CS356 -lab05:1g - Branden-Codd, 940428984

1. GCP
- No screenshots or observations

2. GCP Cloud Storage #1 (USGS)

- What roles are attached to the Compute Engine default service account?
  - editor
- Would they be sufficient for the VM to perform its functions?
  - yes
- What permissions are given by the default access scope to Cloud Storage?
  - Default: read-only access to Storage and Service Management, write access to Stackdriver Logging and Monitoring, read/write access to Service Control
- Would they be sufficient for the VM to perform its functions?
  - yes

3. Cloud Storage access scope

4. USGS data and setup

- What time did the latest earthquake happen?
    - `2021-02-10T23:20:13`
- What was the magnitude (mag)?
    - `2.6`
- Where was the place it happened?
   - `20 km NE of Skwentna, Alaska`

5. Python plotting code
- No screenshots or observations

6. Create and distribute earthquake image

- Take a screenshot that includes your project identifier and include it in your notebook.

← Object details   ⬇ DOWNLOAD   ✏ EDIT METADATA   :• EDIT PERMISSIONS   🗑 DELETE

Buckets > lab5_1g > earthquakes.png 🗐

Public access	Not public
Type	image/png
Size	311.2 KB
Created	Feb 10, 2021, 3:33:15 PM
Last modified	Feb 10, 2021, 3:33:15 PM
Hold status	None ✏
Retention policy	None
Encryption type	Google-managed key
Custom time	—
Public URL ❷	Not applicable
Authenticated URL ❷	https://storage.cloud.google.com/lab5_1g/earthquakes.png?authuser=1 🗐
URI ❷	gs://lab5_1g/earthquakes.png 🗐

Earthquakes 2021-02-03 to 2021-02-10
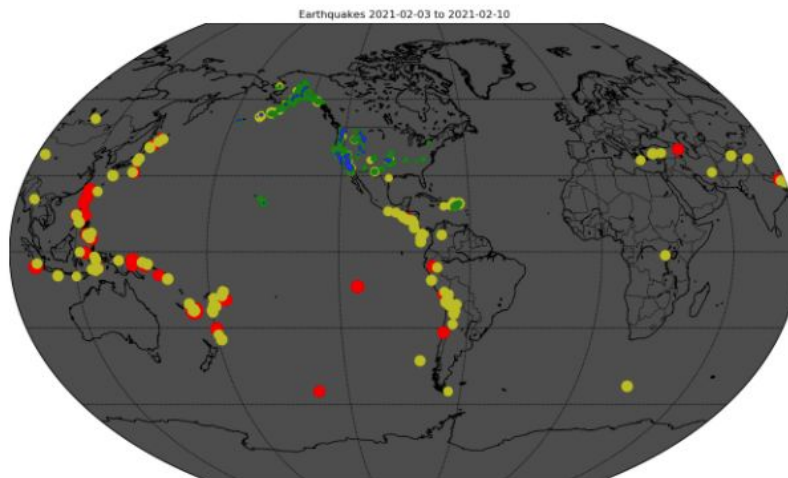
7. GCP Cloud Storage #2 (IAM roles)
- No screenshots or observations

8. Create service account

- No screenshots or observations

9. Service account roles (Compute)

- What is the exact error message that is returned?
  - `ERROR: (gcloud.compute.instances.list) Some requests did not succeed:`
  - `- Required 'compute.zones.list' permission for 'projects/cs356-w21-branden-codd'`
- What role needs to be added to the service account's permissions for the VM to have access to list the project's Compute Engine instances?
  - Compute admin needed to be added

```
coddb@gsc:~$ gcloud compute instances list
NAME       ZONE        MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERNAL_IP     STATUS
gsc        us-west1-b  f1-micro                   10.138.0.16  34.105.52.33    RUNNING
lab05-1g   us-west1-b  f1-micro                   10.138.0.15  34.83.149.178   RUNNING
coddb@gsc:~$ []
```

10. Service account roles (Storage)

- What is the exact error message that is returned?
  - AccessDeniedException: 403 gcs-lab@cs356-w21-branden-codd.iam.gserviceaccount.com does not have storage.objects.create access to lab5_1g/moonquakes.png.

- What role needs to be added to the service account's permissions for the VM to have access to add an object to the storage bucket?
  - Storage object admin

```
coddb@gsc:~$ gsutil cp moonquakes.png gs://lab5_1g/
Copying file://moonquakes.png [Content-Type=image/png]...
/ [1 files][311.2 KiB/311.2 KiB]
Operation completed over 1 objects/311.2 KiB.
coddb@gsc:~$
```

11. GCP Cloud Storage #3 (Python)

- No screenshots or observations

12. Python storage code

- No screenshots or observations

13. View object