

Simple storage service

Assignment – 1 S3 Bucket Creation

Problem Statement

You work for XYZ Corporation. Their application requires a storage service that can store files and publicly share them if required. Implement S3 for the same.

Task to be performed

1. Create an S3 bucket for file storage.
2. Upload 5 Objects with different file extensions.

Steps

- Create a S3 bucket by clicking create bucket
- Select the AWS region and provide a bucket name
- Once the bucket is created click the bucket and go inside the bucket
- And click upload and the selected 5 different file extensions
- And click upload the files will be uploaded in the bucket

The screenshot shows the AWS Management Console interface for creating a new S3 bucket. The top navigation bar includes the AWS logo, 'Services' menu, a search bar, and user information 'Global' and 'Naveen'. The main content area is titled 'Buckets are containers for data stored in S3. [Learn more](#)'. The 'General configuration' section is active, showing a dropdown for 'AWS Region' set to 'Asia Pacific (Mumbai) ap-south-1'. Below it, the 'Bucket name' field contains 'task-assignment-s3'. A note states: 'Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)'. There is a section for 'Copy settings from existing bucket - optional' with a 'Choose bucket' button. The 'Object Ownership' section is partially visible at the bottom, explaining that it controls ownership of objects written to the bucket from other AWS accounts and the use of access control lists (ACLs).

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Amazon S3 > Buckets

Account snapshot

View Storage Lens dashboard

General purpose buckets

Directory buckets

General purpose buckets (1) Info

Copy ARN

Empty

Delete

Create bucket

Find buckets by name

< 1 >

	Name	AWS Region	Access	Creation date
<input type="radio"/>	task-assignment-s3	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	December 22, 2023, 09:10:56 (UTC+05:30)

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

Files and folders (5 Total, 200.1 KB)

Remove

Add files

Add folder

Find by name

< 1 >

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	demo.txt	-	text/plain	6.0 B
<input type="checkbox"/>	information.pdf	-	application/pdf	181.3 KB
<input type="checkbox"/>	new.xlsx	-	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet	7.6 KB
<input type="checkbox"/>	Table.zip	-	application/x-zip-compressed	118.0 B
<input type="checkbox"/>	task.docx	-	application/vnd.openxmlformats-officedocument.wordprocessingml.document	11.0 KB

Destination Info

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Objects (5) Info

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

< 1 >

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	demo.txt	txt	December 22, 2023, 09:21:53 (UTC+05:30)	6.0 B	Standard
<input type="checkbox"/>	information.pdf	pdf	December 22, 2023, 09:21:54 (UTC+05:30)	181.3 KB	Standard
<input type="checkbox"/>	new.xlsx	xlsx	December 22, 2023, 09:21:55 (UTC+05:30)	7.6 KB	Standard
<input type="checkbox"/>	Table.zip	zip	December 22, 2023, 09:21:55 (UTC+05:30)	118.0 B	Standard
<input type="checkbox"/>	task.docx	docx	December 22, 2023, 09:21:56 (UTC+05:30)	11.0 KB	Standard

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Assignment – 2 S3 Bucket Versioning

Problem statement:

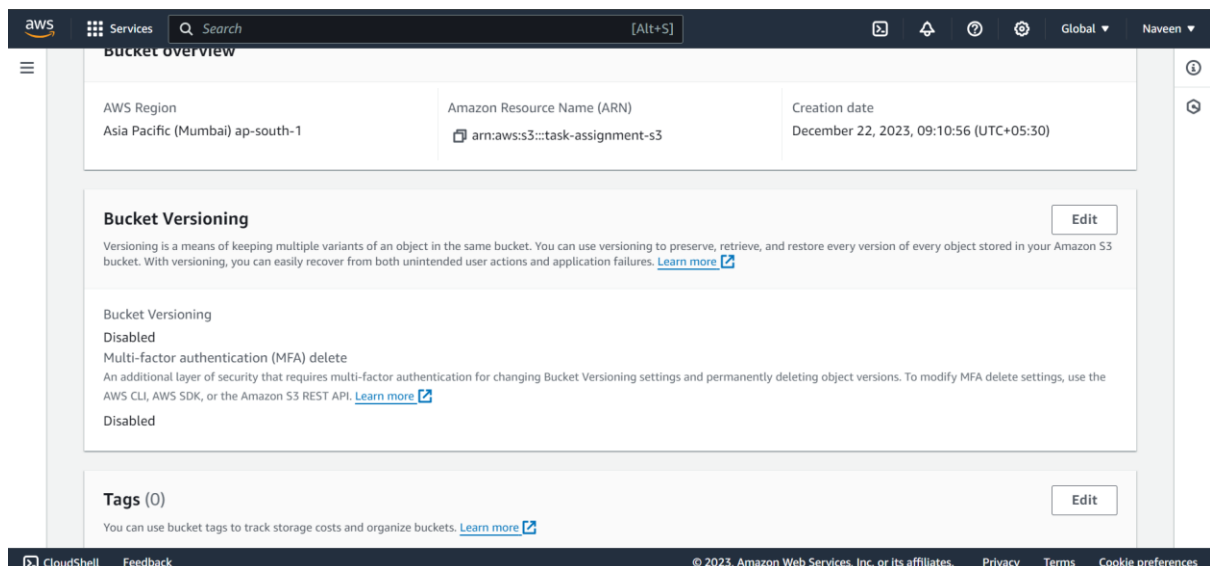
You work for XYZ Corporation. Their application required a storage service that can store files and publicly share them if required. Implement S3 for the same

Task to be performed:

1. Enable versioning for the bucket created in task 1.
2. Re-upload any 2 files already uploaded to verify if versioning works.

Steps:

- Go inside the bucket by clicking the bucket
- Go the properties and click edit bucket versioning
- And click save changes
- Now the bucket versioning is enabled
- And re-uploaded the same 2 files in the bucket
- Enable versions in the bucket
- Now re-uploaded 2 files current version and previous version is reflected



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Amazon S3

Buckets

task-assignment-s3

Edit Bucket Versioning

1

2

Edit Bucket Versioning [Info](#)

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](#)

Bucket Versioning

☐ Suspend

This suspends the creation of object versions for all operations but preserves any existing object versions.

☒ Enable

After enabling Bucket Versioning, you might need to update your lifecycle rules to manage previous versions of objects.

Multi-factor authentication (MFA) delete

An additional layer of security that requires multi-factor authentication for changing Bucket Versioning settings and permanently deleting object versions. To modify MFA delete settings, use the AWS CLI, AWS SDK, or the Amazon S3 REST API. [Learn more](#)

Disabled

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

Files and folders (2 Total, 11.1 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"/>	task.docx	-	application/vnd.openxmlformats-officedocument.wordprocessingml.document	11.1 KB
<input type="checkbox"/>	demo.txt	-	text/plain	22.0 B

Destination [Info](#)

Destination

s3://task-assignment-s3

Destination details

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

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Objects (7) Info

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

Show versions

< 1 >

	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	demo.txt	txt	5Tfpg3nz172xlQ7YkTphzAL	December 22, 2023, 09:30:54 (UTC+05:30)	22.0 B	Standard
<input type="checkbox"/>	demo.txt	txt	null	December 22, 2023, 09:25:12 (UTC+05:30)	6.0 B	Standard
<input type="checkbox"/>	information.pdf	pdf	null	December 22, 2023, 09:25:13 (UTC+05:30)	181.3 KB	Standard
<input type="checkbox"/>	new.xlsx	xlsx	null	December 22, 2023, 09:25:14 (UTC+05:30)	7.6 KB	Standard
				December 22, 2023		

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Objects (7) Info

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Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Show versions

< 1 >

	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	new.xlsx	xlsx	null	09:25:14 (UTC+05:30)	7.6 KB	Standard
<input type="checkbox"/>	Table.zip	zip	null	December 22, 2023, 09:25:14 (UTC+05:30)	118.0 B	Standard
<input type="checkbox"/>	task.docx	docx	L6.WIXXOFUoj_a_y4fWqY5dW_mKhMqC8	December 22, 2023, 09:30:54 (UTC+05:30)	11.1 KB	Standard
<input type="checkbox"/>	task.docx	docx	null	December 22, 2023, 09:25:15 (UTC+05:30)	11.0 KB	Standard

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Assignment – 3 S3 Website Hosting

Problem statement:

You work for XYZ Corporation. Their application required a storage service that can store files and publicly share them if required. Implement S3 for the same

Task to be performed

1. Use the created bucket in the previous task to host static websites, upload an index.html file and error.html page
2. Add a lifecycle rule for the bucket:
 - a. Transition from standard to standard-AI in 60 days
 - b. Expiration in 200 days

Steps:

- Go inside the bucket and click permission
- Go to block public access and enable public access and click save changes
- Edit the bucket policy and write the necessary policy in JSON
- Now uploaded the index html file and error html file in bucket (For assignment purpose Instagram web page is used)
- Go to properties and click edit on static website hosting
- Enable the static website hosting and hosting type host a static website
- provide the name of the file in index document and error document and click save changes
- Now the static website provide a URL to see the website
- Click the URL webpage will be reflected
- And if we put modified URL in browser the error page will be reflected

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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](#)

☐ 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.

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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](#)

Bucket ARN

arn:aws:s3:::task-assignment-s3

Policy

```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid": "PublicReadGetObject",
6       "Effect": "Allow",
7       "Principal": "*",
8       "Action": [
9         "s3:GetObject"
10      ],
11      "Resource": [
12        "arn:aws:s3:::task-assignment-s3/*"
13      ]
14    }
15  ]
16 }
```

Edit statement

Select a statement

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

+ Add new statement

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Upload succeeded

View details below.

s3://task-assignment-s3

2 files, 250.5 KB (100.00%)

0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (2 Total, 250.5 KB)

Find by name

< 1 >

Name	Folder	Type	Size	Status	Error
error.html	-	text/html	7.3 KB	Succeeded	-
index.html	-	text/html	243.1 KB	Succeeded	-

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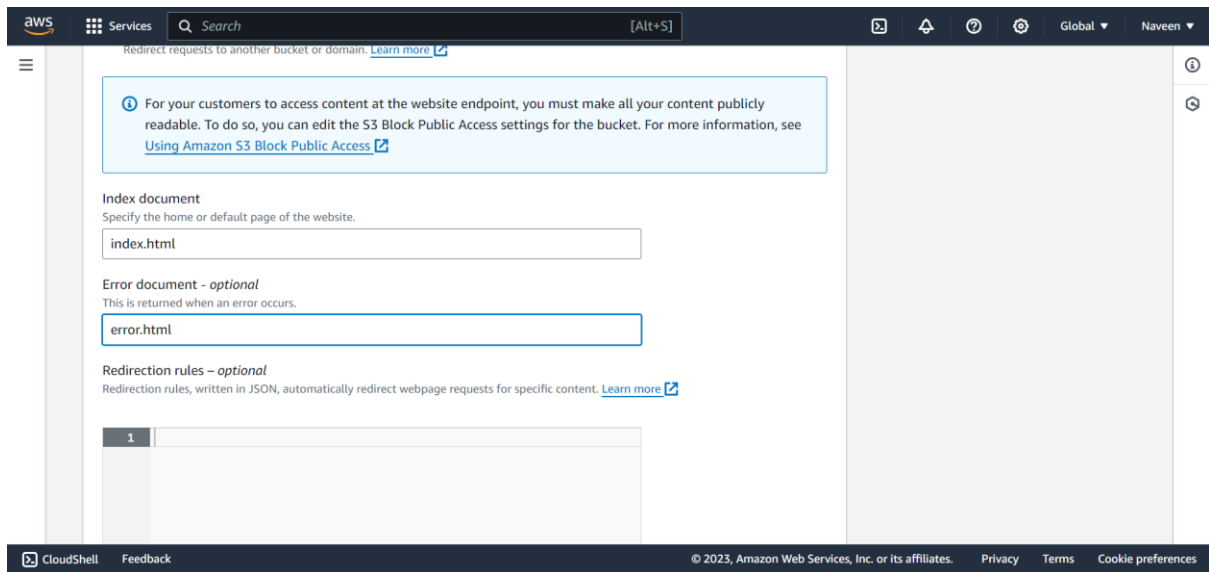
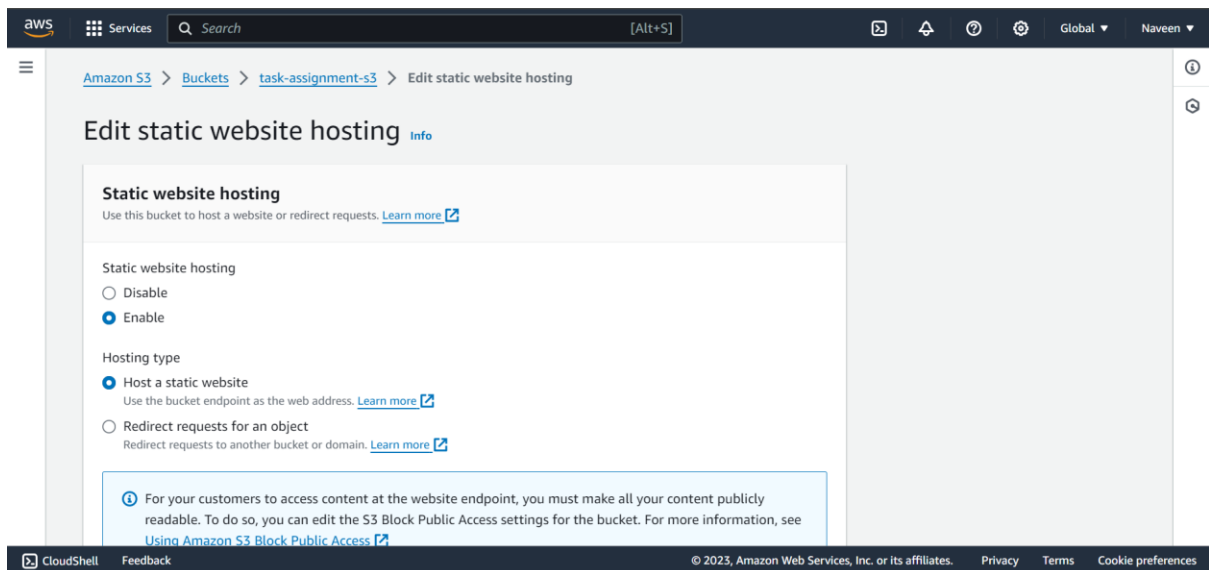
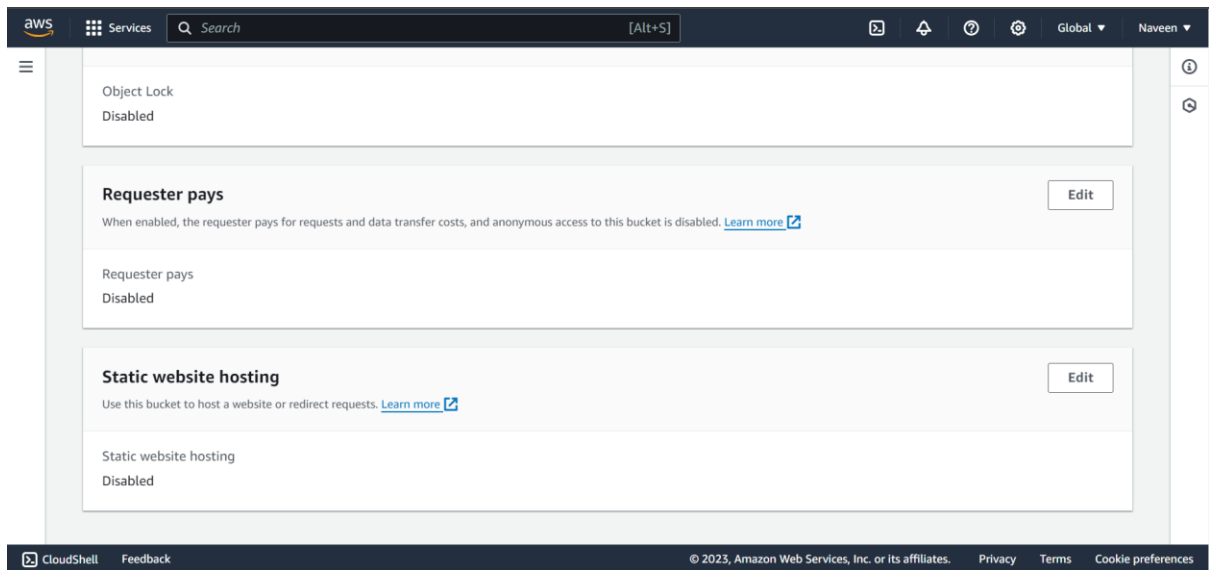
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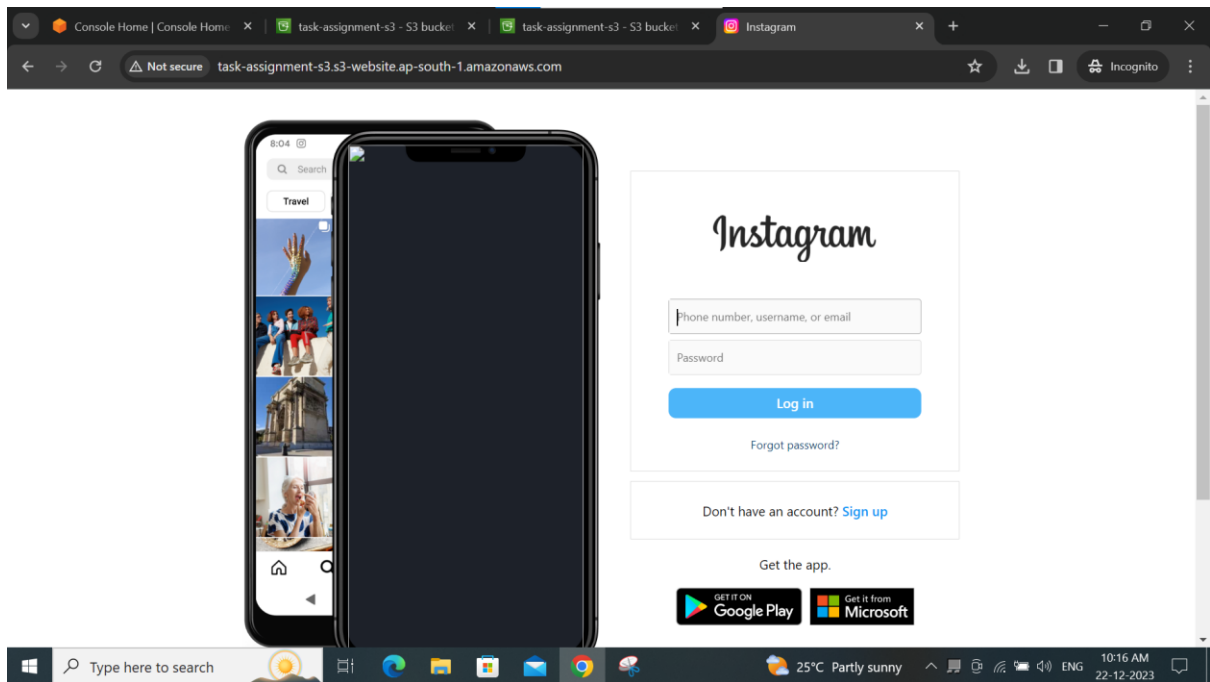
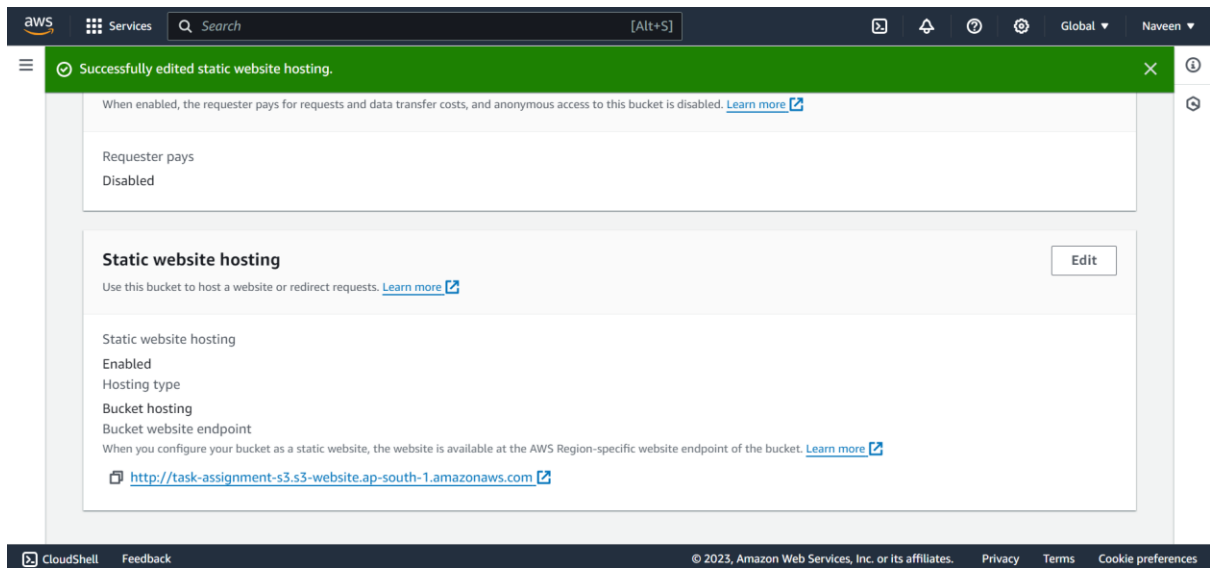
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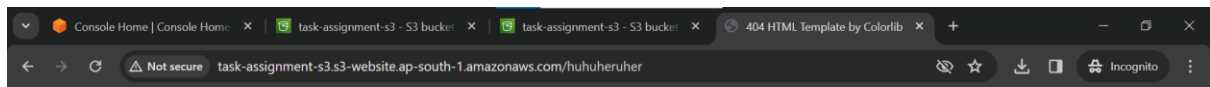
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Oops! Page not found

404

we are sorry, but the page you requested was not found



2. Add a lifecycle rule for the bucket:

- a. Transition from standard to standard-AI in 60 days
- b. Expiration in 200 days

a. Steps

- Go inside the bucket and click Management
- Click create lifecycle rules and provide a lifecycle rule name
- Rule scope click apply all object in bucket
- Select lifecycle rule action as move current version of object between storage classes
- Choose the storage class transition as standard-AI and enter 60 days in days after object creation
- click create rule

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Amazon S3 > Buckets > task-assignment-s3 > Lifecycle configuration > Create lifecycle rule

Create lifecycle rule

Lifecycle rule configuration

Lifecycle rule name
task-rule
Up to 255 characters

Choose a rule scope

☐ Limit the scope of this rule using one or more filters

☒ Apply to all objects in the bucket

⚠ Apply to all objects in the bucket
If you want the rule to apply to specific objects, you must use a filter to identify those objects. Choose "Limit the scope of this rule using one or more filters". [Learn more](#)

☒ I acknowledge that this rule will apply to all objects in the bucket.

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Amazon S3 > Buckets > task-assignment-s3 > Lifecycle configuration > Create lifecycle rule

Review transition and expiration actions

Choose storage class transitions
Standard-IA
Days after object creation
60
Remove
Add transition

Current version actions

Day 0

- Objects uploaded

↓

Day 60

- Objects move to Standard-IA

Noncurrent versions actions

Day 0

No actions defined.

Cancel Create rule

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b. Steps

- Go inside the bucket and click Management
- Click create lifecycle rules and provide a lifecycle rule name
- Rule scope click apply all object in bucket
- Select lifecycle rule action as expire current versions of objects
- Enter 200 days in days after object creation
- click create rule

The screenshot shows the AWS console interface for creating a lifecycle rule. The breadcrumb trail is: Amazon S3 > Buckets > task-assignment-s3 > Lifecycle configuration > Create lifecycle rule. The main heading is 'Create lifecycle rule' with an 'Info' link. Below this is the 'Lifecycle rule configuration' section. It contains a text input for 'Lifecycle rule name' with the value 'task-expire' and a note 'Up to 255 characters'. Under 'Choose a rule scope', the radio button 'Apply to all objects in the bucket' is selected. A yellow warning box states: 'Apply to all objects in the bucket. If you want the rule to apply to specific objects, you must use a filter to identify those objects. Choose "Limit the scope of this rule using one or more filters". [Learn more](#)'. At the bottom of the configuration section, there is a checkbox 'I acknowledge that this rule will apply to all objects in the bucket.' which is checked. The footer of the console shows 'CloudShell', 'Feedback', and copyright information for Amazon Web Services, Inc. or its affiliates.

The screenshot shows the 'Review transition and expiration actions' section of the AWS console. It features a heading 'Expire current versions of objects' with a descriptive paragraph: 'For version-enabled buckets, Amazon S3 adds a delete marker and the current version of an object is retained as a noncurrent version. For non-versioned buckets, Amazon S3 permanently removes the object. [Learn more](#)'. Below this is a text input for 'Days after object creation' with the value '200'. The main section is titled 'Review transition and expiration actions' and is divided into two columns. The left column, 'Current version actions', shows a timeline starting at 'Day 0' with the action 'Objects uploaded', followed by a downward arrow, and then at 'Day 200' with the action 'Objects expire'. The right column, 'Noncurrent versions actions', shows 'Day 0' with the text 'No actions defined.'

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The lifecycle configuration was updated. Lifecycle rule "task-expire" was successfully added.

It may take some time for the configuration to be updated. Press the refresh button if changes to the rule are not displayed.

Lifecycle configuration

Info

To manage your objects so that they are stored cost effectively throughout their lifecycle, configure their lifecycle. A lifecycle configuration is a set of rules that define actions that Amazon S3 applies to a group of objects. Lifecycle rules run once per day.

Lifecycle rules (2)

Use lifecycle rules to define actions you want Amazon S3 to take during an object's lifetime such as transitioning objects to another storage class, archiving them, or deleting them after a specified period of time. [Learn more](#)

View details

Edit

Delete

Actions

Create lifecycle rule

Find lifecycle rules by name

< 1 >

	Lifecycle rul...	Status	Scope	Current vers...	Noncurrent ...	Expired obje...	Incomplet...
<input type="radio"/>	task-rule	Enabled	Entire bucket	Transition to Standar	-	-	-
<input type="radio"/>	task-expire	Enabled	Entire bucket	Expires	-	-	-

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