

Goggle cloud platform lab 2

Deploy your static website on Goggle Cloud
(Cloud Storage)

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Guidelines

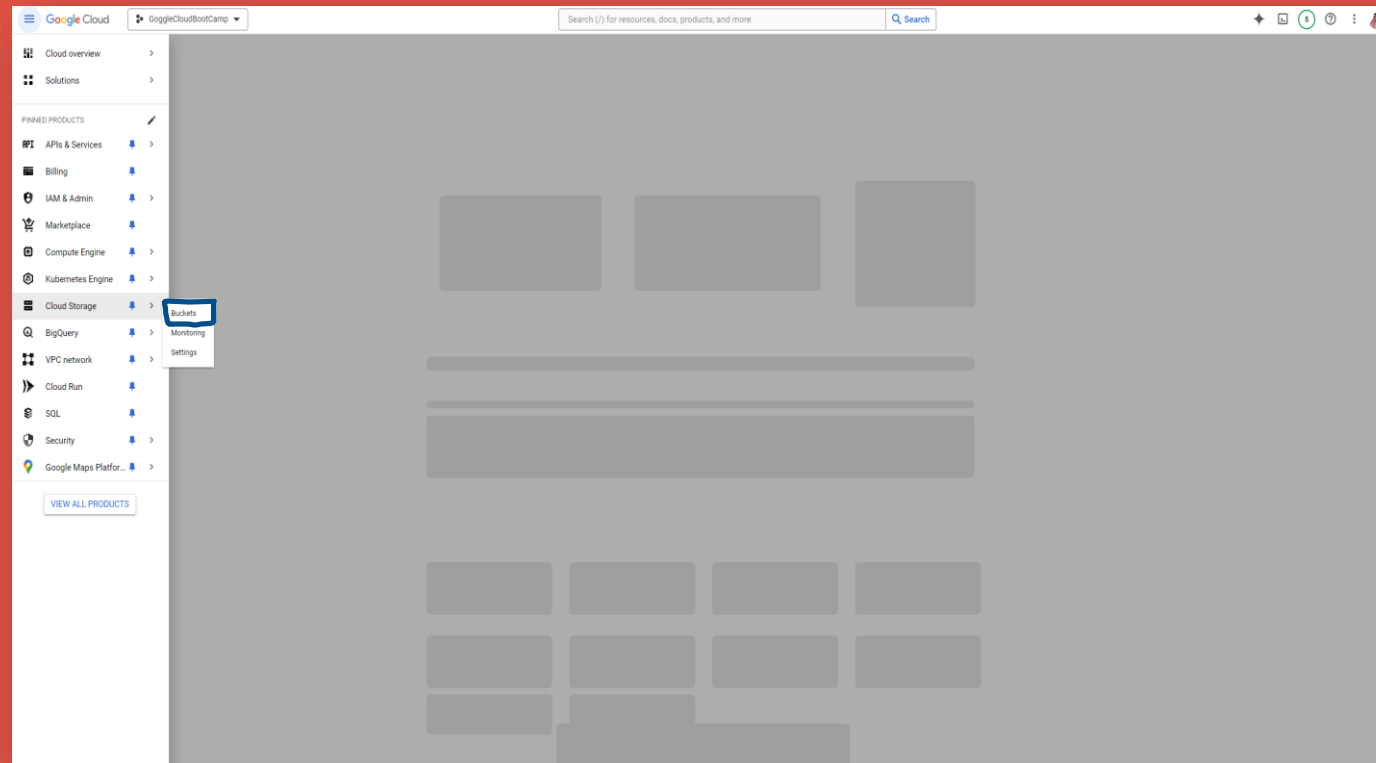


- Guidelines:
- First make your own GCP account.
- Second , after you make your account go to cloud storage and create your first bucket .
- Third upload your website and enable public access.

Hands-on-deck



- Bucket settings:
- Here you make your first bucket.



Bucket settings



- And click on create.

The screenshot shows the Google Cloud Buckets page. At the top, there is a search bar and a 'CREATE' button highlighted with a red box. Below the search bar, there is a table of buckets. The table has columns for Name, Created, Location type, Location, Default storage class, Last modified, Public access, Access control, Protection, Bucket retention, Lifecycle rules, Tags, Encryption, and Security insights. Three buckets are listed: 'googlecloudbootcamp.appspot.com', 'staging.googlecloudbootcamp.appspot.com', and 'storage-1'. The 'storage-1' bucket has a warning icon and text 'Public to internet'.

Name	Created	Location type	Location	Default storage class	Last modified	Public access	Access control	Protection	Bucket retention	Lifecycle rules	Tags	Encryption	Security insights
googlecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:55 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:55 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	None	—	Google-managed	61/61 excess permissions
staging.googlecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:56 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:56 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	1 rule	—	Google-managed	57/61 excess permissions
storage-1	Apr 18, 2024, 4:40:59 PM	Multi-region	us	Standard	Apr 18, 2024, 4:56:22 PM	Public to internet	Uniform	Soft Delete	None	None	—	Google-managed	64/75 excess permissions

Bucket settings



- Bucket settings

✓

LABELS (OPTIONAL)

CONTINUE

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Choose where to store your data

This choice defines the geographic placement of your data and affects cost, performance, and availability. Cannot be changed later. [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

us-east1 (South Carolina)

▼

CONTINUE

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Choose a storage class for your data

A storage class sets costs for storage, retrieval, and operations, with minimal differences in uptime. Choose if you want objects to be managed automatically or specify a default storage class based on how long you plan to store your data and your workload or use case. [Learn more](#)

☐ Autoclass

Automatically transitions each object to Standard or Nearline class based on object-level activity, to optimize for cost and latency. Recommended if usage frequency may be unpredictable. Can be changed to a default class at any time. [Pricing details](#)

☒ Set a default class

Applies to all objects in your bucket unless you manually modify the class per object or set object lifecycle rules. Best when your usage is highly predictable.

☒ 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

✓

Choose how to control access to objects

Prevent public access

Restrict data from being publicly accessible via the internet. Will prevent this bucket from being used for web hosting. [Learn more](#)

☐ Enforce public access prevention on this bucket

Access control

☐ Uniform

Ensure uniform access to all objects in the bucket by using only bucket-level permissions (IAM). This option becomes permanent after 90 days. [Learn more](#)

☒ Fine-grained

Specify access to individual objects by using object-level permissions (ACLs) in addition to your bucket-level permissions (IAM). [Learn more](#)

CONTINUE

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Choose how to protect object data

Your data is always protected with Cloud Storage but you can also choose from these additional data protection options to add extra layers of security.

Data protection

☐ Soft delete policy (For data recovery)

When enabled, deleted objects will be kept for a specified period after they're deleted and can be restored during this time. [Learn more](#)

☐ Object versioning (For version control)

For restoring deleted or overwritten objects. To minimize the cost of storing versions, we recommend limiting the number of noncurrent versions per object and scheduling them to expire after a number of days. [Learn more](#)

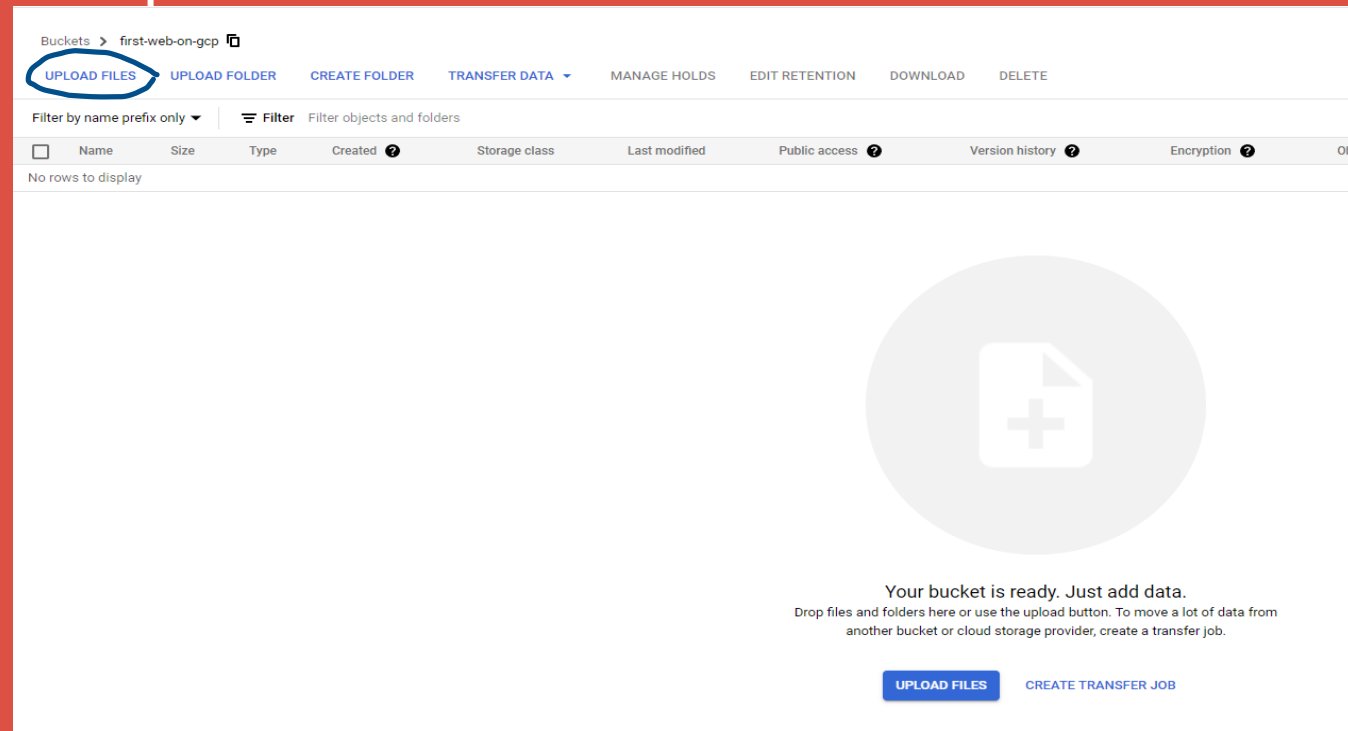
☐ Retention (For compliance)

For preventing the deletion or modification of the bucket's objects for a specified period of time.

Bucket settings



- Bucket Console:
- After we create our first bucket, we 'll upload our website from clicking on the upload button.



Bucket settings



- After we have uploaded the site, we have to make it public.

The screenshot displays the Google Cloud Storage interface for a bucket named 'first-web-on-gcp'. The 'OBJECTS' tab is selected, showing a 'Folder browser' on the left with the bucket name. The main area shows a list of objects. A table at the bottom lists the objects with columns for Name, Size, Type, Created, Storage class, Last modified, and Public access. The 'index.html' file is listed with a size of 2.1 KB, type of text/html, and is currently 'Not public'.

Name	Size	Type	Created	Storage class	Last modified	Public access
<input checked="" type="checkbox"/> index.html	2.1 KB	text/html	May 7, 2024, 6:28:06 PM	Standard	May 7, 2024, 6:28:06 PM	Not public

Bucket settings



- After you select the files click on permissions and click on Grant access.

first-web-on-gcp

Location: us-east1 (South Carolina) | Storage class: Standard | Public access: Subject to object ACLs | Protection: None

OBJECTS | CONFIGURATION | **PERMISSIONS** | PROTECTION | LIFECYCLE | OBSERVABILITY | INVENTORY REPORTS | OPERATIONS

Public access

Subject to object ACLs

One or more objects in this bucket could be public to the internet if they grant access to **allUsers** or **allAuthenticatedUsers**. Check each object's permissions to see if they are public. To streamline permissions, you can switch to uniform access control. If objects should never be publicly accessible, you should also prevent public access to this bucket. [Learn more](#)

[PREVENT PUBLIC ACCESS](#)

Access control

Fine-grained: Object-level ACLs enabled

Access to objects can be granted through object access control lists (ACLs). To enforce a single set of permissions on the bucket and its objects, switch to uniform bucket-level access control. [Learn more](#)

[SWITCH TO UNIFORM](#)

Permissions

[VIEW BY PRINCIPALS](#) | [VIEW BY ROLES](#)

[+ GRANT ACCESS](#) | [- REMOVE ACCESS](#)

Filter Enter property name or value

Type	Principal ↑	Name	Role	Inheritance	
<input type="checkbox"/>		426618738426@cloudbuild.gserviceaccount.com	Legacy Cloud Build Service Account ?	Cloud Build Service Account	GoggleCloudBootCamp
<input type="checkbox"/>		Editors of project: gogglecloudbootcamp	Storage Legacy Bucket Owner		
<input type="checkbox"/>		Owners of project: gogglecloudbootcamp	Storage Legacy Bucket Owner		
<input type="checkbox"/>		service-426618738426@compute-system.iam.gserviceaccount.com	Compute Engine Service Agent ?	Compute Engine Service Agent	GoggleCloudBootCamp
<input type="checkbox"/>		service-426618738426@gcp-gae-service.iam.gserviceaccount.com	App Engine Standard Environment Service Agent ?	App Engine Standard Environment Service Agent	GoggleCloudBootCamp
<input type="checkbox"/>		service-426618738426@gcp-sa-cloudbuild.iam.gserviceaccount.com	Cloud Build Service Agent ?	Cloud Build Service Agent	GoggleCloudBootCamp
<input type="checkbox"/>		service-426618738426@gcp-sa-firestore.iam.gserviceaccount.com	Cloud Firestore Service Agent ?	Firestore Service Agent	GoggleCloudBootCamp
<input type="checkbox"/>		Viewers of project: gogglecloudbootcamp	Storage Legacy Bucket Reader		

Bucket settings



- New principle choose **allUsers**.

Grant access to "first-web-on-gcp"

Grant principals access to this resource and add roles to specify what actions the principals can take. Optionally, add conditions to grant access to principals only when a specific criteria is met. [Learn more about IAM conditions](#)

Resource
first-web-on-gcp

Add principals
Principals are users, groups, domains, or service accounts. [Learn more about principals in IAM](#)

New principals *
allUsers

Assign roles
Roles are composed of sets of permissions and determine what the principal can do with this resource. [Learn more](#)

Select a role * IAM condition (optional) ?
IAM conditions disabled

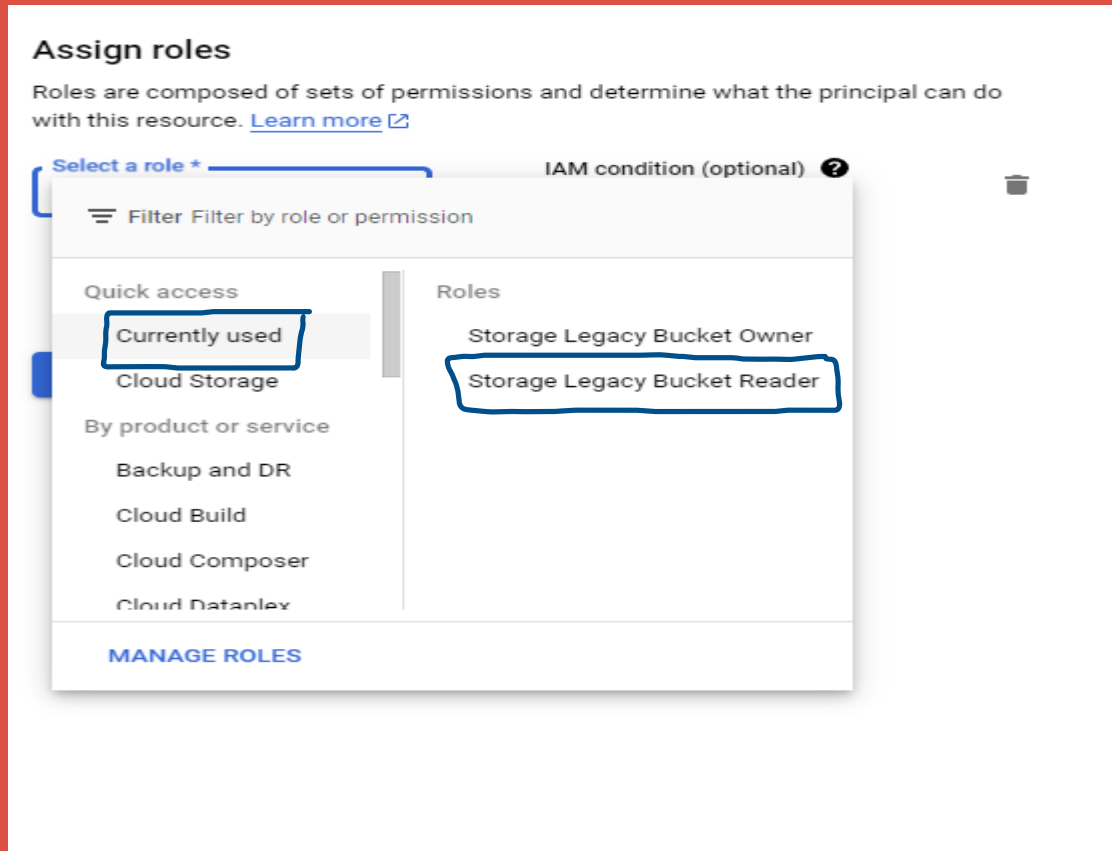
+ ADD ANOTHER ROLE

SAVE **CANCEL**

Bucket settings



- Now select the role.



Bucket settings



- After that save the Grant access.

Grant access to "first-web-on-gcp"

Grant principals access to this resource and add roles to specify what actions the principals can take. Optionally, add conditions to grant access to principals only when a specific criteria is met. [Learn more about IAM conditions](#)

Resource
first-web-on-gcp

Add principals
Principals are users, groups, domains, or service accounts. [Learn more about principals in IAM](#)

New principals *
allUsers

Assign roles
Roles are composed of sets of permissions and determine what the principal can do with this resource. [Learn more](#)

Role *	IAM condition (optional) ?	
Storage Legacy Bucket Reader	IAM conditions disabled	

Grants permission to list a bucket's contents and read bucket metadata, excluding IAM policies. Also grants permission to read object metadata when listing objects (excluding IAM policies).

+ ADD ANOTHER ROLE

SAVE **CANCEL**

Bucket settings



- Get back to Objects and click refresh.

Bucket details

first-web-on-gcp

Location: us-east1 (South Carolina) | Storage class: Standard | Public access: Public to internet | Protection: None

OBJECTS | CONFIGURATION | PERMISSIONS | PROTECTION | LIFECYCLE | OBSERVABILITY | INVENTORY REPORTS | OPERATIONS

Folder browser

Buckets > first-web-on-gcp

UPLOAD FILES | UPLOAD FOLDER | CREATE FOLDER | TRANSFER DATA | MANAGE HOLDS | EDIT RETENTION | DOWNLOAD | DELETE

Filter by name prefix only | Filter objects and folders | Show Live objects only

Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption	Object retention retain until time	Retention expiration time	Hold
index.html	2.1 KB	text/html	May 7, 2024, 6:28:06 PM	Standard	May 7, 2024, 6:28:06 PM	Public to internet	Copy URL	Google-managed	—	—	No

Bucket settings



- As we can see now the website is public.

first-web-on-gcp

Location: us-east1 (South Carolina) | Storage class: Standard | **Public access**: Public to internet | Protection: None

OBJECTS | CONFIGURATION | PERMISSIONS | PROTECTION | LIFECYCLE | OBSERVABILITY | INVENTORY REPORTS | OPERATIONS

Folder browser

Buckets > first-web-on-gcp

UPLOAD FILES | UPLOAD FOLDER | CREATE FOLDER | TRANSFER DATA | MANAGE HOLDS | EDIT RETENTION | DOWNLOAD | DELETE

Filter by name prefix only | Filter objects and folders

<input type="checkbox"/>	Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption
<input type="checkbox"/>	index.html	2.1 KB	text/html	May 7, 2024, 6:28:06 PM	Standard	May 7, 2024, 6:28:06 PM	Public to internet	Copy URL	Google-manage

Bucket settings



- Return to the bucket and select the three dots button and do the following steps.





Cloud Storage Buckets

CREATE REFRESH

GO TO PATH LEARN

DISMISS

Filter Filter buckets

<input type="checkbox"/>	Name ↑	Created	Location type	Location	Default storage class ⓘ	Last modified	Public access ⓘ	Access control ⓘ	Protection ⓘ	Bucket retention	Lifecycle rules ⓘ	Tags ⓘ	Encryption ⓘ	Security insights ⓘ	
<input type="checkbox"/>	first-web-on-gcp	May 7, 2024, 6:25:46 PM	Region	us-east1	Standard	May 7, 2024, 7:36:27 PM	⚠️ Public to internet	Fine-grained	None	None	None	—	Google-managed	—	
<input type="checkbox"/>	gogglecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:55 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:55 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	None	—	Google-managed	61/61 excess permissions	
<input type="checkbox"/>	staging.gogglecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:56 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:56 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	1 rule	—	Google-managed	57/61 excess permissions	
<input type="checkbox"/>	storage-1	Apr 18, 2024, 4:40:59 PM	Multi-region	us	Standard	Apr 18, 2024, 4:56:22 PM	⚠️ Public to internet	Uniform	Soft Delete	None	None	—	Google-managed	64/75 excess permissions	

Bucket settings



<input type="checkbox"/>	first-web-on-gcp	May 7, 2024, 6:25:46 PM	Region	us-east1	Standard	May 7, 2024, 7:36:27 PM	⚠ Public to internet	Fine-grained	None	None	None	—	Google-managed	—
<input type="checkbox"/>	gogglecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:55 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:55 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	None	—	Google	Edit access
<input type="checkbox"/>	staging.gogglecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:56 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:56 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	1 rule	—	Google	Edit tags
<input type="checkbox"/>	stoarge-1	Apr 18, 2024, 4:40:59 PM	Multi-region	us	Standard	Apr 18, 2024, 4:56:22 PM	⚠ Public to internet	Uniform	Soft Delete	None	None	—	Google	Edit labels
														Edit website configuration
														Edit default storage class
														Delete bucket
														Transfer data in
														Transfer data out
														Create restore job
														Export to Cloud Pub/Sub ↗
														Process with Cloud Functions
														Scan with Sensitive Data Protection ↗

Bucket settings



- Write the main file

1 bucket selected [DELETE](#) [PERMISSIONS](#) [TAGS](#) [LABELS](#)

Beginning on April 29th, 2024 at-scale policy analysis and advanced IAM recommendation capabilities will require Security Command Center Premium. [Learn more](#)

Filter Filter buckets

	Name ↑	Created	Location type	Location	Default storage class ?	Last modified	Public access ?	Access control ?	Protection ?	Bucket retention	Lifecycle rules ?	Tags ?	Encryption ?
<input checked="" type="checkbox"/>	first-web-on-gcp	May 7, 2024, 6:25:46 PM	Region	us-east1	Standard	May 7, 2024, 7:36:27 PM	Public to internet	Fine-grained	None	None	None	—	Google-managed
<input type="checkbox"/>	googlecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:55 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:55 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	None	—	Google-managed
<input type="checkbox"/>	staging.googlecloudbootcamp.appspot.com	Apr 18, 2024, 5:20:56 PM	Multi-region	us	Standard	Apr 18, 2024, 5:20:56 PM	Subject to object ACLs	Fine-grained	Soft Delete	None	1 rule	—	Google-managed
<input type="checkbox"/>	storage-1	Apr 18, 2024, 4:40:59 PM	Multi-region	us	Standard	Apr 18, 2024, 4:56:22 PM	Public to internet	Uniform	Soft Delete	None	None	—	Google-managed

first-web-on-gcp website configuration

Configure index and error pages for any static website associated with first-web-on-gcp. [Learn more](#)

Index (main) page suffix

Specify a suffix to append to the URL when visitors request your top-level domain or URLs without associated objects. Ex. With the suffix index.html, example.com serves visitors content from the object example.com/index.html (if it exists).

Error (404 not found) page

Specify an object to serve when visitors request a URL that directs to no object or index page. Ex. A user visits example.com/dir – if neither that URL nor example.com/dir/index.html directs to an object, the error page is served.

[CANCEL](#) [SAVE](#)

Bucket settings



- Finally, go to your index.html and copy the URL.

The screenshot shows the Google Cloud Storage console interface. At the top, there's a breadcrumb 'Buckets > first-web-on-gcp'. Below it are navigation links: 'UPLOAD FILES', 'UPLOAD FOLDER', 'CREATE FOLDER', 'TRANSFER DATA', 'MANAGE HOLDS', 'EDIT RETENTION', 'DOWNLOAD', and 'DELETE'. A filter bar shows 'Filter by name prefix only' and 'Filter objects and folders'. A table lists the contents of the bucket, with one file named 'index.html' (2.1 KB, text/html, created May 7, 2024, 6:28:06 PM, Standard storage class, last modified May 7, 2024, 6:28:06 PM, Public access: Public to internet, Copy URL). A context menu is open over the 'index.html' file, showing options: 'Download', 'Copy Public URL' (highlighted with a blue box), 'Copy Authenticated URL', 'Copy gsutil URI', 'Edit metadata', 'Edit access', 'Edit retention', 'Copy', 'Move', 'Rename', 'Export to Cloud Pub/Sub', and 'Scan with Sensitive Data Protection'.


Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption	Object retention retain until time	Retention expiration time	Hold
index.html	2.1 KB	text/html	May 7, 2024, 6:28:06 PM	Standard	May 7, 2024, 6:28:06 PM	Public to internet	Copy URL	Google-managed	-	-	No

Bucket settings



- Congratulations on the first static website on GCP.

Welcome to Google Cloud Platform



What is Google Cloud Platform?

Google Cloud Platform (GCP) is a suite of cloud computing services offered by Google. It provides a range of on-demand services including:

- Compute: Create and manage virtual machines (VMs)
- Storage: Store your data securely and reliably
- Networking: Connect your applications and resources
- Big Data: Analyze large datasets
- Machine Learning: Build and train machine learning models
- And many more!

What are Virtual Machines (VMs)?

A virtual machine (VM) is a software computer that emulates a physical computer. It allows you to run an operating system and applications on a virtualized server. VMs offer several benefits including:

- Scalability: Easily scale your resources up or down as needed
- Cost-effectiveness: Pay only for the resources you use
- Flexibility: Deploy different types of VMs for different applications
- Isolation: Applications running on VMs are isolated from each other

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Thank You!