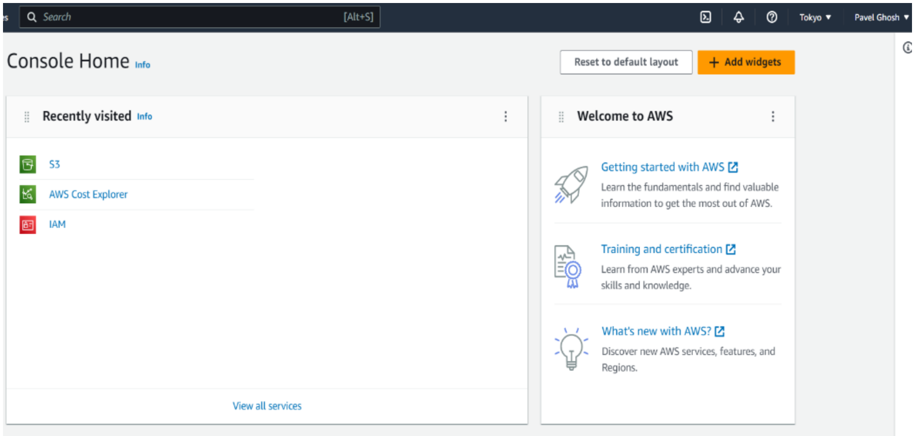
Assignment 4

Problem Statement: Create a private bucket in AWS. Upload a file and check that through pre-signed URL whether you can access the file or not.

Procedure:

1. Sign in to your **AWS account** as root user.



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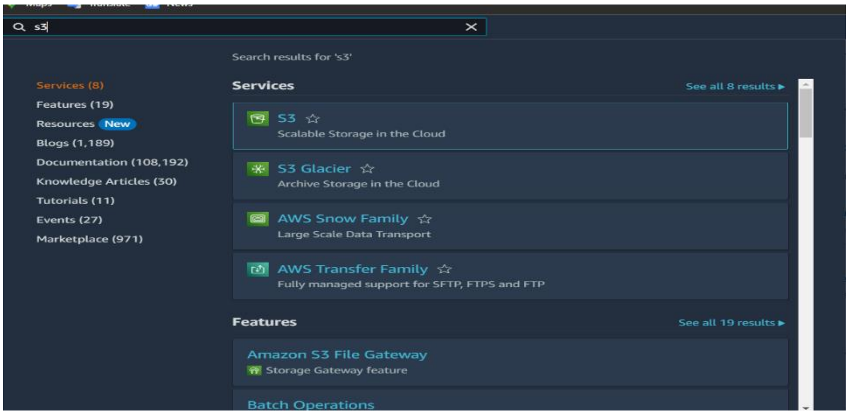
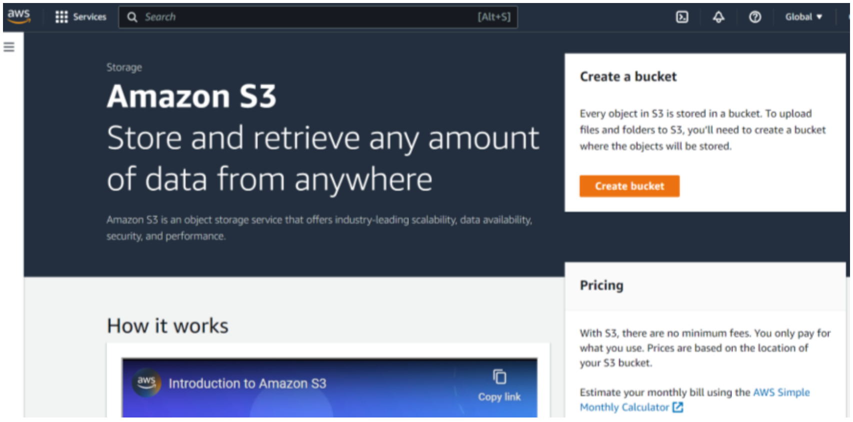
2. Now in the **homepage** search for **S3** in the **search box** and then select the first option displayed.



3. After clicking on it, you will be redirected to the **Amazon S3** homepage. There we have to click on the **create bucket** button on the right hand side.



Amazon S3

Store and retrieve any amount of data from anywhere

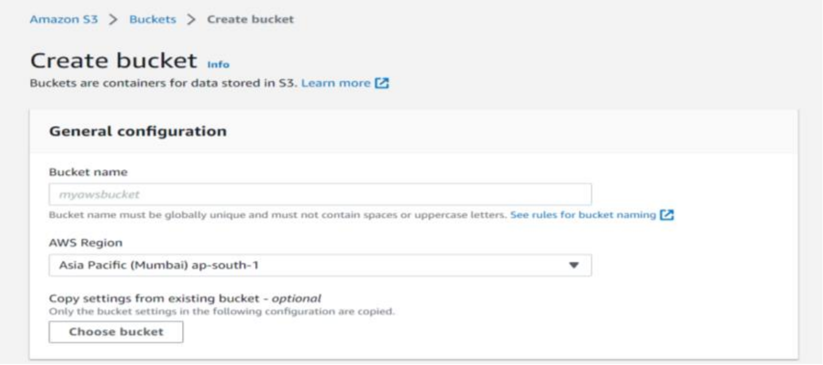
Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Estimate your monthly bill using the AWS Simple Monthly Calculator

4. Next you will go to the **Create bucket screen** where you have to configure your bucket before creating it.
    a. Choose a globally unique name for your bucket. It should NOT contain any spaces or any uppercase letters.
    b. Select the **AWS Region** as **Asia Pacific (Mumbai) ap-south-1**. **Remember** you can avail other options but each server region has **different pricing** associated with it. Since, we are **living in India**, we are choosing the one **closest to us** to remain fairly priced.
    c. Next we go to Object Ownership section where we keep ACLs disabled option checked (as it is).
    d. Next, we keep all public access blocked (as it is).
    e. Everything else remains unchanged.
    f. Now click on the Create bucket button.



Create bucket Info

Buckets are containers for data stored in S3. Learn more

General configuration

Bucket name

myawsbucket

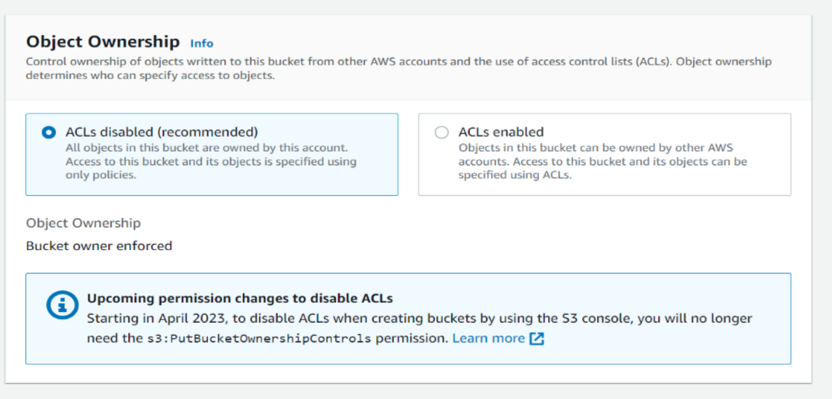
Bucket name must be globally unique and must not contain spaces or uppercase letters. See rules for bucket naming

AWS Region

Asia Pacific (Mumbai) ap-south-1 ▼

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.



Object Ownership Info

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

● ACLs disabled (recommended)
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

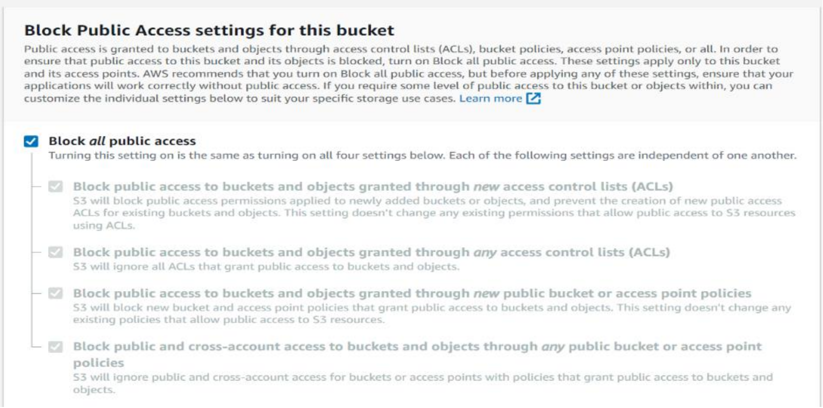
○ ACLs enabled
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

Bucket owner enforced

Upcoming permission changes to disable ACLs

Starting in April 2023, to disable ACLs when creating buckets by using the S3 console, you will no longer need the `s3:PutBucketOwnershipControls` permission. Learn more



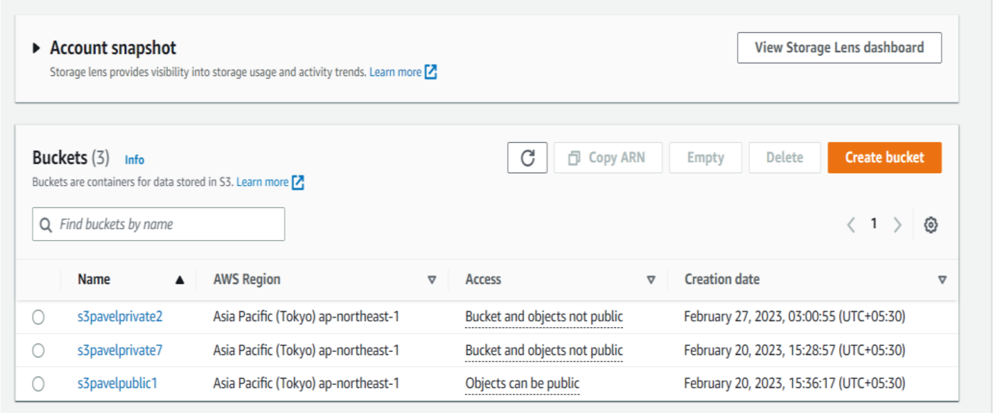
Block Public Access settings for this bucket

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 this bucket and its 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 this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. Learn more

☑ Block *all* public access
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

- ☑ Block public access to buckets and objects granted through *new* access control lists (ACLs)
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
- ☑ Block public access to buckets and objects granted through *any* access control lists (ACLs)
S3 will ignore all ACLs that grant public access to buckets and objects.
- ☑ Block public access to buckets and objects granted through *new* public bucket or access point policies
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
- ☑ Block public and cross-account access to buckets and objects through *any* public bucket or access point policies
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

5. After that we are redirected to the buckets page where we can see all our buckets in a table format.



▸ Account snapshot

Storage lens provides visibility into storage usage and activity trends. Learn more

View Storage Lens dashboard

Buckets (3) Info

Buckets are containers for data stored in S3. Learn more

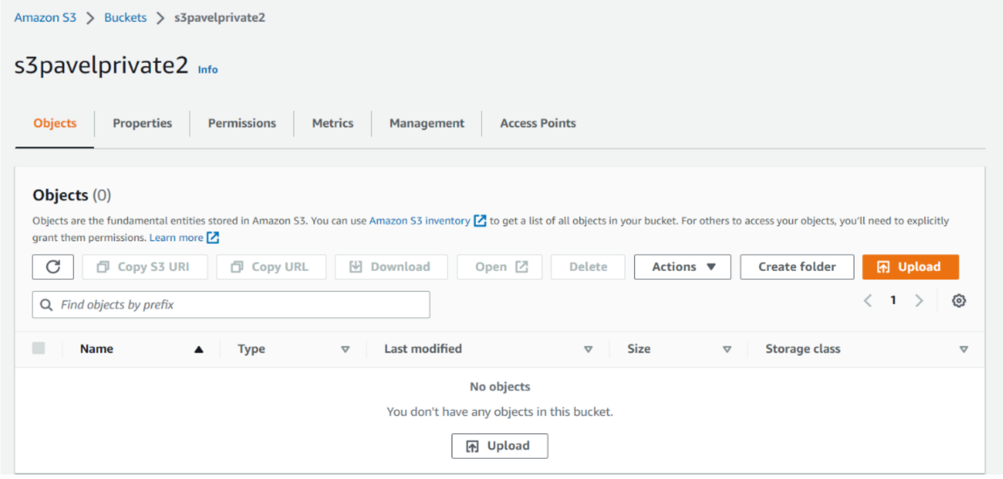
Copy ARN | Empty | Delete | Create bucket

Find buckets by name

< 1 >

	Name ▲	AWS Region ▽	Access ▽	Creation date ▽
○	s3pavelprivate2	Asia Pacific (Tokyo) ap-northeast-1	Bucket and objects not public	February 27, 2023, 03:00:55 (UTC+05:30)
○	s3pavelprivate7	Asia Pacific (Tokyo) ap-northeast-1	Bucket and objects not public	February 20, 2023, 15:28:57 (UTC+05:30)
○	s3pavelpublic1	Asia Pacific (Tokyo) ap-northeast-1	Objects can be public	February 20, 2023, 15:36:17 (UTC+05:30)

6. Now we click on our newly selected bucket (on the name).
7. Now we have successfully entered into our newly created bucket.



Amazon S3 > Buckets > s3pavelprivate2

s3pavelprivate2 Info

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

Objects (0)

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

Copy S3 URI | Copy URL | Download | Open | Delete | Actions ▼ | Create folder | Upload

Find objects by prefix

< 1 >

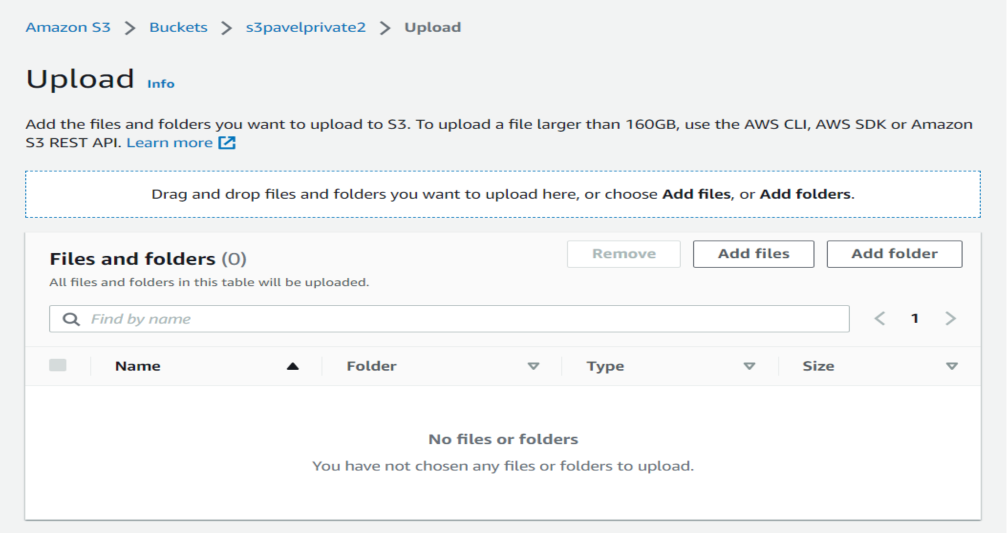
	Name ▲	Type ▽	Last modified ▽	Size ▽	Storage class ▽

No objects

You don't have any objects in this bucket.

Upload

8. Click the Upload button to upload a file in our bucket.
9. After clicking you will be redirected to the Upload page. Click on Add files button to add a file.



Amazon S3 > Buckets > s3pavelprivate2 > Upload

Upload Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, 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 folders**.

Files and folders (0)

All files and folders in this table will be uploaded.

Remove | Add files | Add folder

Find by name

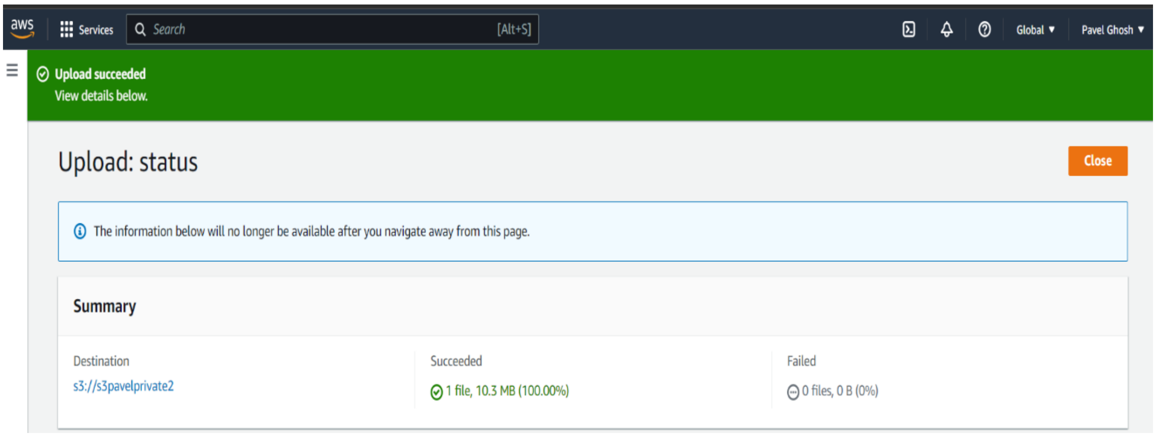
< 1 >

	Name ▲	Folder ▽	Type ▽	Size ▽

No files or folders

You have not chosen any files or folders to upload.

10. You will open a pop up to browse from your pc to upload a file. After selection click on upload button.



Upload succeeded

View details below.

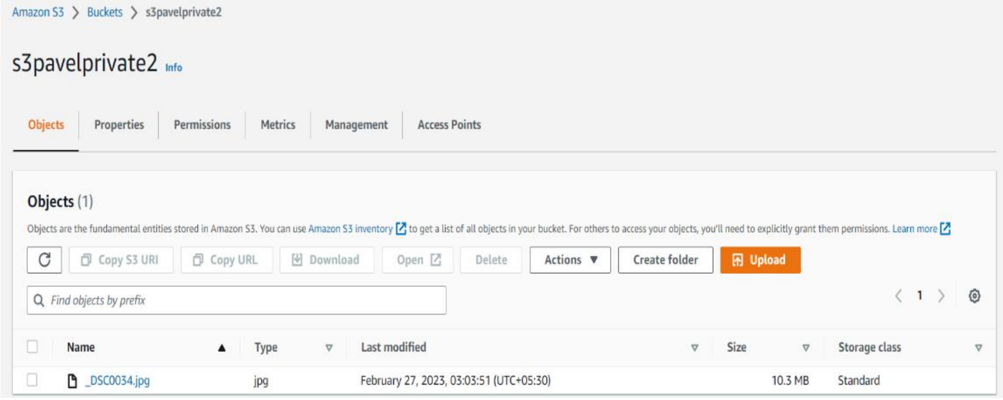
Upload: status

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

Summary

Destination	Succeeded	Failed
s3://s3pavelprivate2	1 file, 10.3 MB (100.00%)	0 files, 0 B (0%)

11. You will then be redirected to the upload status page where a status bar will be present showing the progress of your upload.
12. Close your status page. Now in the bucket page you will see the file you have uploaded in the objects section.



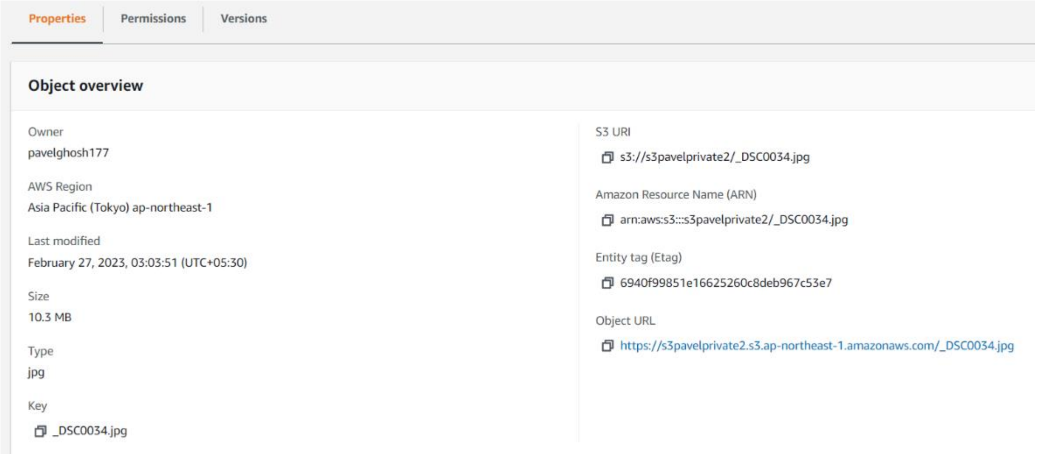
s3pavelprivate2

Objects (1)

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

□	Name	Type	Last modified	Size	Storage class
□	_DSC0034.jpg	jpg	February 27, 2023, 03:03:51 (UTC+05:30)	10.3 MB	Standard

13. Now click on the file.
14. Scroll down and copy the Object URL.



Object overview

Owner
pavelghosh177

AWS Region
Asia Pacific (Tokyo) ap-northeast-1

Last modified
February 27, 2023, 03:03:51 (UTC+05:30)

Size
10.3 MB

Type
jpg

Key
_DSC0034.jpg

S3 URI
s3://s3pavelprivate2/_DSC0034.jpg

Amazon Resource Name (ARN)
arn:aws:s3:::s3pavelprivate2/_DSC0034.jpg

Entity tag (Etag)
6940f99851e16625260c8deb967c53e7

Object URL
https://s3pavelprivate2.s3.ap-northeast-1.amazonaws.com/_DSC0034.jpg

15.Paste it in another browser.

16. IT WILL SHOW ERROR.

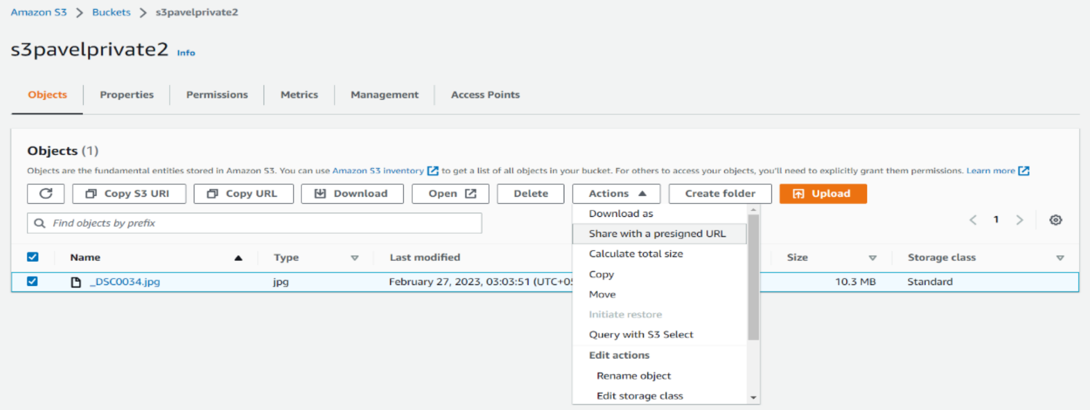
This is because your uploaded file is in a private bucket. Hence, it cannot be accessed by anyone other than you. Now, to let others access, you can only send them a pre-signed URL which remains active for a specific duration.

17.NOW WE WILL GENERATE A PRESIGNED URL

18 .Go back to the previous page and select your file.

19.Next click on the Actions button as shown above.

20.Select the "Share with presigned URL" option.



Amazon S3 > Buckets > s3pavelprivate2

s3pavelprivate2 Info

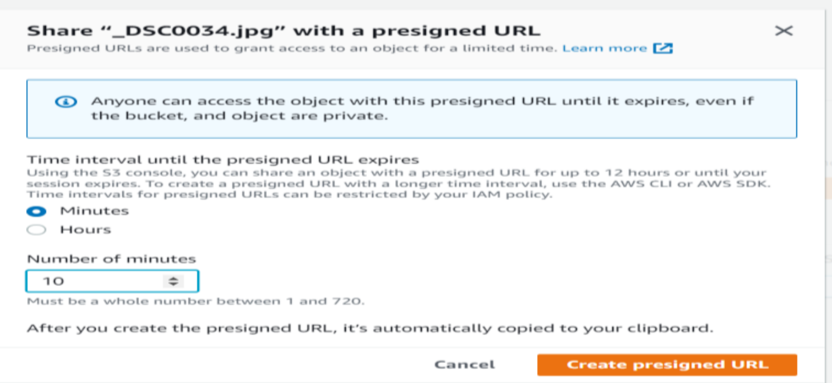
Objects (1)

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

☑	Name	Type	Last modified	Size	Storage class
☑	_DSC0034.jpg	jpg	February 27, 2023, 03:03:51 (UTC+0!	10.3 MB	Standard

21.Now a pop-up will appear as shown below. You have to specify the duration for which the link remains active. Next click on Create presigned URL.

Note that after creation the URL link automatically gets copied (in your clipboard). So you do not have to manually copy it. Just right click and paste it in another browser(Or use Ctrl+V shortcut in the browser search box)



Share "_DSC0034.jpg" with a presigned URL

Presigned URLs are used to grant access to an object for a limited time. Learn more

Anyone can access the object with this presigned URL until it expires, even if the bucket, and object are private.

Time interval until the presigned URL expires

Using the S3 console, you can share an object with a presigned URL for up to 12 hours or until your session expires. To create a presigned URL with a longer time interval, use the AWS CLI or AWS SDK. Time intervals for presigned URLs can be restricted by your IAM policy.

● Minutes

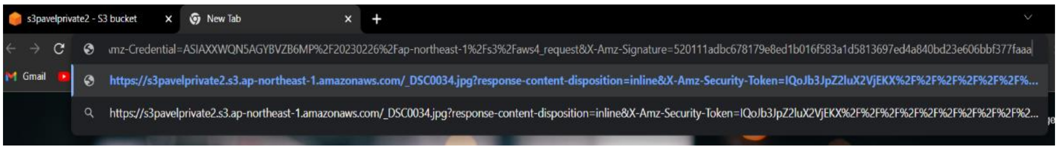
○ Hours

Number of minutes

10

Must be a whole number between 1 and 720.

After you create the presigned URL, it's automatically copied to your clipboard.



mz-Credential=ASIAXXWQN5AGYBVZB6MP%2F20230226%2Fap-northeast-1%2Fs3%2Faws4_request&X-Amz-Signature=520111adbc678179e8ed1b016f583a1d5813697ed4a840bd23e606bbf377faaa

https://s3pavelprivate2.s3.ap-northeast-1.amazonaws.com/_DSC0034.jpg?response-content-disposition=inline&X-Amz-Security-Token=IQoJb3JpZ2luX2VjEKX%2F%2F%2F%2F%2F%2F%...

https://s3pavelprivate2.s3.ap-northeast-1.amazonaws.com/_DSC0034.jpg?response-content-disposition=inline&X-Amz-Security-Token=IQoJb3JpZ2luX2VjEKX%2F%2F%2F%2F%2F%2F%2F%2F%2...

22.After pasting the link in the bar, press Enter key. Now we can access our file using the presigned URL.