

Google Cloud Storage [GCS]

There are various types of storages available in GCP

1. Object Storage
 - a. Cloud Storage
2. Instance Storage
 - a. Persistent Disks
3. Database Storage
 - a. SQL
 - b. NoSQL
 - c. Analytic

GCS:

This is object storage which is best suited for

- a. Structured
- b. Unstructured
- c. Archived data
- d. Storing Intermediate results

It is having Global access, web access

Terminology/Organization:

- Global namespace – This should be unique across GCP, as it is accessed by url
- Buckets – We can have multiple buckets
- Folders - We can create Folders inside buckets
- Objects – we can create Objects inside folder or Buckets

Storage Classes:

Based on the utilization /frequency we can choose storage classes

- Standard – if we use of frequent basis
- Near line – Used monthly once
- Cold line - Used yearly once
- Archive - More than an year or don't use at all

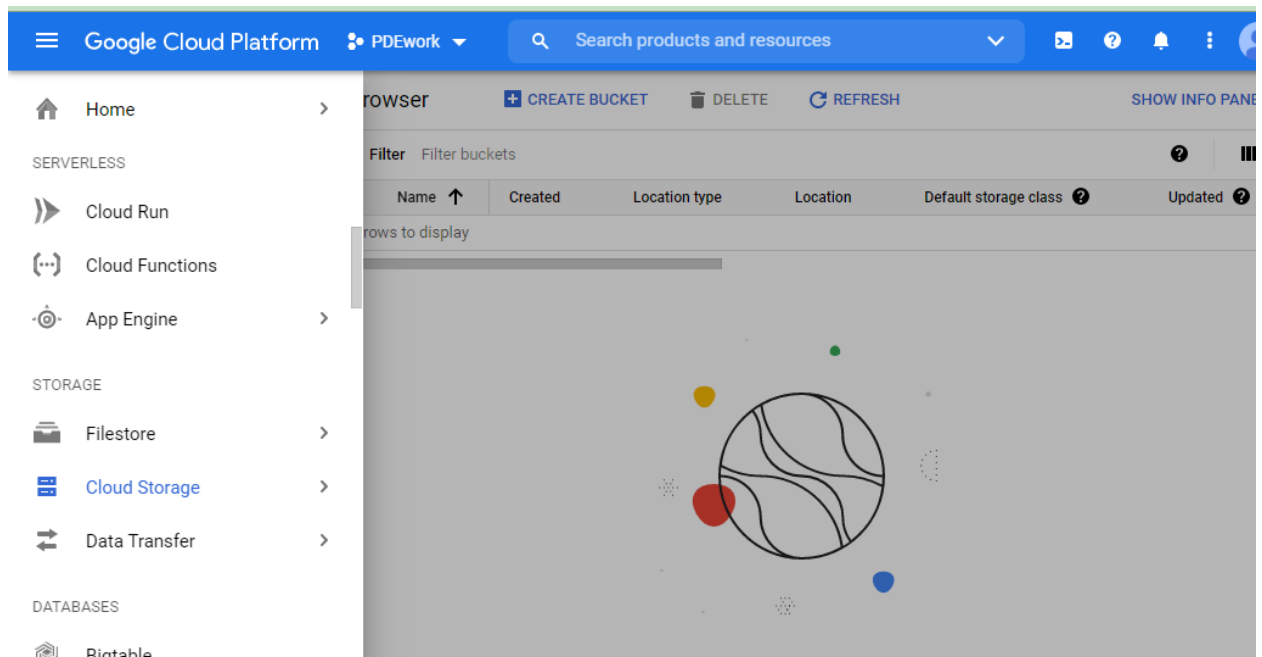
Redundancy/Regions:

- Region
- Dual Region
- Multiple Regions

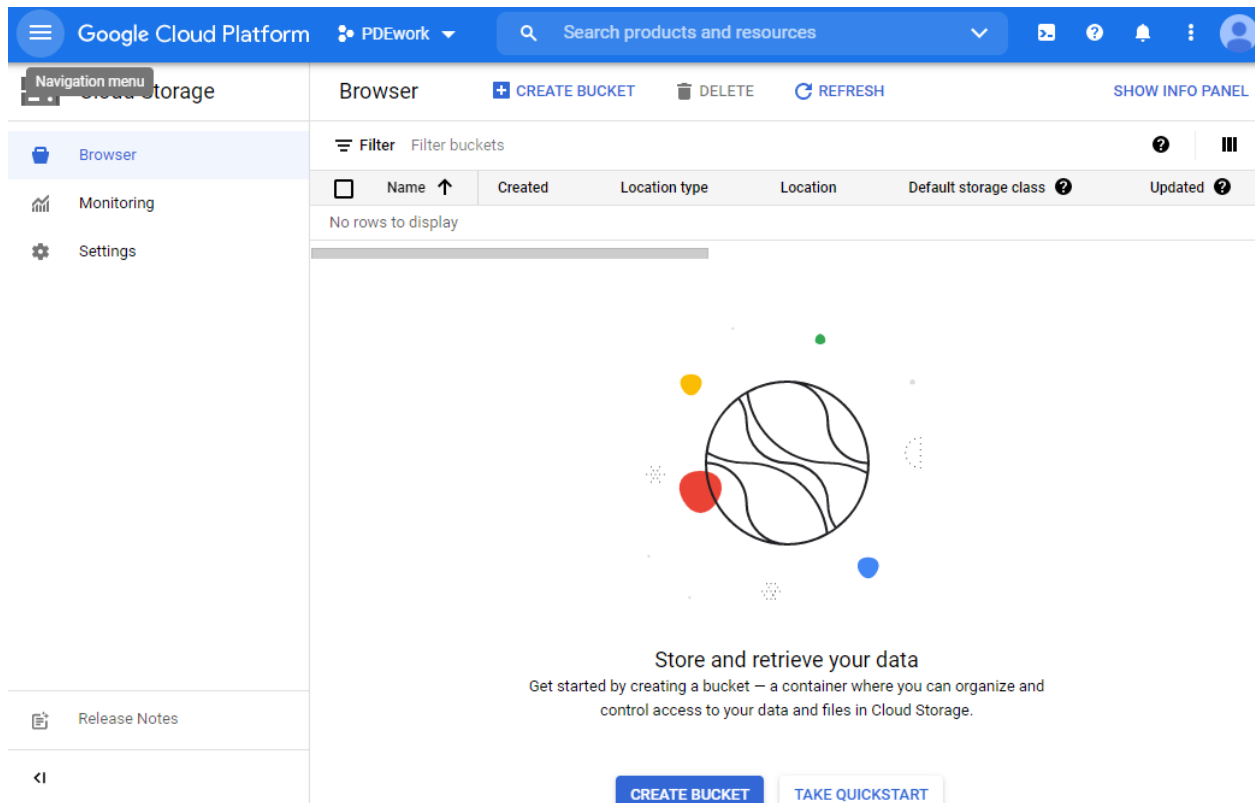
Creating Bucket:

Creating from Console:

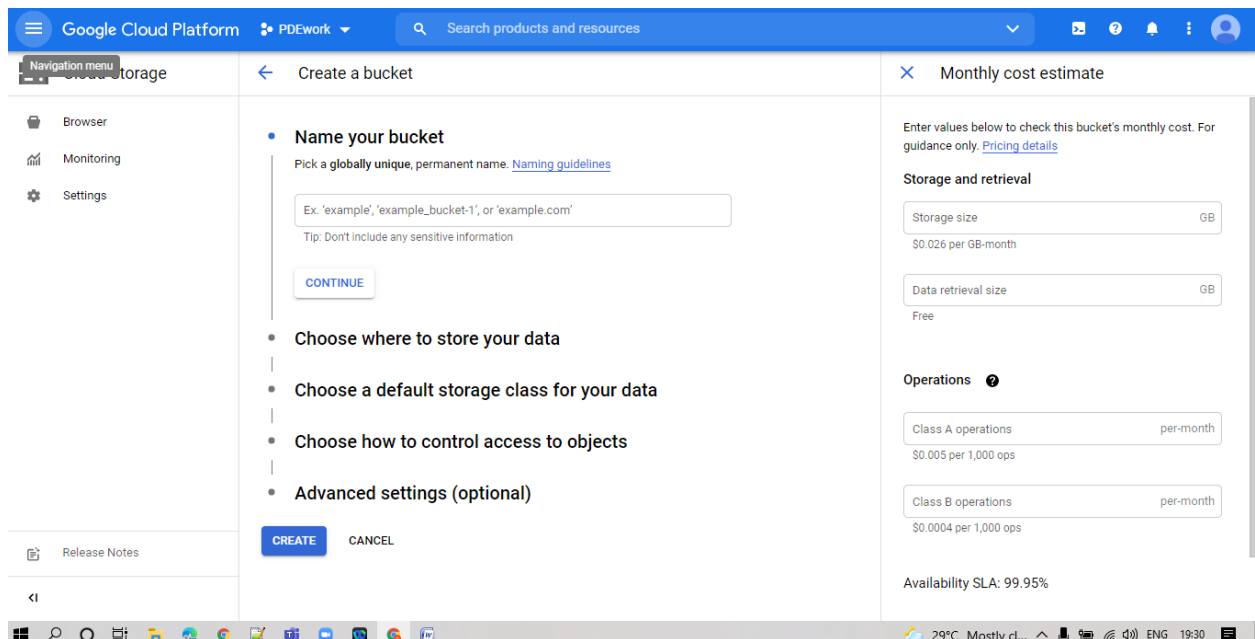
Go to GCP console → Left Panel → select Cloud Storage



This will redirect to below page



Select create Bucket and choose options accordingly



Google Cloud Platform

PDEwork

Search products and resources

Cloud Storage

Create a bucket

Browser

Monitoring

Settings

Release Notes

<1

✓

Name your bucket

Pick a globally unique, permanent name. [Naming guidelines](#)

pdework-bucket1

Tip: Don't include any sensitive information

CONTINUE

•

Choose where to store your data

This permanent choice defines the geographic placement of your data and affects cost, performance, and availability. [Learn more](#)

Location type

☐ Multi-region

Highest availability across largest area

☐ Dual-region

High availability and low latency across 2 regions

☒ Region

Lowest latency within a single region

Location

us-west1 (Oregon)

Google Cloud Platform

PDEwork

Search products and resources

Navigation menu

Cloud Storage

Create a bucket

Browser

Monitoring

Settings

✓

Name your bucket

✓

Choose where to store your data

•

Choose a default storage class for your data

A storage class sets costs for storage, retrieval, and operations. Pick a default storage class based on how long you plan to store your data and how often it will be accessed. [Learn more](#)

☒ Standard

Best for short-term storage and frequently accessed data

☐ Nearline

Best for backups and data accessed less than once a month

☐ Coldline

Best for disaster recovery and data accessed less than once a quarter

☐ Archive

Best for long-term digital preservation of data accessed less than once a year

CONTINUE

Google Cloud Platform

PDEwork

Search products and resources

Cloud Storage

Browser

Monitoring

Settings

Create a bucket

Choose a default storage class for your data

Choose how to control access to objects

Prevent public access

Enforce public access prevention on this bucket

Access control

Uniform

Fine-grained

CONTINUE

Advanced settings (optional)

We have multiple options to load data

Upload files: Click on Upload files → browse file

Google Cloud Platform

PDEwork

Search products and resources

REFRESH

Cloud Storage

Browser

Monitoring

Settings

Bucket details

pdework-bucket1

OBJECTS

CONFIGURATION

PERMISSIONS

RETENTION

LIFECYCLE

Buckets > pdework-bucket1

UPLOAD FILES

UPLOAD FOLDER

CREATE FOLDER

MANAGE HOLDS

DOWNLOAD

DELETE

Filter by name prefix only

Filter

Filter objects and folders

	Name	Size	Type	Created time	Storage class	Last modified	Public access	Encryption
No rows to display								

Google Cloud Platform

PDework

Search products and resources

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Buckets > pdework-bucket1

UPLOAD FILES

UPLOAD FOLDER

CREATE FOLDER

MANAGE HOLDS

DOWNLOAD

DELETE

Filter by name prefix only

Filter

Filter objects and folders

<input type="checkbox"/>	Name	Size	Type	Created time	Storage class	
<input type="checkbox"/>	AirLine.csv	205.8 KB	application/vnd.ms-excel	Aug 3, 2021, 7:...	Standard	

Cloud Storage

Browser

Monitoring

Settings

Bucket details

REFRESH

pdework-bucket1

OBJECTS

CONFIGURATION

PERMISSIONS

RETENTION

LIFECYCLE

Overview

Created

August 3, 2021 at 7:43:29 PM GMT+5

Updated

August 3, 2021 at 7:43:29 PM GMT+5

Location type

Region

Location

us-west1 (Oregon)

Default storage class

Standard

Requester pays

OFF

Labels

purpose: pde-practise

Cloud Console URL

https://console.cloud.google.com/storage/browser/pdework-bucket1

gsutil URI

gs://pdework-bucket1

Permissions

Access control

Uniform

Public access

Not public

Creating bucket from cloud terminal

Go to Cloud terminal

The screenshot shows the Google Cloud Platform interface. The top navigation bar includes the Google Cloud Platform logo, a dropdown menu for 'PDEwork', a search bar, and a notification icon. The left sidebar shows the 'Cloud Storage' section with options for 'Browser', 'Monitoring', 'Settings', and 'Release Notes'. The main content area displays the 'Browser' view for Cloud Storage, showing a table of buckets. The table has columns for 'Name', 'Created', 'Location type', 'Location', 'Default storage class', and 'Updated'. One bucket, 'pdework-bucket1', is listed. Below the table, there is a 'CLOUD SHELL' section with a terminal window. The terminal shows the following commands and output:

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to astute-zephyr-321813.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil ls
gs://pdework-bucket1/
gs://pdework-bucket2/
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil ls
gs://pdework-bucket1/
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil mb pdework-bucket2
CommandException: "mb" command does not support "file://" URLs. Did you mean to use a gs:// URL?
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil mb gs://pdework-bucket2
Creating gs://pdework-bucket2/...
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $
```

Command:

gsutil ls → This will display existing buckets

gsutil mb gs://<BUCKET_NAME> → This will create bucket

The screenshot shows the Google Cloud Platform interface after the bucket creation. The top navigation bar is the same. The left sidebar shows the 'Cloud Storage' section. The main content area displays the 'Browser' view for Cloud Storage, showing a table of buckets. The table has columns for 'Name', 'Created', 'Location type', 'Location', 'Default storage class', and 'Updated'. Two buckets are listed: 'pdework-bucket1' and 'pdework-bucket2'. The 'pdework-bucket2' row is highlighted. Below the table, there is a 'CLOUD SHELL' section with a terminal window. The terminal shows the following commands and output:

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to astute-zephyr-321813.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil ls
gs://pdework-bucket1/
gs://pdework-bucket2/
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil ls
gs://pdework-bucket1/
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil mb pdework-bucket2
CommandException: "mb" command does not support "file://" URLs. Did you mean to use a gs:// URL?
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $ gsutil mb gs://pdework-bucket2
Creating gs://pdework-bucket2/...
saiprabhanj_turaga@cloudshell:~ (astute-zephyr-321813) $
```