IDs and campaign names, each separated by a comma.

Retrieve data from custom objects

You can retrieve data from a custom object in Marketo based on the search criteria you specify in a mapping task.

To retrieve custom object records from Marketo, configure the following advanced list properties in a mapping task for the specified custom source object:

Note: The advanced source property field names, such as **Type Filter**, **Values Filter**, **Fields Filter**, and **String Values Filter** represent properties that you can configure for custom, opportunity, opportunity role, sales person, and company objects.

- **Custom Object - Type Filter.** Specify the filter type to retrieve the attributes of a custom object. You can specify one of the following filter types:
 - **idField.** The primary key of the custom object in Marketo.
 - **dedupeFields.** List of fields that define the unique row of the custom object in Marketo. Default is `dedupeFields`.
- **Custom Object - Values Filter.** Specify the location of the .csv file that contains the filter values to retrieve specific custom object fields.

- **Custom Object - Fields Filter.** Specify the object fields that you want to retrieve. You can specify more than one value for the custom object fields, separated by a comma. If you do not specify the fields, all the default fields from Marketo are retrieved. The default fields retrieved include marketoGuid, dedupeFields, updatedAt, and createdAt.
- **Custom Object - String Values Filter.** Specify the filter values to retrieve specific custom object fields. When you specify the filter values, enter the column name of the custom object on which you want to apply the filter, followed by the filter string values on consecutive lines similar to the format in a CSV file. For example, to filter data based on email IDs, specify the filter values in the following format:

```
email_ID
jim@gmail.com
gerald@gmail.com
harry@gmail.com
```

- **Note:** If you specify both the **Custom Object - String Values Filter** and the **Custom Object - Values Filter** field, the Secure Agent considers the **Custom Object - Values Filter** field and uses the values in the CSV file to filter data from the custom object.

For example, specify the filter type as *dedupeFields* and the filter value as *E:\Files\FilterValues_DDF_Reservation.csv*, which contains the dedupe field values. Specify the custom object fields as *createdAt,marketoGUID,updatedAt,pnr,TicketNumber* for which you want to retrieve data from a flight reservation custom object.

The following table shows a sample of the retrieved custom object details:

createdAt	marketoGUID	updatedAt	pnr	TicketNumber
12/4/2015 04:48:00	2cc3a035-4274-4b34-abc3-9338cda7a1e4	12/4/2015 04:48:00	BAF57HG1	1001
12/4/2015 04:48:00	c0d1297d-aacc-4d74-8ac7-89490b36d811	12/4/2015 04:48:00	TAU64GS5	1002

Retrieve opportunity data

You can retrieve opportunity data from Marketo based on the search criteria you specify in a mapping task.

To retrieve opportunity data from Marketo, configure the following advanced list properties in a mapping task for an opportunity source object:

Note: The advanced source property field names, such as **Filter Type**, **Filter Values**, and **Fields**, represent properties that you can configure for custom, opportunity, opportunity role, sales person, and company objects.

- **Custom Object Filter Type.** Specify the filter type to retrieve the attributes of an opportunity object. The filter type can be any of the searchable fields.
- **Custom Object Filter Values.** Specify the location of the .csv file that contains the filter values to retrieve specific opportunity fields.
- **Custom Object Fields.** Specify the object fields that you want to retrieve. You can specify more than one value for the opportunity object fields, separated by a comma. If you do not specify the fields, the Secure Agent retrieves the fields that you mapped in the task.

For example, specify the filter type as *dedupeFields* and the filter value as *E:\Files\FilterValues_ID.csv*, which contains the externalOpportunityId. Specify the opportunity object fields for which you want to retrieve data.

The following table shows the example of the retrieved opportunity data:

marketoGUID	externalOpportunityId	name	description	amount	source
da42707c-4dc4-4fc1-9fef-f30a3017240a	19UYA31581L00000	Chairs	Chairs	1604.47	Inbound Sales Call/Email
da42707c-4dc4-4fc1-9fef-f30a3017240b	29UYA31581L00000	Big Dog Day Care-Phase12	Big Dog Day Care-Phase12	1604.47	Email

Retrieve opportunity role data

You can retrieve opportunity role data from Marketo based on the search criteria you specify in a mapping task.

To retrieve opportunity role data from Marketo, configure the following advanced list properties in a mapping task:

Note: The advanced source property field names, such as **Filter Type**, **Filter Values**, and **Fields**, represent properties that you can configure for custom, opportunity, opportunity role, sales person, and company objects.

- **Custom Object Filter Type.** Specify the filter type to retrieve the attributes of an opportunity role object. The filter type can be any of the searchable fields.
- **Custom Object Filter Values.** Specify the location of the .csv file that contains the filter values to retrieve specific opportunity role fields.
- **Custom Object Fields.** Specify the object fields that you want to retrieve. You can specify more than one value for the opportunity role object fields, separated by a comma. If you do not specify the fields, the Secure Agent retrieves the fields that you mapped in the task.

For example, specify the filter type as `externalOpportunityId` and the filter value as `E:\Files\FilterValues_ID.csv`, which contains the external opportunity ID field values. Specify the opportunity role object fields for which you want to retrieve data.

The following table shows a sample of the retrieved opportunity role data:

marketoGUID	externalOpportunityId	role	leadId	isPrimary
da42707c-4dc4-4fc1-9fef-f30a3017240a	19UYA31581L000000	Chairs	3445453	0
da42707c-4dc4-4fc1-9fef-f30a3017240b	19UYA31581L000000	Chairs	34454556	1

Retrieve sales person records

You can retrieve sales person records from Marketo based on the search criteria you specify in a mapping task.

To retrieve sales person data from Marketo, configure the following advanced list properties in a mapping task:

Note: The advanced source property field names, such as **Type Filter**, **Values Filter**, and **Fields**, represent properties that you can configure for custom, opportunity, opportunity role, sales person, and company objects.

- **Custom Object Filter Type.** Specify the filter type to retrieve the attributes of a sales person object. The filter type can be any of the searchable fields.
- **Custom Object Filter Values.** Specify the location of the .csv file that contains the filter values to retrieve specific sales person fields.
- **Custom Object Fields.** Specify the object fields that you want to retrieve. You can specify more than one value for the sales person object fields, separated by a comma. If you do not specify the fields, the Secure Agent retrieves the fields that you mapped in the task.

For example, specify the filter type as `dedupeFields` and the filter value as `E:\Files\FilterValues_ID.csv`, which contains the `externalSalesPersonId`. Specify the sales person object fields for which you want to retrieve data.

The following table shows a sample of the retrieved sales person data:

externalSalesPersonId	firstName	lastName	phone	title	createdAt
rhernandez3@phoca.cz	Ruth	Hernandez	62-(427)296-8646	Senior Editor	8/25/2016 6:23:32 AM
lhunter4@google.com.au	Lisa	Hunter	853-(308)354-3116	Technical Writer	8/25/2016 6:23:32 AM

Retrieve company records

You can retrieve company records from Marketo based on the search criteria you specify in a mapping task.

To retrieve company data from Marketo, configure the following advanced list properties in a mapping task:

Note: The advanced source property field names, such as **Filter Type**, **Filter Values**, and **Fields**, represent properties that you can configure for custom, opportunity, opportunity role, sales person, and company objects.

- **Custom Object Filter Type.** Specify the filter type to retrieve the attributes of a company object. The filter type can be any of the searchable fields.
- **Custom Object Filter Values.** Specify the location of the .csv file that contains the filter values to retrieve specific company fields.
- **Custom Object Fields.** Specify the object fields that you want to retrieve. You can specify more than one value for the company object fields, separated by a comma. If you do not specify the fields, the Secure Agent retrieves the fields that you mapped in the task.

For example, specify the filter type as `dedupeFields` and the filter value as `E:\Files\FilterValues_ID.csv`, which contains the `externalCompanyId`. Specify the company object fields for which you want to retrieve data.

The following table shows sample data for a few fields of the company object retrieved from Marketo:

createdAt	externalCompanyId	billingCity	billingCountry	industry	annualRevenue
8/24/2016 5:43:29 AM	2a26a9df-fdce-9c30-67c5-56952b2b5c27	Boston	USA	Transportation	9460
8/24/2016 5:43:29 AM	23d89d7a-ea99-5635-0d26-56952b59b3d8	Paris	France	Financial	92300

Marketo rules and guidelines

Consider the following rules and guidelines when you configure mapping tasks:

- When you configure a task to read data from a folder in Marketo, the task runs successfully even though you cannot specify the root parameter required for browsing folders in Marketo.
- You cannot configure filters from the **Data Filters** tab in a task. You must instead use the advanced source properties to filter the data.
- The Hosted Agent does not support advanced source properties, such as **Filter Field** and **Filter Values CSV File**.
- When you use the Cloud Hosted Agent to run memory intensive tasks, an out-of-memory error might occur.
- When you choose the LeadActivity source object in a task to retrieve lead activities from Marketo, the Secure Agent internally maps the marketoGUID field with the activityId field. marketoGUID is a new field introduced by Marketo. For more information about changes in activity records in Marketo APIs, see the following website: <https://developers.marketo.com/blog/important-change-activity-records-marketo-apis/>

Marketo restrictions

Consider the following restrictions from Marketo when you configure source object in mapping tasks:

- If any of the List - List ID value specified in the list source properties is not found in Marketo, the REST API returns only that data that matches the configured properties. The API does not return an error for incorrect list IDs that are not found in Marketo.
- When you configure a task to create duplicate leads in Marketo, you must use the standard API. When you use the bulk API, the Marketo REST API updates the existing leads in Marketo.
- You might observe latency when you use the dedupe fields to update the Lead Link Field, such as email address, for a custom object in Marketo.
- When you use Marketo Connector, you cannot preview lead, lead activity, and custom object records.
- You can include a maximum of only 10 ActivityType IDs in a single task.
- When you configure the value of concurrent threads, do not exceed a maximum number of 10 threads for Marketo tasks to process concurrently at a given time.

- When you configure a task to read data from a Marketo instance that does not support the opportunity, opportunity role, sales person, and company objects, an error occurs when you preview the data. These objects are not enabled for CRM-enabled subscriptions in Marketo.
- The Marketo API does not return an error if any of the records for the company, sales person, opportunity, or opportunity role source objects are not found in Marketo, even though you specify the required advanced properties in the task.
- You can retrieve the metadata of only the default fields of email, program, tag, channel, list, and campaign objects in Marketo.
- When you specify multiple IDs for retrieving the program and email data, the Marketo API does not support additional API call requests, which causes an overhead as Data Integration sends multiple API requests.
- The program, list, and activityType objects have pre-defined fields because of a restriction from the Marketo APIs. When you use the program, list, or activityType objects, you can retrieve data only from these pre-defined fields.
- The metadata of objects other than lead, company, opportunity, role, sales person, and custom objects has pre-defined fields because of a restriction from the Marketo APIs. When you use these objects, you can retrieve data only for these pre-defined fields.
- When you configure a task to read data from a folder in Marketo, you cannot specify the root parameter required for browsing folders in Marketo.
- When you use the Bulk Extract option, you can extract a daily quota maximum of 500 MB shared between leads and lead activities. When you exceed the quota, you cannot create another job until the daily quota resets at midnight.

CHAPTER 4

Mappings and Mapping tasks with Marketo

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

When you create a mapping task, select the mapping that you want to use. 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.

CHAPTER 5

Troubleshooting

When you configure a task with the Bulk API to retrieve data from the LeadActivity source object, the task might fail with the following error:

```
[ERROR] com.informatica.powercenter.sdk.SDKException:  
com.informatica.cloud.api.adapter.runtime.exception.ReadException:  
com.informatica.cloud.api.adapter.runtime.exception.ReadException:  
com.fasterxml.jackson.databind.exc.MismatchedInputException: Cannot deserialize instance  
of `java.util.LinkedHashMap<java.lang.Object,java.lang.Object>` out of VALUE_NUMBER_INT  
token at [Source: (String)"57007"; line: 1, column: 1]
```

To resolve this issue, you must set the JVM option to `-DInfaCustomParser=true` in the Secure Agent properties.

Perform the following steps to configure the JVM option:

1. In Administrator, select the Secure Agent listed on the **Runtime Environments** tab.
2. Click **Edit**.
3. In the **System Configuration Details** section, select **Data Integration Service** as the service and **DTM** as the type.
4. Add the **DInfaCustomParser** property in the JVM option and set the property value to true.

Example:

```
-DInfaCustomParser=true
```

5. Click **Save**.

CHAPTER 6

Data type reference

Data Integration uses the following data types in mappings and mapping tasks with Marketo:

Marketo native data types

Marketo data types appear in the source transformation 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.

Marketo and transformation data types

The following table lists the Marketo data types that Data Integration supports and the corresponding transformation data types:

Marketo Data Type	Transformation Data Type	Description
Boolean	String	1 to 104,857,600 characters
Currency	String	1 to 104,857,600 characters
Data	String	1 to 104,857,600 characters
Date	Date/Time	Jan 1, 0001 A.D. to Dec 31, 9999 A.D. Precision 29, scale 9 (precision to the nanosecond)
DateTime	Date/Time	Jan 1, 0001 A.D. to Dec 31, 9999 A.D. Precision 29, scale 9 (precision to the nanosecond)
Email	String	1 to 104,857,600 characters
Float	Double	Precision 15

Marketo Data Type	Transformation Data Type	Description
Integer	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
Phone	String	1 to 104,857,600 characters
Reference	String	1 to 104,857,600 characters
String	String	1 to 104,857,600 characters
Text	String	1 to 104,857,600 characters
URL	String	1 to 104,857,600 characters

CHAPTER 7

Marketo activity type reference

You can retrieve data by specifying ActivityType IDs. Each Marketo subscription may have different IDs for corresponding Activity names. The following table shows ActivityType ID, corresponding name, and description from a sample Marketo subscription:

ID	Name	Description
1	Visit Webpage	User visits a web page.
10	Open Email	User opens Marketo email.
11	Click Email	User clicks on a link in a Marketo email.
12	New Lead	New person or record is added to the lead database.
13	Change Data Value	Changed attribute value for a person or record.
34	Add to Opportunity	Add to an opportunity.
35	Remove from Opportunity	Remove from an opportunity.

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