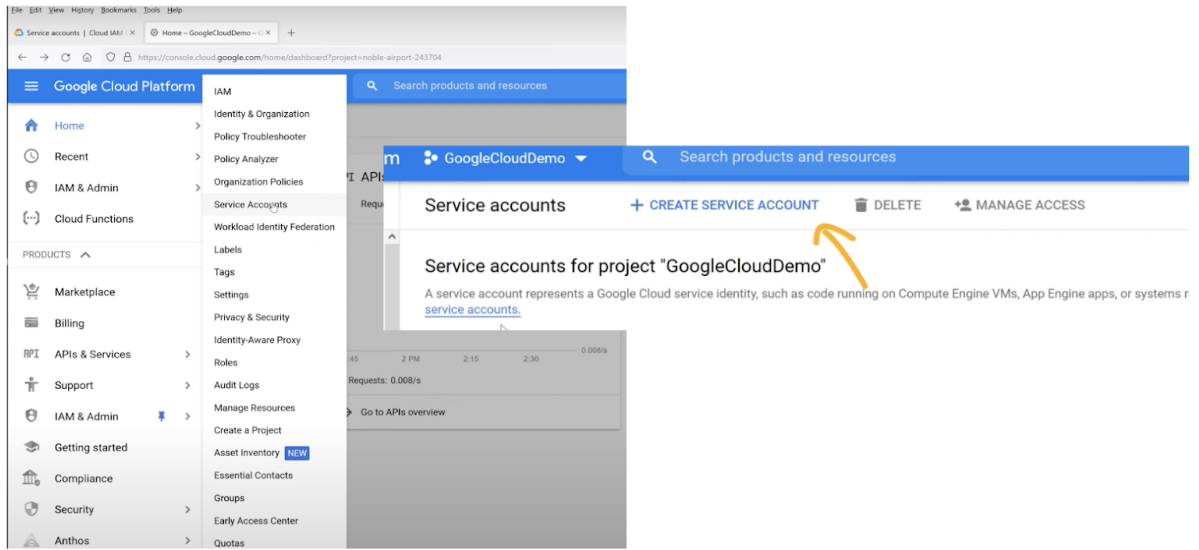


BigQuery Setup Instructions

1. Make sure you have a Gmail account set up .
2. Go to console.cloud.google.com. Click on the navigation (hamburger icon on upper left), then click on IAM & Admin. Under IAM & Admin click on services accounts and create a service account:




3. Next add name and description. Click create and continue:

1 Service account details

Service account name

Display name for this service account

Service account ID * ✕ ↻

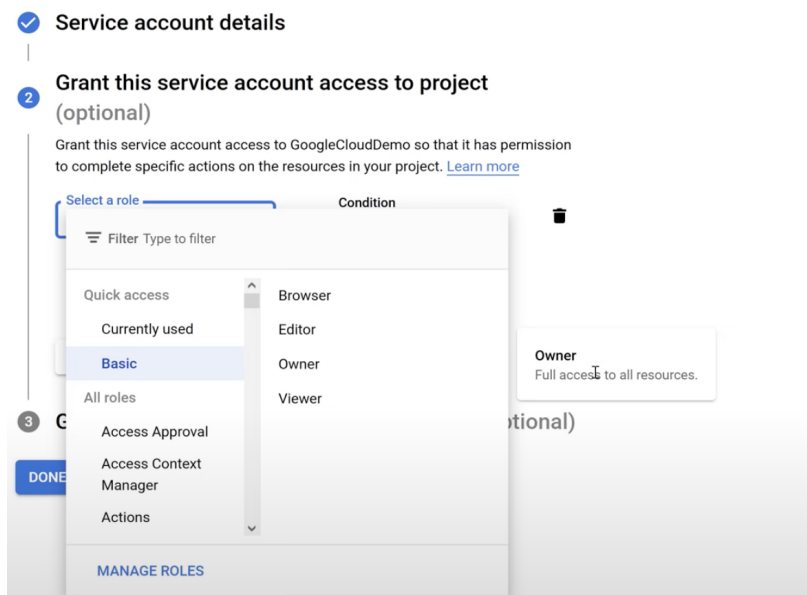
Email address: bigquery-tutorial-sp-admin@boreal-freedom-265422.iam.gserviceaccount.com 

Service account description

Describe what this service account will do

CREATE AND CONTINUE

1. Next click on basic, then owner, then continue and then done:



Next click on manage keys for your newly created service account:

Service accounts for project "My First Project"

A service account represents a Google Cloud service identity, such as code running on Compute Engine VMs, App Engine apps, or systems running outside Google. [Learn more about service accounts.](#)

Organization policies can be used to secure service accounts and block risky service account features, such as automatic IAM Grants, key creation/upload, or the creation of service accounts entirely. [Learn more about service account organization policies.](#)

Filter

Enter property name or value

<input type="checkbox"/>	Email	Status	Name ↑	Description
<input type="checkbox"/>	bigquery-tutorial@boreal-freedom-265422.iam.gserviceaccount.com	✓	bigquery_tutorial	tutorial ore
<input type="checkbox"/>	bigquery-tutorial-sp-admin@boreal-freedom-265422.iam.gserviceaccount.com	✓	bigquery_tutorial_sp_admin	big tut

- Manage details
- Manage permissions
- Manage keys
- View metrics
- View logs
- Disable
- Delete

Click on add and create keys:

← bigquery_tutorial_sp_admin

DETAILS PERMISSIONS KEYS METRICS LOGS

Keys



Service account keys could pose a security risk if compromised. We recommend you avoid downloading [Identity Federation](#). You can learn more about the best way to authenticate service accounts on Google

Add a new key pair or upload a public key certificate from an existing key pair.

Block service account key creation using [organization policies](#).
[Learn more about setting organization policies for service accounts](#)

ADD KEY ▾

Create new key

Upload existing key

Key creation date

Key expiration date

Select JSON and click create:

Create private key for "bigquery_tutorial_sp_admin"

Downloads a file that contains the private key. Store the file securely because this key can't be recovered if lost.

Key type

☒ JSON

Recommended

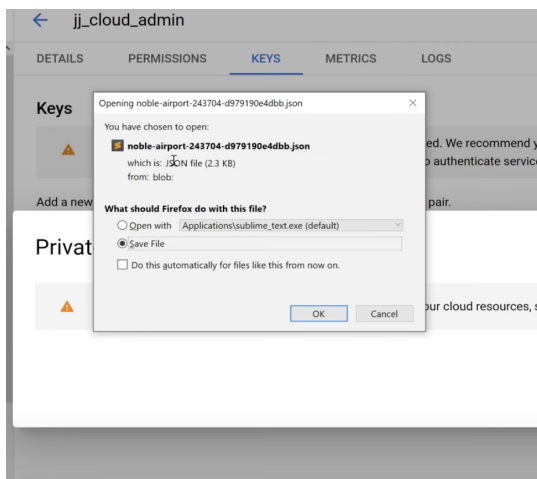
☐ P12

For backward compatibility with code using the P12 format

CANCEL

CREATE

Create JSON and save in project folder. You can now save the JSON to your computer. I recommend renaming the file to something easy to understand:



If you lose your key you can easily create a new one:

Keys



Service account keys could pose a security risk if compromised. We recommend you avoid downloading service account keys and instead use the [Workload Identity Federation](#). You can learn more about the best way to authenticate service accounts on Google Cloud [here](#).

Add a new key pair or upload a public key certificate from an existing key pair.

Block service account key creation using [organization policies](#).
[Learn more about setting organization policies for service accounts](#)

ADD KEY ▾

Create new key

Upload existing key

Key	Key creation date	Key expiration date	
d979190e4dbb3165e1f8f22e03e29eda5944cfa1	Jul 25, 2021	Jan 1, 10000	

To create a BigQuery client, create a new folder on your desktop called 'bigquery_tutorial'. Next, open a Jupyter notebook and save it in the 'bigquery_tutorial' folder. Also drag and drag the JSON private key file into the 'bigquery_tutorial' folder.

You can use the following code to create a client. In the first cell of your Jupyter notebook copy, paste and execute this command:

```
%pip install google-cloud-bigquery
```

In the subsequent cell you can paste the following to define your bigquery client:

```
import os
from google.cloud import bigquery
os.environ['GOOGLE_APPLICATION_CREDENTIALS'] = 'oreilly_demo_key.json'
client = bigquery.Client()
```

During the course you will learn how to access tables using this client!