Bulk Import from Google Sheets

This article explains how to import data from Google Sheets to Treasure Data using embulk-input-google_spreadsheets input plugin.

Continue to the following topics:

This content is obsolete and will no longer be updated.
Treasure Data recommends using our native integration for Google Sheets.

Prerequisites

- Basic knowledge of Treasure Data
- Basic knowledge of Embulk.
- Embulk is a Java application. Make sure that Java is installed.
- Follow the instructions in Installing Bulk Data Import.

- Embulk and embulk-output-td plugin installed on your machine.

Install embulk-input-google_spreadsheets Plugin

To install embulk-input-google_spreadsheeets plugin, run the following command:

```
$ embulk gem install embulk-input-google_spreadsheets
```

Obtain Required Google API Credentials

For Embulk to connect to the Google Sheets API there are different authentication options available. This example will use the `authorized_user` method which requires a JSON key file. You can get the key file from the Google API console. The key file contains the credentials to allow connection to Google Sheets API. It has three fields required for the Embulk plugin to run.

```
* client_id
* client_secret
* refresh_token
```

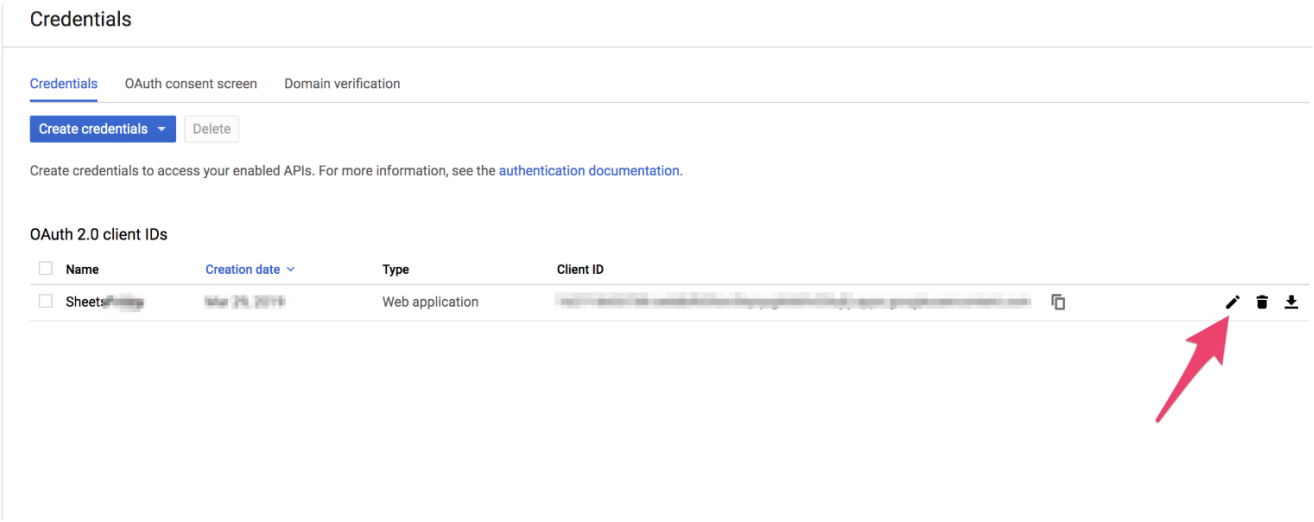
You will need to download the key file from an existing Google API project. If you have not created a project, you can do so using this wizard provided by Google that will allow you to create a project and turn on the Google Sheets API Google Sheets API Wizard.

Go to Credentials > Create Credentials > OAuth ClientID > Web Application. Enter a name, then ‘Create’. The next screen will show you the client ID and client secret. Copy them as you will need them for the JSON key file. Completing these steps will provide you with the `client_id` and `client_secret`.

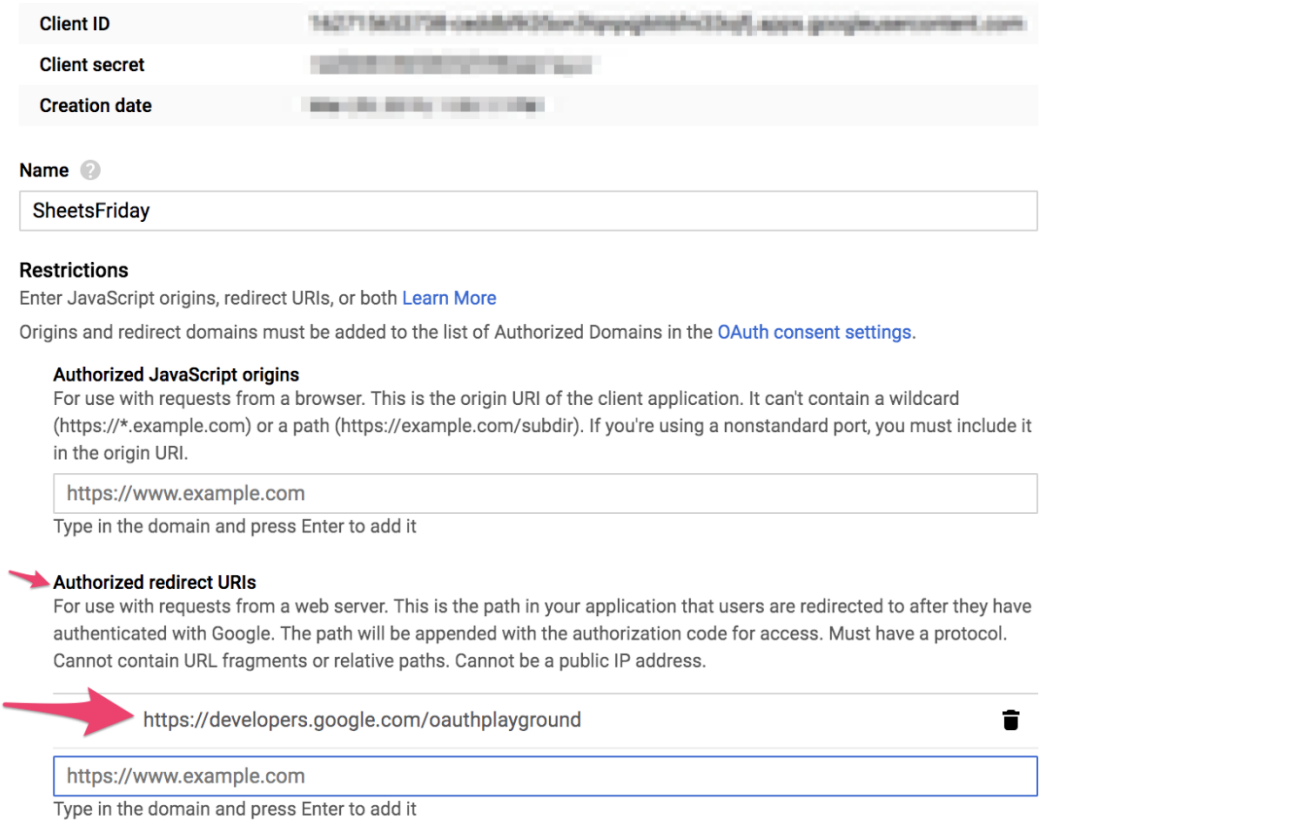
Add Google OAuth 2.0 Playground Redirect URI

You must obtain a refresh token from the Google OAuth 2.0 Playground. You must add the OAuth 2.0 Playground Redirect URI (https://developers.google.com/oauthplayground) to the Authorized Redirect URI's for the credentials you created.

1. Select the pencil icon to edit the credentials you are going to use for the Google OAuth 2.0 Playground.



1. In the Authorized Redirect URI field, enter the url for the Auth Playground: *https://developers.google.com/oauthplayground*. Press enter and SELECT save.



The remaining credential you need is the refresh token. One way to get the refresh token is to use the Google OAuth 2.0 Playground available at Google OAuth 2.0 Playground.

In the top right select the Gear Icon and make sure to select the Use your own OAuth credentials. In the OAuth Client ID and the OAuth Client secret fields, insert the credentials you got from the Google API console.

From the API list on the left, select the Google Sheets API v4. Then proceed to the Step 2. - Exchange authorization code for tokens. Press the Exchange authorization code for tokens button which will fill the Refresh Token and Access Token fields. The refresh token field is the value you should note down for the JSON key file Embulk will require. With all components of the JSON key file collected, you are ready to begin the Embulk configuration. The format of the JSON key file is:

```
{
    "client_id": "xxxxxxxxxx",
    "client_secret": "xxxxxxxxxx",
    "refresh_token": "xxxxxxxxxx"
}
```

Create Embulk Configuration File

Using your favorite text editor, create the Embulk config file defining input (Google Sheets) and output (TD) parameters.

In the example below, the required JSON key file is used in-line. For further details about additional parameters and to view other examples, refer to Embulk Input Google Sheets.

The fields that are required for the plugin to run are spreadsheets_url and worksheet_title. Edit the relevant details for the sheet you are trying to import. The same applies for the output section which outputs to Treasure Data.

The example assumes that you have already created a relevant table in Treasure Data that matches the details used in the config file. For example database would be the database created for the data, table would be the table within that database to receive the data.

```
in:
    type: google_spreadsheets
    auth_method: authorized_user
    json_keyfile:
        content: |
            {
                "client_id": "xxxxxxxxxx",
                "client_secret": "xxxxxxxxxx",
                "refresh_token": "xxxxxxxxxx"
            }
    spreadsheets_url: https://docs.google.com/spreadsheets/d/1xP_ZBA-Or4sJ63Zj99-JreuAFGn7Y2gcUKd1vtwSqwM
/edit#gid=0
    worksheet_title: title
    start_row: starting row
    default_timezone: timezone to be used
    null_string: '\N'
    default_typecast: strict
    columns:
        - {name: color, type: string}
        - {name: size, type: string}
        - {name: type, type: string}
out:
    type: td
    apikey: xxxxxxxxxxxx
    endpoint: api.treasuredata.com
    database: dbname
    table: tblname
    time_column: datecolumn
    mode: replace
    #by default mode: append is used, if not defined. Imported records are appended to the target table with
this mode.
    #mode: replace, replaces existing target table
    default_timestamp_format: '%d/%m/%Y'
```

Add the "auto_create_table: true" parameter to the load.yml, so that tables that do not exist are automatically created.

This is an example of the auto_create_table parameter in a .yml file.

```
out:
  type: td
  apikey: <your apikey>
  endpoint: api.treasuredata.com
  database: dbname
  table: tblname
  time_column: created_at
  auto_create_table: true
  mode: append
```

You must create the database and table in TD, prior to executing the load job. Alternatively, if you: 1) must add a database or 2) do not add the auto_create_table parameter in a .yml file and must add a table, run the following TD commands:

```
$ td database:create dbname
$ td table:create dbname tblname
```

You can also create the database and table using TD Console.

Execute Load Job

Issue the import job by running the following command:

```
$embulk run load.yml
```

The run time of the import job varies depending on the size of the data you are importing. After the job is done, the data should reflect in the TD database and table used in the Embulk configuration file.