

How to create:

- 1) New Storage Bucket
- 2) Folders – 3
- 3) Loading data into GCP

What is a storage bucket?

Containers that hold your data. Everything stored in Google Cloud Storage must be contained in a bucket. You can create multiple buckets in your project, but you cannot nest buckets like you may do so in directories and folders (**Key Terms | Cloud Storage |, n.d.**). There are few naming conventions encouraged to follow. It can be given a unique name and a geographic location where the bucket along with its contents are stored. Once created they cannot be changed but instead you can delete and recreate it (**Key Terms | Cloud Storage |, n.d.**).

What is a folder in GCP?

A folder in GCP is used to contain projects, folders, or both for each department in an organization. They will contain resources only associated with that department. The figure below helps better understand the concept of folder (**Creating and Managing Folders | Resource Manager Documentation |, n.d.**).

Take an organization, which consists of 2 departments and some shared infrastructure. These will be my folders. Dept Y has 2 teams doing their own projects and would require only certain resources. Team B is working on developing two products and product 1 has three stages associated with it (**Creating and Managing Folders | Resource Manager Documentation |, n.d.**). The individuals working for team b building product 1 have been separated into development, test, and production projects. Development team might require certain resources that are not needed by test and production team. Folders make it easier to organize teams working on different stages of a project and provide only resources needed by them (**Creating and Managing Folders | Resource Manager Documentation |, n.d.**).

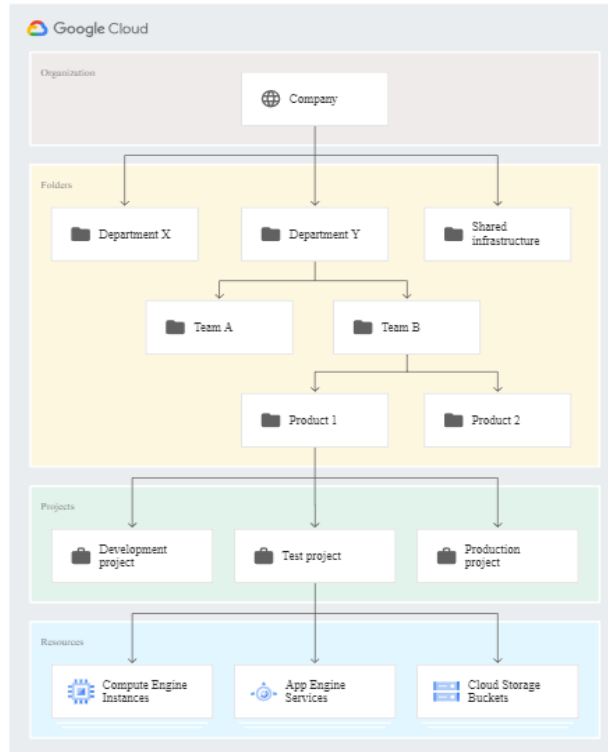
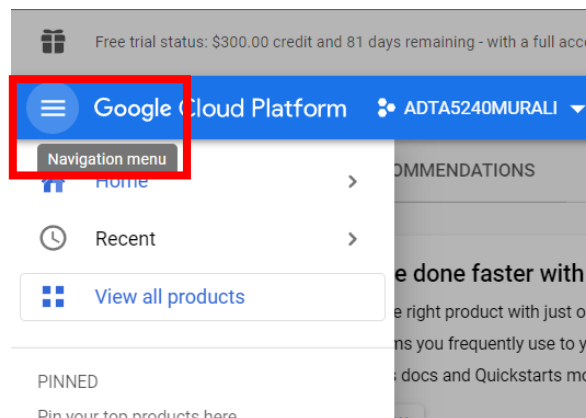


Image source: <https://cloud.google.com/resource-manager/docs/creating-managing-folders>

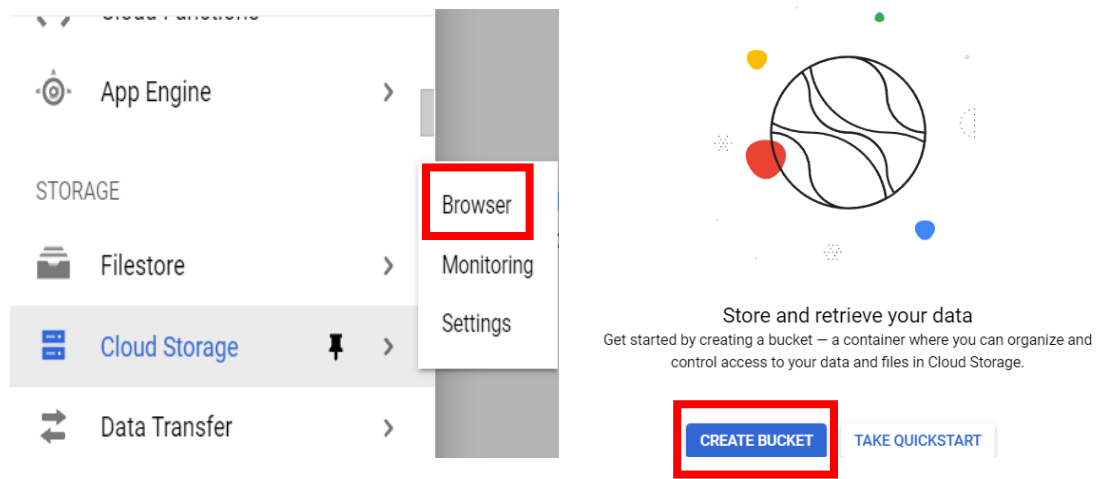
Now that we understood the basic terms and its functionality. Let us begin creating them on GCP.

Creating storage buckets:

- ⇒ Log into your GCP account and click on “Go to Console”. It should open the front page which will have basic information about your project.
- ⇒ Click on the three horizontal lines on the top left corner of the console (location shown below).



- ⇒ Scroll down to the STORAGE section and under “Cloud Storage”, select “Browser”. It should open a window on the console, click on “Create Bucket”.



- ⇒ Most important step of this process. Make sure to NOT CLICK ON CREATE without filling in all the correct information as they cannot be changed later. Please follow the naming convention. Your bucket name must have no spaces and avoid using hyphen or any special character as it may become difficult to access it through Linux.

A screenshot of the 'Create a bucket' form in the Google Cloud Platform console. The form is titled 'Name your bucket' and includes a text input field for the bucket name. Below this, there are sections for 'LABELS (OPTIONAL)', 'Choose where to store your data', 'Choose a default storage class for your data', 'Choose how to control access to objects', and 'Choose how to protect object data'. At the bottom, there are 'CREATE' and 'CANCEL' buttons.

TIPS to fill out information:

- Name of bucket – bucone
- Where to store data – Multiregional (Default), location : US
- Storage class – Standard (Default)
- Control access to objects – Fine grained

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Cloud Storage

Browser

Monitoring

Settings

Bucket details

bucone

Location	Storage class	Public access	Protection
us (multiple regions in United States)	Standard	Subject to object ACLs	None

OBJECTS CONFIGURATION PERMISSIONS PROTECTION LIFECYCLE

Buckets > bucone

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 ?	Storage class	Last modified
No rows to display						

Creating Folders:

⇒ Now let us create folders. Click on “CREATE FOLDER” as shown below.

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bucone

Location	Storage class	Public access	Protection
us (multiple regions in United States)	Standard	Subject to object ACLs	None

OBJECTS CONFIGURATION PERMISSIONS PROTECTION LIFECYCLE

Buckets > bucone

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 ?	Storage class	Last modified
No rows to display						

⇒ Create 3 folders namely – “data”, “logs” and “outputs”

Create folder

Name *
data

CANCEL

CREATE

⇒ It should display all the folders.

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Search Products, resource

← Bucket details

bucone

Location: us (multiple regions in United States) | Storage class: Standard | Public access: Subject to object ACLs | Protection: None

OBJECTS | CONFIGURATION | PERMISSIONS | PROTECTION | LIFECYCLE

Buckets > bucone

UPLOAD FILES | UPLOAD FOLDER | CREATE FOLDER | MANAGE HOLDS | DOWNLOAD | DELETE

Filter by name prefix only | Filter objects and folders

<input type="checkbox"/>	Name	Size	Type	Created ?	Storage class
<input type="checkbox"/>	data/	—	Folder	—	—
<input type="checkbox"/>	logs/	—	Folder	—	—
<input type="checkbox"/>	outputs/	—	Folder	—	—

⇒ Uploading data into the bucket. You need to download userdata.csv and weblog.csv available.

⇒ Click on the “data” folder and then click on “upload files”.

Loding data:

Bucket details

bucone

Location: us (multiple regions in United States) | Storage class: Standard | Public access: Subject to object ACLs | Protection: None

OBJECTS | CONFIGURATION | PERMISSIONS | PROTECTION | LIFECYCLE

Buckets > bucone > data

UPLOAD FILES | UPLOAD FOLDER | CREATE FOLDER | MANAGE HOLDS | DOWNLOAD | DELETE

Filter by name prefix only | Filter objects and folders | Show deleted data

<input type="checkbox"/>	Name	Size	Type	Created	Storage class	Last modified	Public access
No rows to display							

⇒ This should what your set up should look like after uploading the data.

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Cloud Storage | Bucket details

bucone

Location: us (multiple regions in United States) | Storage class: Standard | Public access: Subject to object ACLs | Protection: None

OBJECTS | CONFIGURATION | PERMISSIONS | PROTECTION | LIFECYCLE

Buckets > bucone > data

UPLOAD FILES | UPLOAD FOLDER | CREATE FOLDER | MANAGE HOLDS | DOWNLOAD | DELETE

Filter by name prefix only | Filter objects and folders | Show deleted data

<input type="checkbox"/>	Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption	Retention expiration date	Holds
<input type="checkbox"/>	userdata.csv	162.3 KB	application/vnd.ms-excel	Feb 3, 2022, ...	Standard	Feb 3, 2022, ...	Not public	—	Google-managed key	—	None
<input type="checkbox"/>	weblog.csv	5 MB	application/vnd.ms-excel	Feb 3, 2022, ...	Standard	Feb 3, 2022, ...	Not public	—	Google-managed key	—	None

References

Creating and managing Folders | Resource Manager Documentation |. (n.d.). Google Cloud. Retrieved February 3, 2022, from <https://cloud.google.com/resource-manager/docs/creating-managing-folders>

Key terms | Cloud Storage |. (n.d.). Google Cloud. Retrieved February 3, 2022, from <https://cloud.google.com/storage/docs/key-terms#:~:text=Buckets%20are%20the%20basic%20containers,folders%2C%20you%20cannot%20nest%20buckets>.