

Experiment No - 05

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AIM:

Demonstrate the creation of storage services in public cloud based on the

Scenario:

You are tasked with demonstrating the usage of different AWS storage services to a group of colleagues who are new to cloud computing. Your goal is to provide hands-on experience with Amazon S3, Amazon EBS, and Amazon EFS. Create a step-by-step guide for this demonstration, covering the creation, configuration, and use of each storage service.

Task 1: Demonstrate the process of creating a static website using Amazon S3 bucket storage to a group of beginners. The website should include multiple HTML files, CSS stylesheets, and images.

Describe the step-by-step process, including setting up the S3 bucket, configuring the necessary permissions, and ensuring the website is accessible via a web browser.

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Creating S3 bucket called as ccexp05

[Amazon S3](#) > [Buckets](#) > Create bucket

Create bucket [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

General configuration

Bucket name

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

AWS Region

US East (N. Virginia) us-east-1

Copy settings from existing bucket - *optional*
Only the bucket settings in the following configuration are copied.

Choose bucket

Object Ownership [Info](#)

ccexp05 [Info](#)

Objects | **Properties** | Permissions | Metrics | Management | Access Points

Bucket overview

AWS Region US East (N. Virginia) us-east-1	Amazon Resource Name (ARN) arn:aws:s3:::ccexp05	Creation date October 4, 2023, 13:40:29 (UTC+05:30)
---	--	--

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Edit

Bucket Versioning

Enabled

Making bucket public for static webpage hosting where it is going to display index.html and if there will be error it will display error.html

☒ **Host a static website**
Use the bucket endpoint as the web address. [Learn more](#)

☐ **Redirect requests for an object**
Redirect requests to another bucket or domain. [Learn more](#)

ⓘ For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#)

Index document
Specify the home or default page of the website.

index.html

Error document - optional
This is returned when an error occurs.

error.html

Redirection rules - optional
Redirection rules, written in JSON, automatically redirect webpage requests for specific content. [Learn more](#)

After saving the changes S3 bucket URL is generated

Static website hosting Edit

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

Enabled

Hosting type

Bucket hosting

Bucket website endpoint

When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

<http://ccexp05.s3-website-us-east-1.amazonaws.com>

When trying to access S3 Bucket via URL the bucket is public but contains of bucket are not public

← → ↻

⚠ Not secure | ccexp05.s3-website-us-east-1.amazonaws.com

403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: VAV5Q5QPYM86TYQV
- HostId: NmXkTXEBcNCKkrWa5lmQ5c5bvENjmw9g2/bXRcVBmu/4yqW9RfrLykPku9yrErYF7HElr+cTGw=

An Error Occurred While Attempting to Retrieve a Custom Error Document

- Code: AccessDenied
- Message: Access Denied

Uploading the static webpages that one needs to host

Add the files and folders you want to upload to S3. To upload a file larger than 16GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (2 Total, 3.0 KB)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

Find by name

< 1 >

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	error.html	-	text/html	52.0 B
<input type="checkbox"/>	index.html	-	text/html	2.9 KB

Destination

Destination

s3://ccexp05

► Destination details

Bucket settings that impact new objects stored in the specified destination.

► Permissions

Grant public access and access to other AWS accounts.

► Properties

Specify storage class, encryption settings, tags, and more.

Cancel

Upload

Upload succeeded
View details below.

The information below will no longer be available after you navigate away from this page.

Summary

Destination

s3://ccexp05

Succeeded

2 files, 3.0 KB (100.00%)

Failed

0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (2 Total, 3.0 KB)

Find by name

< 1 >

Name	Folder	Type	Size	Status	Error
error.html	-	text/html	52.0 B	Succeeded	-
index.html	-	text/html	2.9 KB	Succeeded	-

ccexp05

Info

Objects

Properties

Permissions

Metrics

Management

Access Points

Objects (3)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Refresh

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Show versions

< 1 >

<input type="checkbox"/>	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	error.html	html	3j6fpI3Shk_9JgykaVzH5KcnUN2Ws_mzg	October 4, 2023, 13:52:52 (UTC+05:30)	52.0 B	Standard
<input type="checkbox"/>	error.html	html	JAFckGKv1HfAXceETcEW9Kczh0P1AZxX	October 4, 2023, 13:51:24 (UTC+05:30)	52.0 B	Standard
<input type="checkbox"/>	index.html	html	Y_Vi9QYZVbiDYLVZMbiUIWl6PqzsTlAS	October 4, 2023, 13:51:25 (UTC+05:30)	2.9 KB	Standard

Uploading Folders

Uploading

Total remaining: 7 files: 19.0 MB(97.42%)

Estimated time remaining: a few seconds

Transfer rate: 517.0 KB/s

13%

Cancel

Files and folders

Configuration

Files and folders (9 Total, 21.7 MB)

Find by name

Name	Folder	Type	Size	Status	Error
styles.css	css/	text/css	541.0 B	Succeeded	-
Cafe-Owners.png	images/	image/png	2.7 MB	Succeeded	-
Cake-Vitrine.png	images/	image/png	3.8 MB	In progress (100%)	-
Coffee-and-Pastries.png	images/	image/png	3.1 MB	Pending	-
Coffee-Shop.png	images/	image/png	726.8 KB	Pending	-
Cookies.png	images/	image/png	1.4 MB	Pending	-
Cup-of-Hot-Chocolate.png	images/	image/png	3.6 MB	Pending	-
Strawberry-&-Blueberry-Tarts.png	images/	image/png	2.9 MB	Pending	-
Strawberry-Tarts.png	images/	image/png	3.4 MB	Pending	-

Objects (5)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Refresh

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Show versions

	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	css/	Folder	-	-	-	-
<input type="checkbox"/>	error.html	html	3j6fpl3Shk_9JgykaVzH5KcnUN2Ws mzg	October 4, 2023, 13:52:52 (UTC+05:30)	52.0 B	Standard
<input type="checkbox"/>	error.html	html	JAFckGKv1HfAXceETcEW9KCzhOP1AZxX	October 4, 2023, 13:51:24 (UTC+05:30)	52.0 B	Standard
<input type="checkbox"/>	images/	Folder	-	-	-	-
<input type="checkbox"/>	index.html	html	Y_VI9QYZVbIDYLVZMbiUWii6PqsTlAS	October 4, 2023, 13:51:25 (UTC+05:30)	2.9 KB	Standard

Creating Bucket policy so make contents of bucket public

Objects
Properties
Permissions
Metrics
Management
Access Points

Permissions overview

Access

Objects can be public

Block public access (bucket settings)

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

Edit

Block all public access

⚠ Off

► Individual Block Public Access settings for this bucket

Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

Edit Delete

No policies to display
1/1



AWS Policy Generator

The AWS Policy Generator is a tool that enables you to create policies that control access to Amazon Web Services (AWS) products and resources. For more information about creating policies, see [key concepts in Using AWS Identity and Access Management](#). Here are sample policies.

Step 1: Select Policy Type

A Policy is a container for permissions. The different types of policies you can create are an IAM Policy, an S3 Bucket Policy, an SNS Topic Policy, a VPC Endpoint Policy, and an SQS Queue Policy.

Select Type of Policy

SQS Queue Policy
SQS Queue Policy
S3 Bucket Policy
VPC Endpoint Policy
IAM Policy
SNS Topic Policy

Step 2: Add Statement(s)

A statement is the formal description of permissions. See [a description of elements that you can use in statements](#).

Effect ☒ Allow ☐ Deny

Principal

Use a comma to separate multiple values.

AWS Service Amazon SQS ☐ All Services (*)

Use multiple statements to add permissions for more than one service.

Actions -- Select Actions -- ☐ All Actions (*)

Amazon Resource Name (ARN)

Step 1: Select Policy Type

A Policy is a container for permissions. The different types of policies you can create are an IAM Policy, an S3 Bucket Policy, an SNS Topic Policy, a VPC Endpoint Policy, and an SQS Queue Policy.

Select Type of Policy S3 Bucket Policy

Step 2: Add Statement(s)

A statement is the formal description of a single permission. See a [description of elements](#) that you can use in statements.

Effect ☒ Allow ☐ Deny

Principal

Use a comma to separate multiple values.

AWS Service Amazon S3 ☐ All Services ⁽¹⁹⁶¹⁾

Use multiple statements to add permissions for more than one service.

Actions -- Select Actions -- ☐ All Actions ⁽¹⁹⁶¹⁾

Amazon Resource Name (ARN)

ARN should follow the following format: arn:aws:s3:::\${BucketName}/\${KeyName}.

Use a comma to separate multiple values.

Add Conditions (Optional)

Add Statement

You added the following statements. Click the button below to Generate a policy.

Amazon Resource Name (ARN)

ARN should follow the following format: arn:aws:s3:::\${BucketName}/\${KeyName}.

Policy JSON Document

Click below to edit. To save the policy, copy the text below to a text editor. Changes made below will **not** be reflected in the policy generator tool.

```
{
  "Id": "Policy1696388392287",
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1696388384360",
      "Action": [
        "s3:GetObject"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::ccexp05",
      "Principal": "*"
    }
  ]
}
```

Close

This AWS Policy Generator is provided for informational purposes only, you are still responsible for your use of Amazon Web Services technologies and ensuring that your use is in compliance with all applicable terms and conditions. This AWS Policy Generator is provided as "as is" without warranty of any kind, either express or implied.

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Edit bucket policy [Info](#)

Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

[Policy examples](#)[Policy generator](#)

Bucket ARN

arn:aws:s3::ccexp05

Policy

```
1 {
2   "Id": "Policy1696388392287",
3   "Version": "2012-10-17",
4   "Statement": [
5     {
6       "Sid": "Stmt1696388384360",
7       "Action": [
8         "s3:GetObject"
9       ],
10      "Effect": "Allow",
11      "Resource": "arn:aws:s3:::ccexp05/*",
12      "Principal": "*"
13    }
14  ]
15 }
```

Edit statement

Select a statement

Select an existing statement in the policy or add a new statement.

+ Add new statement

Successfully hosted webpage



Café




The Café offers an assortment of delicious and delectable pastries and coffees that will put a smile on your face. From cookies to croissants, tarts and cakes, each treat is specially prepared to excite your tastebuds and brighten your day!

Frank bakes a rich variety of cookies. Try them all!

After deleting the index.html file that is the main webpage it shows the error.html file


Delete objects [Info](#)

 If a folder is selected for deletion, all objects in the folder will be deleted, and any new objects added while the delete action is in progress might also be deleted. If an object is selected for deletion, any new objects with the same name that are uploaded before the delete action is completed will also be deleted.

[Learn more](#) 



Deleting the specified objects adds delete markers to them

If you need to undo the delete action, you can delete the delete markers. [Learn more](#) 

Specified objects

 Find objects by name

< 1 >


Name ▲	Type ▼	Last modified ▼	Size ▼
 index.html	html	October 4, 2023, 13:51:25 (UTC+05:30)	2.9 KB

Delete objects?

To confirm deletion, type *delete* in the text input field.

Cancel

Delete objects

← → ↻  Not secure | ccexp05.s3-website-us-east-1.amazonaws.com

this is error page