BigQuery Setup

Identity Access Management (IAM) Admin Privileges

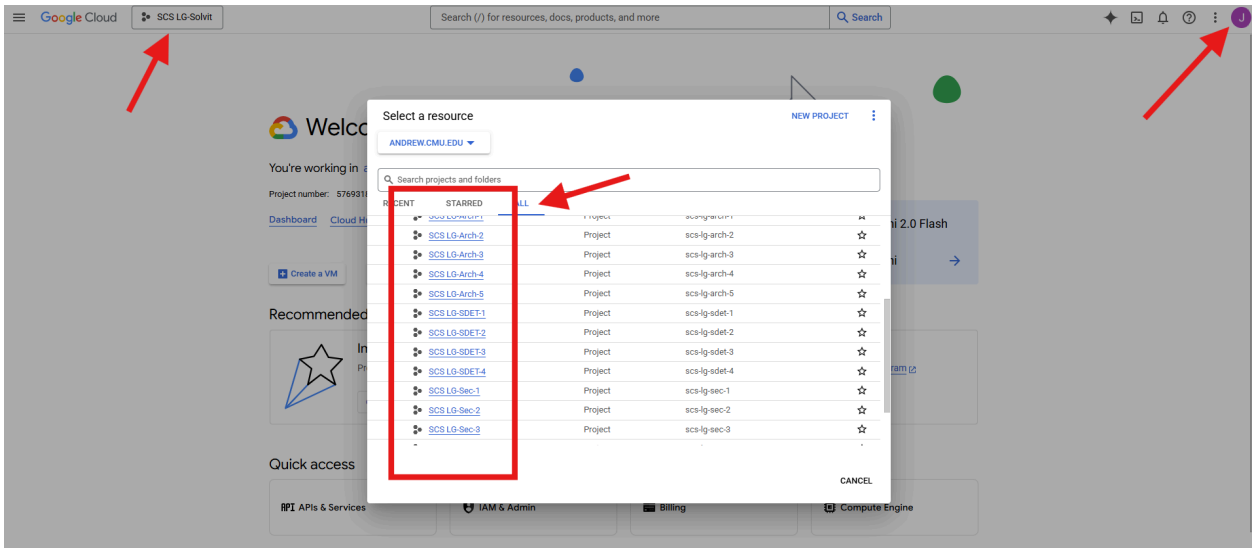
First, please contact Cathy to identify which team member has been assigned team leader. This student will be the only one initially that can complete the steps below.

The team leader may be able to assign additional privileges to the other team members.

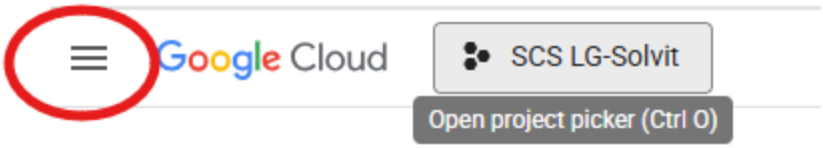
Set your team's Dataset and Table

Recommend using Google Chrome.
Navigate to the following URL - https://console.cloud.google.com/

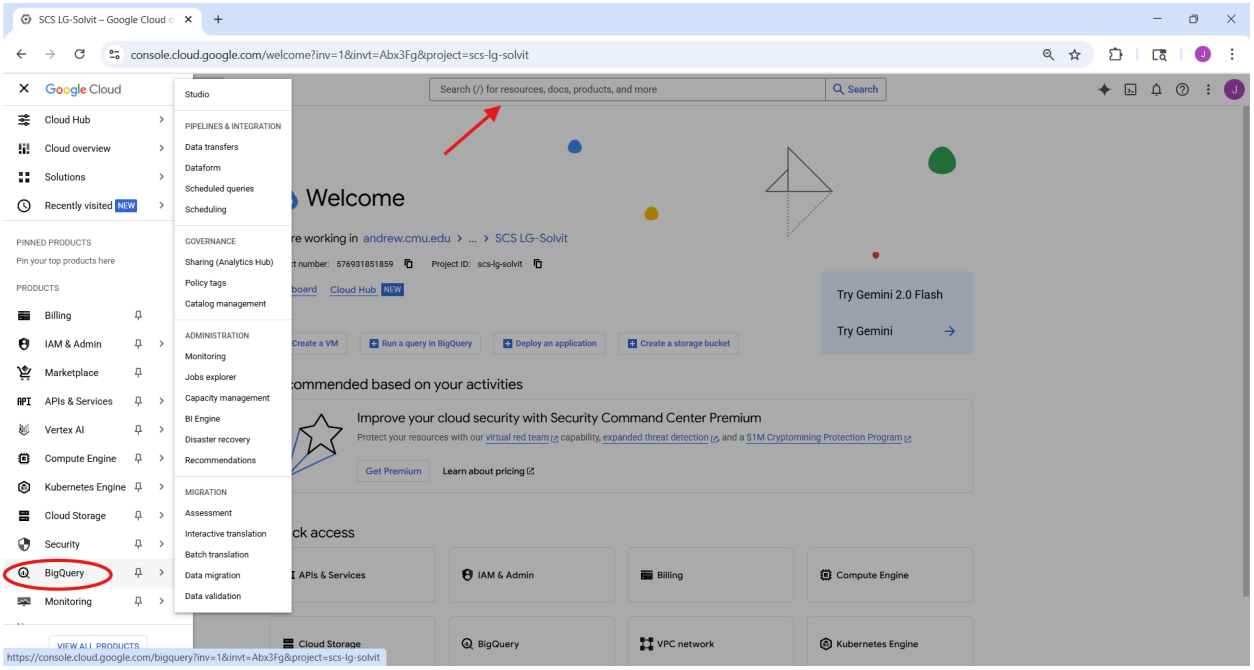
Log into your Andrew account on Chrome in the upper right corner.
Click on the project button in the upper left corner.
When the 'Select a resource' window opens, select your "All" to see all accounts, find your team's account and click on it..



Your project will be displayed next to Google Cloud. Next, left click on the three horizontal lines.



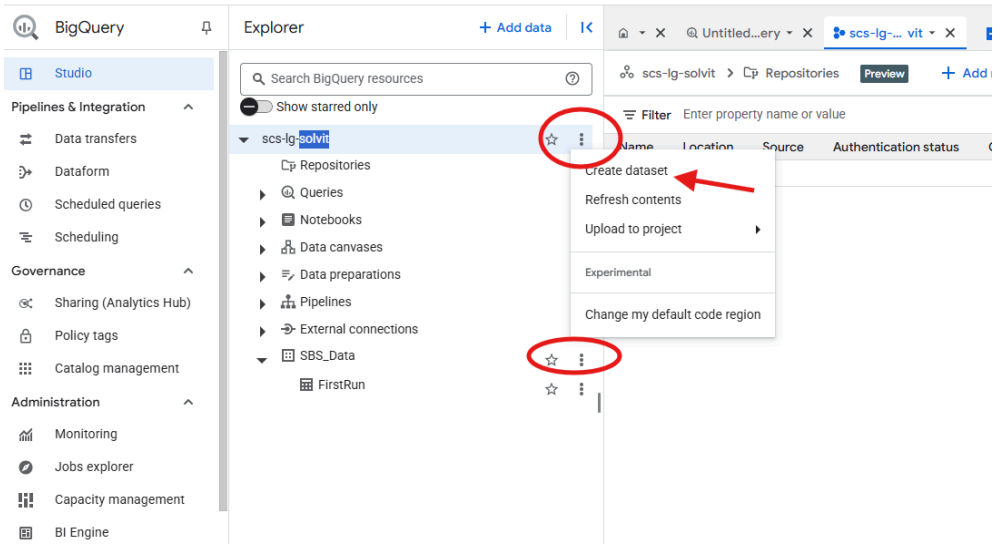
Next, in the drop down on the left, look for BigQuery and click on it. If not found, enter BigQuery in the search bar. The red arrow is pointing to the search bar in the image below.



Left click on the three dots of your project, and select “Create dataset”.
Fill in:

- Dataset ID (e.g., SBS_Data)
- Data location (e.g., US)

Click Create Dataset
Note: Your team is free to set any name for your dataset. Recommend making a name that is easy to remember and is logically relevant. Your team is also free to set the location, but closer location can have better performance.

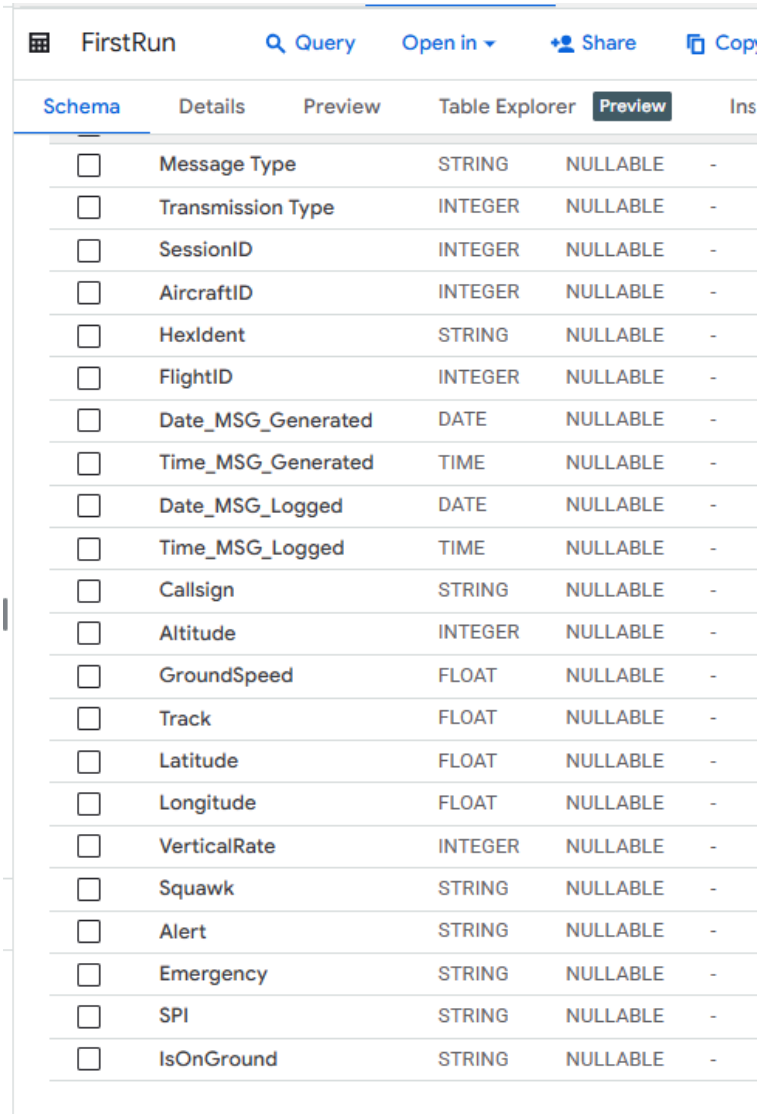


After the dataset is created (SBS_Data is the dataset in the image above), click on the three dots and select "Create Table".

There are several options to create a table. Pick the option that works for your team.

Note: The schema must be built before loading data to BigQuery. The schema that Solvit used is shown to the right.

Now your team is ready to load and query data in BigQuery.

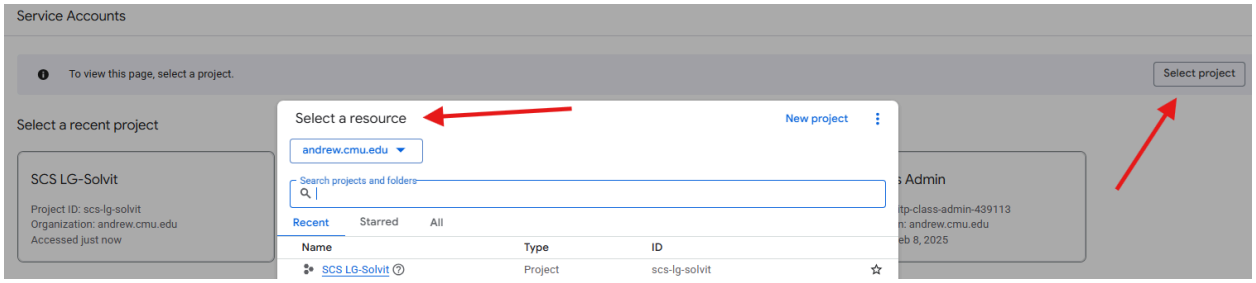


Create your JSON file

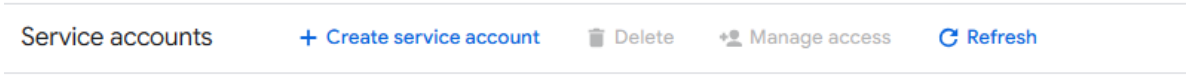
Your team will need to create a service account JSON key to run the Google API calls. The key authenticates your code or tool with Google Cloud on behalf of a service account.

Go to the IAM Service Accounts page:
https://console.cloud.google.com/iam-admin/serviceaccounts

On the right hand side, click “Select project” then select a resource (e.g., SCS LG-Sec-1). The resource is your team name.



Click on “Create service account”



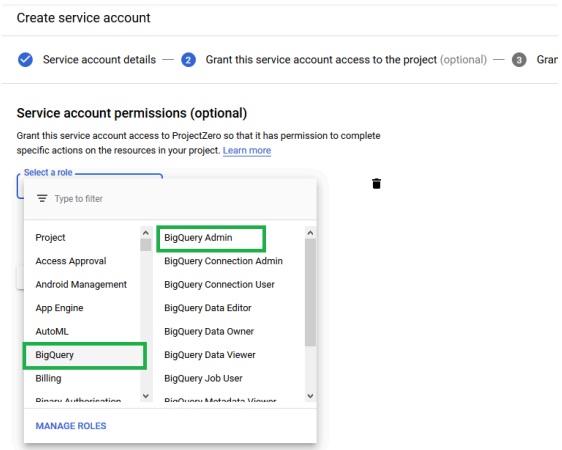
Fill out:

- Service account name: e.g., bigquery-client
- Service account ID (autofills from name)
- Description (optional)

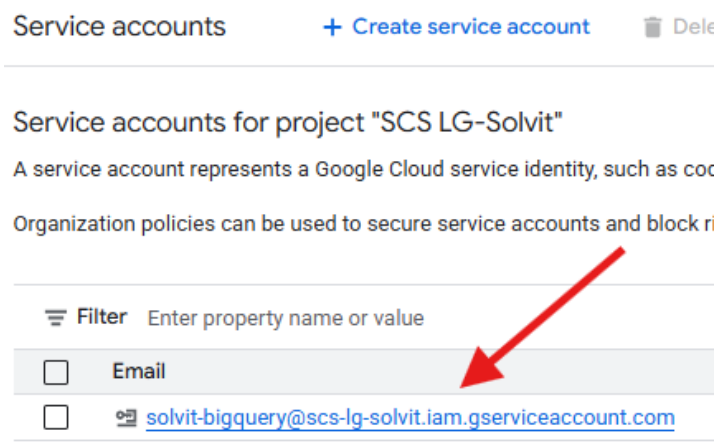
Click Create and Continue

You should see an option to assign Service Account permissions. Under that you should find a drop down. Choose BigQuery-> BigQuery Admin.

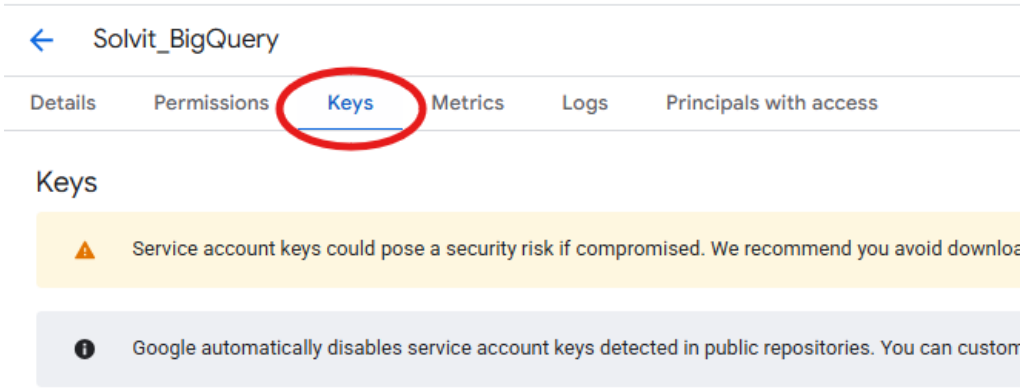
Click on Continue.
Click Done.



On the next screen, you should now see an option to Create Key. If not, click on the email link of the service account.



Go to the “Keys” tab



Click “ADD KEY” > “Create new key”

Key type: Choose JSON

Click Create

The JSON file will immediately download.

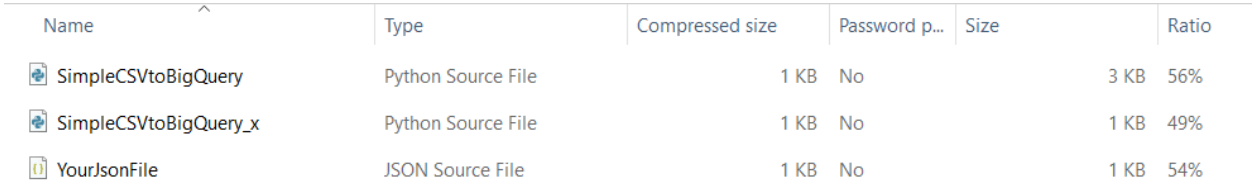
This file contains a private key — treat it like a password. Do not upload it to GitHub or cloud storage without encryption.

Store your JSON file in the application directory

Your JSON file name will be a combination of your team name and alpha-numeric digits, for example scs-lg-solvit-1234abcd5e.json.

Replace the filename with “YourJsonFile”. This is important, the filename needs to be exactly: YourJsonFile.json

Navigate to the Big Query folder - PATH\LG\ADS-B-Display\BigQuery



Name	Type	Compressed size	Password p...	Size	Ratio
SimpleCSVtoBigQuery	Python Source File	1 KB	No	3 KB	56%
SimpleCSVtoBigQuery_x	Python Source File	1 KB	No	1 KB	49%
YourJsonFile	JSON Source File	1 KB	No	1 KB	54%

Replace the existing YourJsonFile with the your new YourJsonFile.json key that was just created.