Deployment Guide

SalesForce <–> Google Sheets | Data Synchronization

# Sync Process Overview

## Export Process:

1. SFCD sends export request to the Heroku server.
2. Heroku performs OAuth request for both SF and Google.
3. Heroku retrieves data from SFDC.
4. Heroku create/update Google Sheet document.
5. Heroku attaches Google Web App script to Google Sheet.

## Update Process:

1. Google Sheet triggers the Web App when document is updated.
2. Google Web App sends notification to Heroku.
3. Heroku retrieves modified data from Google Sheet.
4. Heroku sends data update request to SFDC.
5. Heroku updates Google Sheet with success/error message from SFDC.

# Heroku Sync Proxy

This is a node.js server that acts as a broker between SalesForce and Google Sheets. It handles all the export and update requests, manages credentials, and displays progress to the user during exports.

The source code (and an up-to-date version of this document) can be found on GitHub: <https://github.com/TractionOnDemand/TractionSyncProxy>

# SalesForce Exporter

This is primarily a Lightning component that sits on the Opportunity page layout. It makes a POST to the Heroku app to initiate a LIstView export.

# Google Web App

This web app detects change events on the Google Sheet and sends notifications to the Heroku app when such changes occur.

# Step by Step Deployment Instructions

### Heroku Setup

1. Create a new Heroku App <https://dashboard.heroku.com/new>.

Refer to the official Heroku documentation for detailed help: <https://devcenter.heroku.com>

* 1. On the Settings tab, record the Domain of your new app.

This will be referred to as <HEROKU\_APP\_URL> throughout this document.

1. Add PostgreSQL to the Heroku app
   1. From the ‘Resources’ tab, enter ‘Postgres’ into the Add-ons search and select ‘Heroku Postgres’ from the search results.
   2. Pick your plan name and click the ‘Provision’ button.
   3. From the new datastore page, click the ‘View Credentials’ button.
   4. The URI value is the <DATABASE\_URL>
2. Setup Environment Variables.
   1. From the settings tab, click ‘Reveal Config Vars’
   2. add a new variable for the following KEY = VALUE pair

NODE\_PATH = ./server

1. Checkout the node.js server from GitHub.
   1. git clone <https://github.com/TractionOnDemand/TractionSyncProxy.git>
2. CD into the repo directory
   1. cd TractionSyncProxy
3. Add heroku as a remote.
   1. git remote add heroku https://git.heroku.com/<HEROKU\_APP\_NAME>.git
4. Push to your heroku app.
   1. git push heroku
5. Run the database setup.
   1. Open the URL in a browser: <HEROKU\_APP\_URL>/pg/setup\_db
   2. optionally disable the setup in ./router/pg.js to prevent setup from running again.   
      (will need to commit/push the change).

### SalesForce Setup

1. Install the Manged Package.

* 1. <https://login.salesforce.com/packaging/installPackage.apexp?p0=04t50000000RXpc>

1. Add the Custom Setting default value for the Heroku Endpoint URL.
   1. Setup -> Custom Settings -> Google Sheet Sync (Manage)
   2. Add new default organization level value:

Endpoint URL = <HEROKU\_APP\_URL>/salesforce  
(e.g. [https:// your-heroku-app-name.herokuapp.com/salesforce](https://my-new-app.herokuapp.com/salesforce))

1. Add the Heroku App as a Connected App in SalesForce
   1. Setup -> Create -> Apps -> Connected Apps (New).
   2. Enable OAuth Settings.
      1. Callback URL = <HEROKU\_APP\_URL>/salesforce/oauth
      2. Selected OAuth Scopes

* Full access (full)
* Perform requests on your behalf at any time (refresh\_token, offline\_access)
  1. Record the ‘Consumer Key’ and ‘Consumer Secret’ for the next step.

1. Back on your Heroku app, add the following environment variables:

SF\_LOGIN\_URL = https://login.salesforce.com/services/oauth2

SF\_REDIRECT\_URI = <HEROKU\_APP\_URL>/salesforce/oauth

SF\_KEY = use the ‘Consumer Key’ from the previous step.

SF\_SECRET = use the ‘Consumer Secret’ from the previous step.

1. Update the ‘Heroku Sync’ Remote Site settings with your Heroku App URL
   1. Setup -> Security Controls > Remote Site Settings -> Heroku Sync -> Edit

Remote Site URL = <HEROKU\_APP\_URL>

1. Add the ‘List View Exporter’ Lightning component to the Opportunity page layout
   1. Switch to Lightning Experience if not already enabled.
   2. Go to an Opportunity record page.
   3. SETUP (gear) -> Edit Page.
   4. Drag/Drop the ListViewExporter component onto the Opportunity page layout.
   5. (optional) set the components configurable text labels.
   6. Click “Save”.

### Google Web App Setup

1. Create a project:
   1. open the Developer Console: <https://console.developers.google.com>
   2. select ‘Create project’ from the menu dropdown.
   3. Enter a project name then click ‘Create’ (this might take a few minutes)
2. Enable Drive API and Sheets API
3. Click ‘Credentials’ from the nav menu.
4. On the ‘OAuth consent screen’ tab, enter all appropriate fields then Save.
5. Setup Credentials
   1. On the Credentials tab, select ‘OAuth client ID’ from the ‘Create credentials’ dropdown.
   2. Select ‘Web application’
   3. Enter a name for the web application
   4. Set the ‘Authorized redirect URI’ to: <HEROKU\_APP\_URL>/google/callback
   5. Click Create.
   6. Record the Client ID and Client Secret.

(referred to as <GOOGLE\_CLIENT\_ID> and <GOOGLE\_CLIENT\_SECRET> in this document).

1. Create a new Google Doc on your Google Drive.
2. From the Tools menu, select ‘Script editor…’
3. Copy/paste the contents of <GIT\_PROJECT\_FOLDER>/webapp/google\_sync\_apps.gs into Code.js
4. Save the project: File -> Save
5. Add URL to Script Properties:
   1. File -> Project Properties
   2. on the Script properties tab, add a new row with the following Property = Value:

(remove any trailing slash from the URL)

HEROKU\_APP\_URL = <HEROKU\_APP\_URL>

1. Publish the app:
   1. Publish -> Deploy as web app
   2. Project version = New
   3. Execute the app as: User accessing the web app
   4. Who has access to the app: Anyone
2. Copy the web app URL (referred to as <GOOGLE\_WEBAPP\_URL>).
3. Back on your Heroku app, add the following Environment Variables:

GOOGLE\_CLIENT\_ID = <GOOGLE\_CLIENT\_ID>

GOOGLE\_CLIENT\_SECRET = <GOOGLE\_CLIENT\_SECRET>

GOOGLE\_CALLBACK\_URL = <HEROKU\_APP\_URL>/google/callback

GOOGLE\_WEBAPP\_URL = <GOOGLE\_WEBAPP\_URL>