

Salesforce Marketing Cloud Import Integration CLI v2

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Install 'td' Command v0.11.9 or Later

You can install the newest [Treasure Data Toolbelt](#).

```
$ td --version
0.15.3
```

Create Configuration File

Prepare configuration file (for eg: `load.yml`) as shown in the following example, with your Salesforce Marketing Cloud account access information.

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: <client_id>
  client_secret: <client_secret>
  auth_type: v2
  auth_uri: <auth_uri>
  account_id: <account_id>
  target: <target_name>
  data_extension_names: <data_extension_names>
  shared_data_extension: false
  incremental: false
  maximum_retries: 7
  initial_retry_interval_millis: 1000
  maximum_retry_interval_millis: 120000

filters:
- type: add_time
  to_column:
    name: time
    type: timestamp
  from_value:
    mode: upload_time
- type: rename
  rules:
  - rule: upper_to_lower
  - rule: character_types
    pass_types: [ "a-z", "0-9" ]
    pass_characters: "_"
    replace: "_"

out:
  type: td
  apikey: <td_api_key>
  endpoint: <td_endpoint>
  database: <database>
  table: <table>
  time_column: time
  mode: replace
  default_timestamp_format: '%d/%m/%Y'

```

This example dumps Salesforce Marketing Cloud Campaign Data Source:

- `client_id`: Salesforce Marketing Cloud client id.
- `client_secret`: Salesforce Marketing Cloud client secret.
- `target`: Salesforce Marketing Cloud entity object to be imported.

Optionally Preview Data to Import

You can preview data to be imported using the command `td connector:preview`.

```

$ td connector:preview load.yml
+-----+-----+-----+-----+
| id:long      | name:string      | description:string | ...
+-----+-----+-----+-----+
| 42023        | "Hello"          | apps               |
| 42045        | "World"          | apps               |
+-----+-----+-----+-----+

```

Execute Load Job

Submit the load job. It may take a couple of hours depending on the data size. Users need to specify the database and table where their data are stored.

It is recommended to specify `--time-column` option, since Treasure Data's storage is partitioned by time (see also [data partitioning](#)). If the option is not given, the data connector selects the first long or timestamp column as the partitioning time. The type of the column specified by `--time-column` must be either of long and timestamp type.

If your data doesn't have a time column you can add it using `add_time` filter option. More details at [add_time filter plugin](#).

```
$ td connector:issue load.yml --database td_sample_db --table td_sample_table --time-column modifieddate
```

The preceding command assumes you have already created `database(td_sample_db)` and `table(td_sample_table)`. If the database or the table does not exist in TD this command will not succeed. Therefore, [create the database and table manually](#) or use `--auto-create-table` option with `td connector:issue` command to auto create the database and table:

```
$ td connector:issue load.yml --database td_sample_db --table td_sample_table --time-column modifieddate --auto-create-table
```

You can assign Time Format column to the "Partitioning Key" by `--time-column` option.

Scheduled Execution

You can schedule periodic data connector execution for periodic Salesforce Marketing Cloud import. We configure our scheduler carefully to ensure high availability. By using this feature, you no longer need a `cron` daemon on your local data center.

Create the Schedule

A new schedule can be created using the `td connector:create` command. The name of the schedule, cron-style schedule, the database and table where their data will be stored, and the Data Connector configuration file are required.

```
$ td connector:create \  
  daily_salesforce_marketing_cloud_import \  
  "10 0 * * *" \  
  td_sample_db \  
  td_sample_table \  
  load.yml
```

The ``cron`` parameter also accepts these three options: ``@hourly``, ``@daily`` and ``@monthly``.

By default, the schedule is setup in the UTC timezone. You can set the schedule in a timezone using `-t` or `--timezone` option. The ``--timezone`` option only supports extended timezone formats like 'Asia/Tokyo', 'America/Los_Angeles' etc. Timezone abbreviations like PST, CST are "not" supported and may lead to unexpected schedules.

List the Schedules

You can see the list of currently scheduled entries by `td connector:list`.

```
$ td connector:list  
+-----+-----+-----+-----+-----+-----+  
+-----+  
| Name                | Cron          | Timezone | Delay | Database      | Table          |  
Config              |               |          |      |               |                |  
+-----+-----+-----+-----+-----+-----+  
+-----+  
| daily_salesforce_marketing_cloud_import | 10 0 * * * | UTC      | 0    | td_sample_db | td_sample_table |  
{ "type"=>"salesforce_marketing_cloud_v2", ... } |  
+-----+-----+-----+-----+-----+-----+  
+-----+
```

Show the Setting and History of Schedules

`td connector:show` shows the execution setting of a schedule entry.

```
% td connector:show daily_salesforce_marketing_cloud_import
Name      : daily_salesforce_marketing_cloud_import
Cron      : 10 0 * * *
Timezone  : UTC
Delay     : 0
Database  : td_sample_db
Table     : td_sample_table
```

`td connector:history` shows the execution history of a schedule entry. To investigate the results of each individual execution, use `td job <jobid>`.

```
% td connector:history daily_salesforce_marketing_cloud_import
+-----+-----+-----+-----+-----+-----+-----+-----+
+
| JobID  | Status | Records | Database | Table           | Priority | Started              | Duration |
+-----+-----+-----+-----+-----+-----+-----+-----+
+
| 578066 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-18 00:10:05 +0000 | 160     |
| 577968 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-17 00:10:07 +0000 | 161     |
| 577914 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-16 00:10:03 +0000 | 152     |
| 577872 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-15 00:10:04 +0000 | 163     |
| 577810 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-14 00:10:04 +0000 | 164     |
| 577766 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-13 00:10:04 +0000 | 155     |
| 577710 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-12 00:10:05 +0000 | 156     |
| 577610 | success | 10000   | td_sample_db | td_sample_table | 0       | 2015-04-11 00:10:04 +0000 | 157     |
+-----+-----+-----+-----+-----+-----+-----+-----+
+
8 rows in set
```

Delete the Schedule

`td connector:delete` removes the schedule.

```
$ td connector:delete daily_salesforce_marketing_cloud_import
```

Incremental Loading

For Data Extensions

Treasure Data supports incremental loading for **Data Extensions** that have a date field.

If `incremental: true` is set, the data connector loads records according to the range specified by the `from_date` and the `fetch_days` for the specified date field.

For example:

```

incremental_column_name: mydatefield
from_date: "2016-09-01T00:00:00.000Z"
fetch_days: 2

```

- 1st iteration: The data connector fetches records from **Sep 01 00:00:00 UTC 2016** to **Sep 03 00:00:00 UTC 2016**
- 2nd iteration: The data connector fetches records for the next available 2 day period, from **Sep 03 00:00:00 UTC 2016** until **Sep 05 00:00:00 UTC 2016**. This process repeats for each successive iteration.
- When the increment includes the present date, additional records are fetched as each complete time period becomes available.

If `incremental: false` is set, The data connector loads all records for the target specified. This is one-time activity.

For Email Events

Treasure Data supports incremental loading for **Email Events** based on their event date.

If `incremental: true` is set

- 1st iteration: the connector loads the data from specified Start Time (from all time if not set) to specified End Time (to the time the job was scheduled to run if not set)
- 2nd iteration: the connector loads the data from the previous End Time to the time job is scheduled

If `incremental: false` is set, The data connector loads all records for the target specified. This is a one-time activity.

Modes for the Out Plugin

You can specify file import mode in the out section of the load.yml file.

The out: section controls how data is imported into a Treasure Data table.

For example, you may choose to append data or replace data in an existing table in Treasure Data.

Mode	Description	Examples
Append	Records are appended to the target table.	<pre> in: ... out: mode: append </pre>
Always Replace	Replaces data in the target table. Any manual schema changes made to the target table remain intact.	<pre> in: ... out: mode: replace </pre>
Replace on new data	Replaces data in the target table only when there is new data to import.	<pre> in: ... out: mode: replace_on_new_data </pre>

Sample Configuration for Each Target

For Campaign target using **Legacy Package**

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v1
  tenant_auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: campaign
out:
  ...

```

For Campaign target using Enhanced Package

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v2
  auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: campaign
out:
  ...

```

Parameters	Description	Default value
type	must be salesforce_marketing_cloud_v2	
client_id	Salesforce Marketing Cloud Client ID	
client_secret	Salesforce Marketing Cloud Client Secret	
auth_type	Package Type This is a enum (v1, v2) where v1 is Legacy package and v2 is Enhanced Package	v1
tenant_auth_uri	Tenant Authentication Base URI (only enter this option if auth_type = v1) This is required from September 2022 as Marketing Cloud is going to deprecate the legacy endpoints [https://*.exacttargetapis.com]. For more information: https://help.salesforce.com/s/articleView?id=000356497 , https://help.salesforce.com/s/articleView?id=000356498	
auth_uri	Authentication Base URI (only enter this option if auth_type = v2)	

For Contact target using Legacy Package

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v1
  tenant_auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: contact
  contact_page_size: 50
  contact_attributes_request_limit: 100
  contact_multiple_requests: true
  ignore_attribute_set_names:
    - attribute_1
    - attribute_2
out:
  ...

```

For Contact target using Enhanced Package

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v2
  auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: contact
  contact_page_size: 50
  contact_attributes_request_limit: 100
  contact_multiple_requests: true
  ignore_attribute_set_names:
    - attribute_1
    - attribute_2
out:
  ...

```

Parameters	Description	Default value
type	must be salesforce_marketing_cloud_v2	
client_id	Salesforce Marketing Cloud Client ID	
client_secret	Salesforce Marketing Cloud Client Secret	
auth_type	Package Type This is a enum (v1, v2) where v1 is Legacy package and v2 is Enhanced Package	v1
tenant_auth_uri	Tenant Authentication Base URI (only enter this option if auth_type = v1) This is required as of September 2022 as Marketing Cloud is going to deprecate the legacy endpoints [https://*.exacttargetapis.com]. For more information: https://help.salesforce.com/s/articleView?id=000356497 , https://help.salesforce.com/s/articleView?id=000356498	
auth_uri	Authentication Base URI (only enter this option if auth_type = v2)	
contact_attributes_request_limit	Number of attributes to ingest for each contact in a single request. When number of attributes greater than this value, it is split into multiple requests	100
contact_multiple_requests	Enable plugin to ingest contact detail with so many attributes in multiple requests (This only effects when number of attributes greater than 100)	false
ignore_attribute_set_names	List of attributes are ignored. Useful when you want to eliminate some unnecessary attributes	null

For Data Extension target using **Legacy Package**

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v1
  tenant_auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: data_extension
  data_extension_name: data_extension_1
  incremental: true
  shared_data_extension: true
  incremental_column_name: date
  from_date: "2016-09-01T00:00:00.000Z"
  fetch_days: 1

out:
  type: td
  apikey: <td_api_key>
  endpoint: <td_endpoint>
  database: <database>
  table: <table>
  time_column: time
  mode: replace
  default_timestamp_format: '%d/%m/%Y'

```

For Data Extension target using Enhanced Package

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v2
  auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: data_extension
  data_extension_name: data_extension_1
  incremental: true
  shared_data_extension: true
  incremental_column_name: date
  from_date: "2016-09-01T00:00:00.000Z"
  fetch_days: 1

out:
  type: td
  apikey: <td_api_key>
  endpoint: <td_endpoint>
  database: <database>
  table: <table>
  time_column: time
  mode: replace
  default_timestamp_format: '%d/%m/%Y'

```

Parameters	Description	Default value
type	must be salesforce_marketing_cloud_v2	
client_id	Salesforce Marketing Cloud Client ID	
client_secret	Salesforce Marketing Cloud Client Secret	
auth_type	Package Type This is a enum (v1, v2) where v1 is Legacy package and v2 is Enhanced Package	v1

tenant_auth_uri	Tenant Authentication Base URI (only enter this option if auth_type = v1) This is required as of September 2022 as Marketing Cloud is going to deprecate the legacy endpoints [https://*.exacttargetapis.com]. For more information: https://help.salesforce.com/s/articleView?id=000356497 , https://help.salesforce.com/s/articleView?id=000356498	
auth_uri	Authentication Base URI (only enter this option if auth_type = v2)	
shared_data_extension	Set this flag to true when you want to ingest the data from shared data extensions	false
incremental	Set this flag to true if you want to get newer data between each schedule only	false
incremental_column_name	Column used for incremental loading. Must be set if you set incremental = true	null
from_date	Set this to ingest data from this date	null
fetch_days	Duration to ingest is from_date to from_date + fetch_days	1

For Email Event target using **Legacy Package**

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v1
  tenant_auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: email_event
  search_term: "email name"
  search_mode: "exact"
  email_event_types:
    - value : all
  start_time: "2019-03-26T07:20:00.000Z"
  end_time: "2019-03-26T07:53:00.000Z"
  incremental: true
out:
  ...

```

For Email Event target using **Enhanced Package**

```

in:
  type: salesforce_marketing_cloud_v2
  client_id: XXXXXX
  client_secret: XXXXXX
  auth_type: v2
  auth_uri: https://your_tenant_specific_endpoint.auth.marketingcloudapis.com
  target: email_event
  search_term: "email name"
  search_mode: "exact"
  email_event_types:
    - value : all
  start_time: "2019-03-26T07:20:00.000Z"
  end_time: "2019-03-26T07:53:00.000Z"
  incremental: true
out:
  ...

```

Parameters	Description	Default value
type	must be salesforce_marketing_cloud_v2	
client_id	Salesforce Marketing Cloud Client ID	
client_secret	Salesforce Marketing Cloud Client Secret	

auth_type	Package Type This is an enum (v1, v2) where v1 is Legacy package and v2 is Enhanced Package	v1
tenant_auth_uri	Tenant Authentication Base URI (only enter this option if auth_type = v1) This is required as of September 2022 as Marketing Cloud is going to deprecate the legacy endpoints [https://*.exacttargetapis.com]. For more information: https://help.salesforce.com/s/articleView?id=000356497 , https://help.salesforce.com/s/articleView?id=000356498	
auth_uri	Authentication Base URI (only enter this option if auth_type = v2)	
target	must be email_event (in this case)	
search_term	Name of email you want to ingest	null
search_mode	Mode for name matching pattern. Must be exact or partial only	exact
email_event_types	List of event types you want to import. Valid options are as follows: <ul style="list-style-type: none"> • value : all • value : bounce • value : click • value : forward • value : forwardOptIn • value : open • value : sent • value : survey • value : unsub 	null
start_time	Set this to ingest data from this time	null
end_time	Set this to ingest data to this time	null
incremental	Set this flag to true if you want to get newer data between each schedule only	false