

Big Data Graded Assignment 1

❖ Step 1 : Starting VM lab in Qwiklabs

← Creating a Virtual Machine

End Lab

00:10:38

40 minutes 1 Credit ★★★★★ Rate Lab

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

[Open Google Console](#)

Username

student-83-33941328275

Password

HidzUfRtphPk


GCP Project ID

qwiklabs-gcp-00-7af660r

Student Resources

[Create a Virtual Machine, GCP Essentials](#)

GSP001

 Google Cloud Self-Paced Labs

Overview

Compute Engine lets you create virtual machines that run different operating systems, including multiple flavors of Linux (Debian, Ubuntu, Suse, Red Hat, CoreOS) and Windows Server, on Google infrastructure. You can run thousands of virtual CPUs on a system that

GSP001

10/100

Overview

Setup

Task 1. Create a new instance from the Cloud Console

Task 2. Install an NGINX web server

Task 3. Create a new instance with gcloud

Task 4. Test your knowledge

Congratulations!

❖ Step 2 : Create a VM instance

Google Cloud

qwiklabs-gcp-00-7af660cc0d05

Search (/) for resources, docs, products, and more

Search

7

?

⋮

S

Compute Engine

Virtual machines

VM instances

Instance templates

Sole-tenant nodes

Machine images

TPUs

Committed use discounts

Reservations

Migrate to Virtual Machin...

Storage

Disks

Snaphshots

Marketplace

Release Notes

<1

VM instances

[CREATE INSTANCE](#) [IMPORT VM](#) [REFRESH](#)

[LEARN](#) [HELP ASSISTANT](#)

INSTANCES

OBSERVABILITY

INSTANCE SCHEDULES

VM instances

Filter Enter property name or value

<input type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✓	instance-2	us-central1-f			10.128.0.3 (nic0)	34.132.22.179 (nic0)	SSH ▾ ⋮

Related actions

[Explore Backup and DR](#) NEW
Back up your VMs and set up disaster recovery

[Monitor VMs](#)
View outlier VMs across metrics like CPU and network

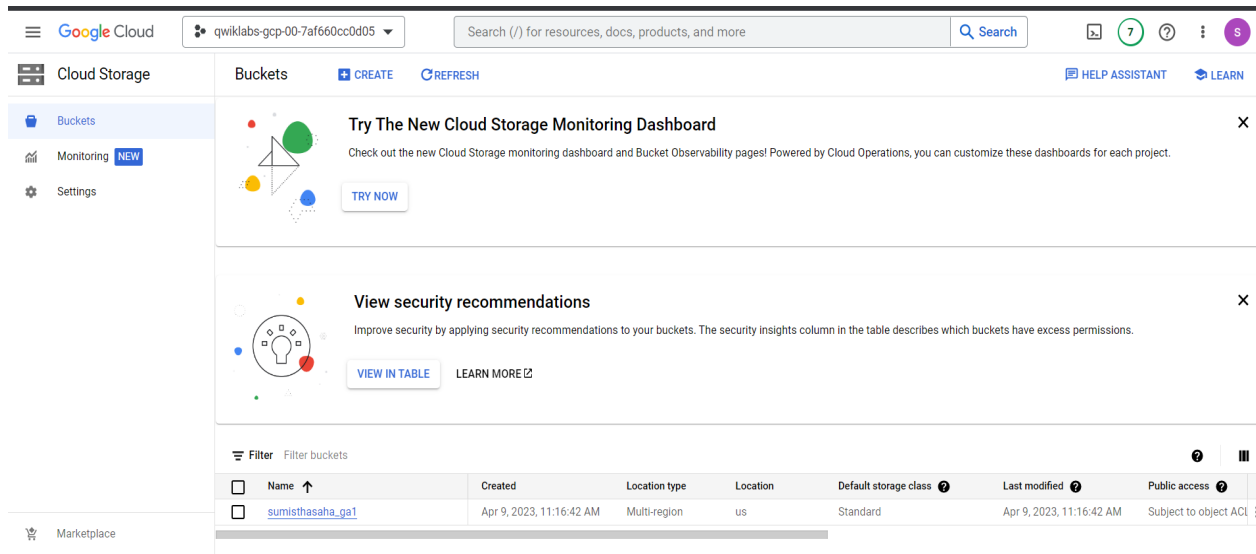
[Explore VM logs](#)
View, search, analyze, and download VM instance logs

[Set up firewall rules](#)
Control traffic to and from a VM instance

[Patch management](#)
Schedule patch updates and view patch compliance on VM instances

[Load balance between VMs](#) ⌵
Set up Load Balancing for your applications as your traffic and users grow

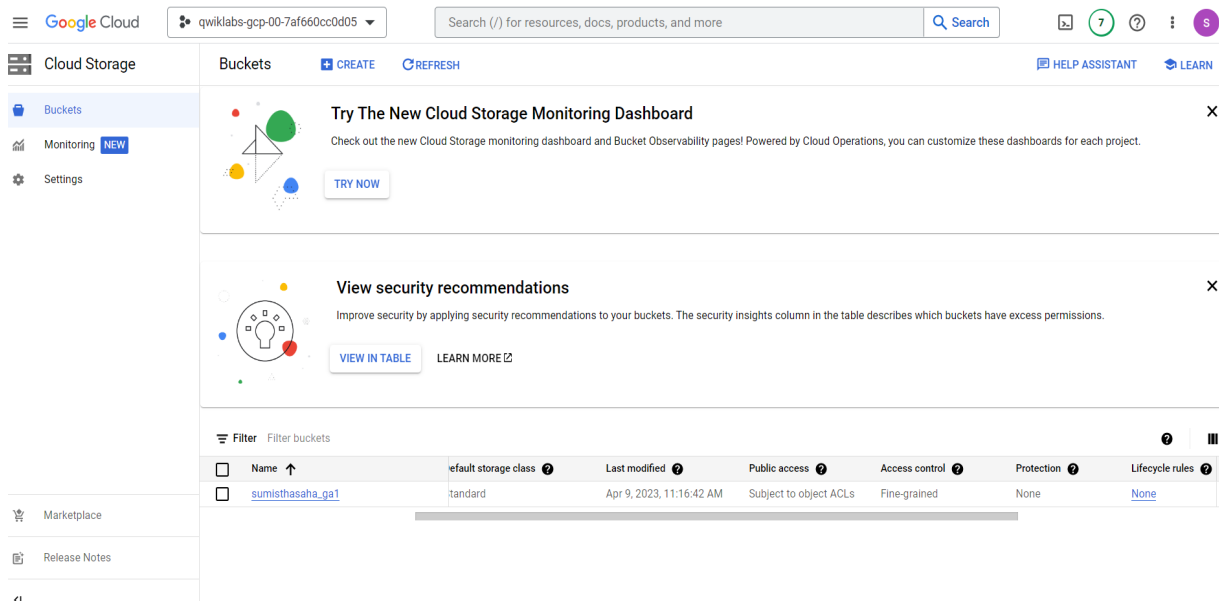
❖ Step 3 : Create a Bucket



The screenshot shows the Google Cloud Storage Buckets page. The left sidebar contains 'Cloud Storage', 'Buckets', 'Monitoring', and 'Settings'. The main content area has a 'Buckets' header with 'CREATE' and 'REFRESH' buttons. Below the header are two cards: 'Try The New Cloud Storage Monitoring Dashboard' and 'View security recommendations'. At the bottom is a table of buckets.

Name	Created	Location type	Location	Default storage class	Last modified	Public access
sumisthasaha_ga1	Apr 9, 2023, 11:16:42 AM	Multi-region	us	Standard	Apr 9, 2023, 11:16:42 AM	Subject to object ACL

❖ Step 4 : Bucket with public access



The screenshot shows the Google Cloud Storage Buckets page with the same layout as Step 3. The table now includes additional columns: 'Default storage class', 'Access control', 'Protection', and 'Lifecycle rules'.

Name	Default storage class	Last modified	Public access	Access control	Protection	Lifecycle rules
sumisthasaha_ga1	standard	Apr 9, 2023, 11:16:42 AM	Subject to object ACLs	Fine-grained	None	None

❖ Step 5 : Upload text file under the bucket

The screenshot shows the Google Cloud Storage interface. The left sidebar contains the navigation menu with options: Buckets, Monitoring (NEW), and Settings. The main content area is titled 'Bucket details' for the bucket 'sumisthasaha_ga1'. It displays the bucket's location (us), storage class (Standard), public access (Subject to object ACLs), and protection (None). Below this, there are tabs for OBJECTS, CONFIGURATION, PERMISSIONS, PROTECTION, LIFECYCLE, and OBSERVABILITY (NEW). The 'OBJECTS' tab is active, showing a list of objects. A table lists the objects with columns: Name, Size, Type, Created, Storage class, Last modified, Public access, and Version history. One object, 'week1.txt', is listed with a size of 33 B, type of text/plain, and created on Apr 9, 2023, at 11:16:54 AM. The public access is indicated as 'Public to internet' with a warning icon. The bottom of the page shows the Marketplace and Release Notes links.

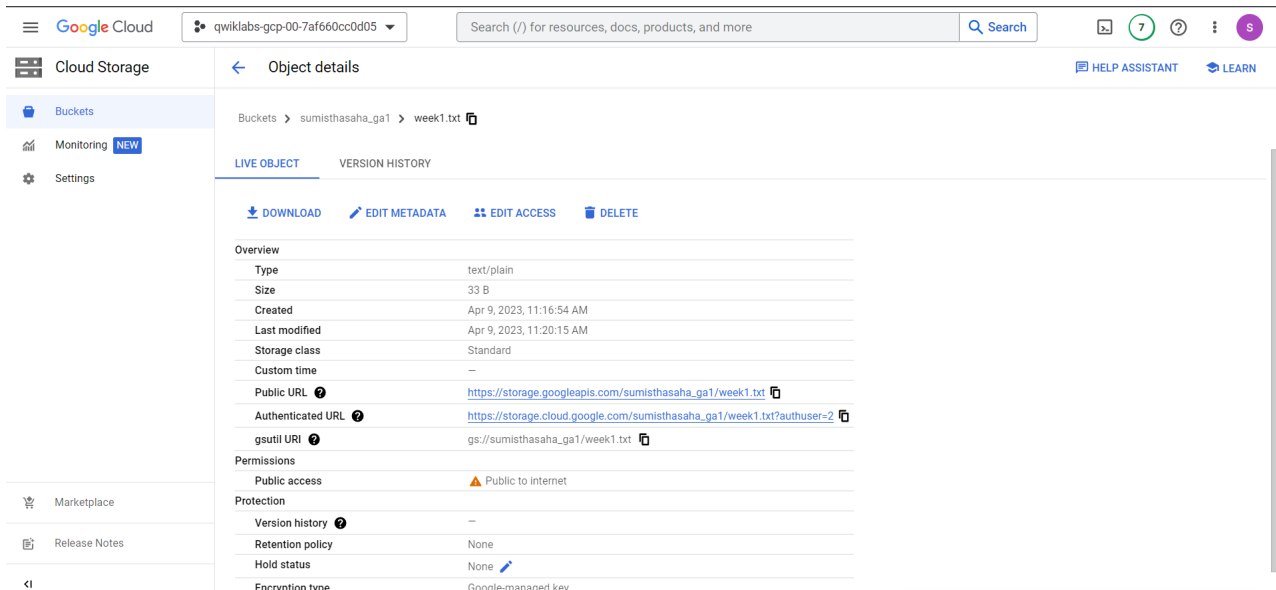
Name	Size	Type	Created	Storage class	Last modified	Public access	Version history
week1.txt	33 B	text/plain	Apr 9, 2023, 11:16:54 AM	Standard	Apr 9, 2023, 11:20:15 AM	Public to internet	Copy URL

❖ Step 6 : Giving public access to the file

The screenshot shows the Google Cloud Storage interface with the 'Edit access' dialog open for the file 'week1.txt'. The dialog has a title 'Edit access' and a subtitle 'Object name: week1.txt'. It contains a warning message: 'This object is public and can be accessed by anyone on the internet. To remove public access, search for and remove all public entries from the object's permissions.' Below this, there is a note: 'If you don't rely on individual object-level access, you can start managing all access uniformly at the bucket-level. Go to the bucket's Permissions tab to get started. Learn more'. The dialog lists five entities with their names and access levels. The entities are: Entity 1 (Public, allUsers, Reader), Entity 2 (Project, owners-30577710534, Owner), Entity 3 (Project, editors-30577710534, Owner), Entity 4 (Project, viewers-30577710534, Reader), and Entity 5 (Public, allUsers, Reader). There is an '+ ADD ENTRY' button at the bottom of the dialog. The background shows the bucket details for 'sumisthasaha_ga1' with the 'week1.txt' file listed.

Entity	Name	Access
Entity 1 *	Public	Reader
Entity 2 *	Project	Owner
Entity 3 *	Project	Owner
Entity 4 *	Project	Reader
Entity 5 *	Public	Reader

❖ Step 7 : Public url of the file

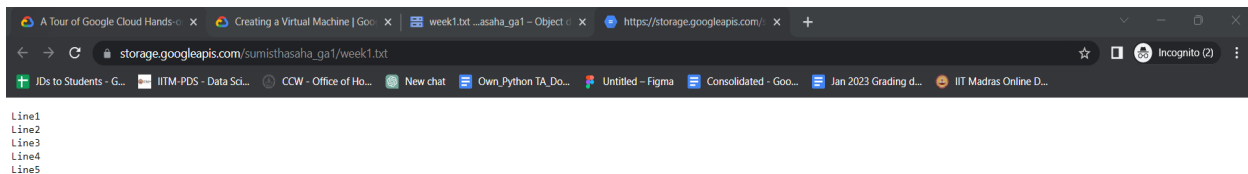


The screenshot shows the Google Cloud Storage 'Object details' page for a bucket named 'sumisthasaha_ga1' and an object named 'week1.txt'. The page has a left sidebar with navigation options: Buckets, Monitoring (marked as NEW), Settings, Marketplace, and Release Notes. The main content area has tabs for 'LIVE OBJECT' and 'VERSION HISTORY'. Below the tabs are action buttons: DOWNLOAD, EDIT METADATA, EDIT ACCESS, and DELETE. The 'Overview' section contains a table with the following details:

Overview	
Type	text/plain
Size	33 B
Created	Apr 9, 2023, 11:16:54 AM
Last modified	Apr 9, 2023, 11:20:15 AM
Storage class	Standard
Custom time	—
Public URL	https://storage.googleapis.com/sumisthasaha_ga1/week1.txt
Authenticated URL	https://storage.cloud.google.com/sumisthasaha_ga1/week1.txt?authuser=2
gsutil URI	gs://sumisthasaha_ga1/week1.txt

Below the overview table, there are sections for 'Permissions' and 'Protection'. The 'Permissions' section shows 'Public access' as 'Public to internet'. The 'Protection' section shows 'Version history' as '—', 'Retention policy' as 'None', 'Hold status' as 'None', and 'Encryption type' as 'Google-managed key'.

❖ Step 8 : Opening text file from the public url



The screenshot shows a web browser window with multiple tabs. The active tab is 'week1.txt - asaha_ga1 - Object' with the URL 'https://storage.googleapis.com/sumisthasaha_ga1/week1.txt'. The browser displays the content of the text file, which consists of five lines of text, labeled 'Line1' through 'Line5' on the left side of the page.

❖ Step 9 : Python code to count no of lines and output file with correct no of lines



The screenshot shows a terminal window titled 'SSH-in-browser' with a URL bar at the top: 'ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-00-7af660cc0d05/zones/us-central1-f/instances/instance-2?authuser=2&...'. The terminal shows the following commands and output:

```
student-03-339413282751@instance-2:~$ cat week1.py
import requests

response=requests.get('https://storage.googleapis.com/sumisthasaha_ga1/week1.txt')
x = response.text
count = 0
for i in x.split("\n"):
    count += 1
f = open('output.txt', 'w')
f.write('Total no of lines : ' + str(count) + '\n')
f.close()
student-03-339413282751@instance-2:~$ python3 week1.py
student-03-339413282751@instance-2:~$ cat output.txt
Total no of lines : 5
student-03-339413282751@instance-2:~$
```