2100031668
G. Pravinya

CLOUD AND SERVERLESS COMPUTING PROJECT

SERVERLESS MEDIA ORCHESTRATION

Aim:

Building a Serverless Video channeling stream using Amazon S3 bucket and CloudFront

Description:

Building a Serverless Video Channeling Stream with Amazon S3 bucket and CloudFront involves storing video content in an S3 bucket and configuring it for static website hosting. CloudFront is then set up with the S3 bucket as the origin, distributing content globally with low latency via edge locations. Permissions on the S3 bucket are adjusted for appropriate access control, and SSL/TLS is enabled for secure communication. Customization of CloudFront settings like cache behavior and TTL ensures optimal performance. Integrating the CloudFront URL into a video player enables seamless streaming for viewers.

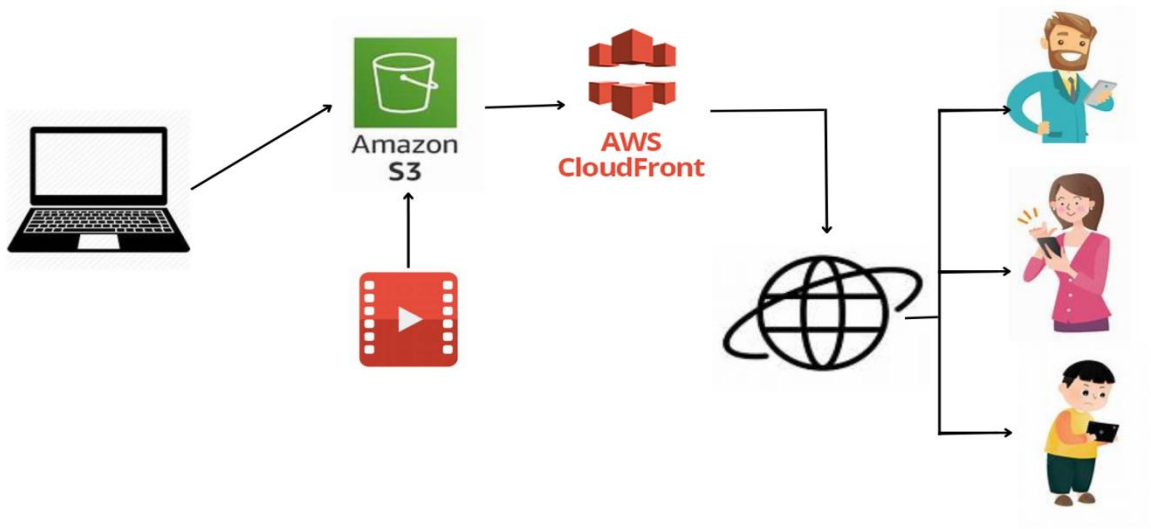
Services Used:

1) Amazon S3 Bucket:
   - Create an S3 bucket to store video content.
   - Configure bucket permissions for access control.
   - Enable static website hosting on the bucket.
   - Upload video files to the S3 bucket.
   - Set up CloudFront distribution with S3 bucket as origin.
   - Customize CloudFront settings for optimal performance.
   - Integrate CloudFront URL with video player.
   - Monitor performance and scale automatically with CloudFront.

2) CloudFront:
   - Set up CloudFront to deliver video content globally.
   - Configure CloudFront distribution with S3 bucket as origin.
   - Customize cache behaviour and TTL settings for efficiency.
   - Enable SSL/TLS for secure communication.
   - Utilize edge locations for low-latency content delivery.
   - Embed CloudFront URL into video player for seamless streaming.
   - Monitor performance through CloudWatch metrics and logs.
   - Scale automatically to handle increased demand.

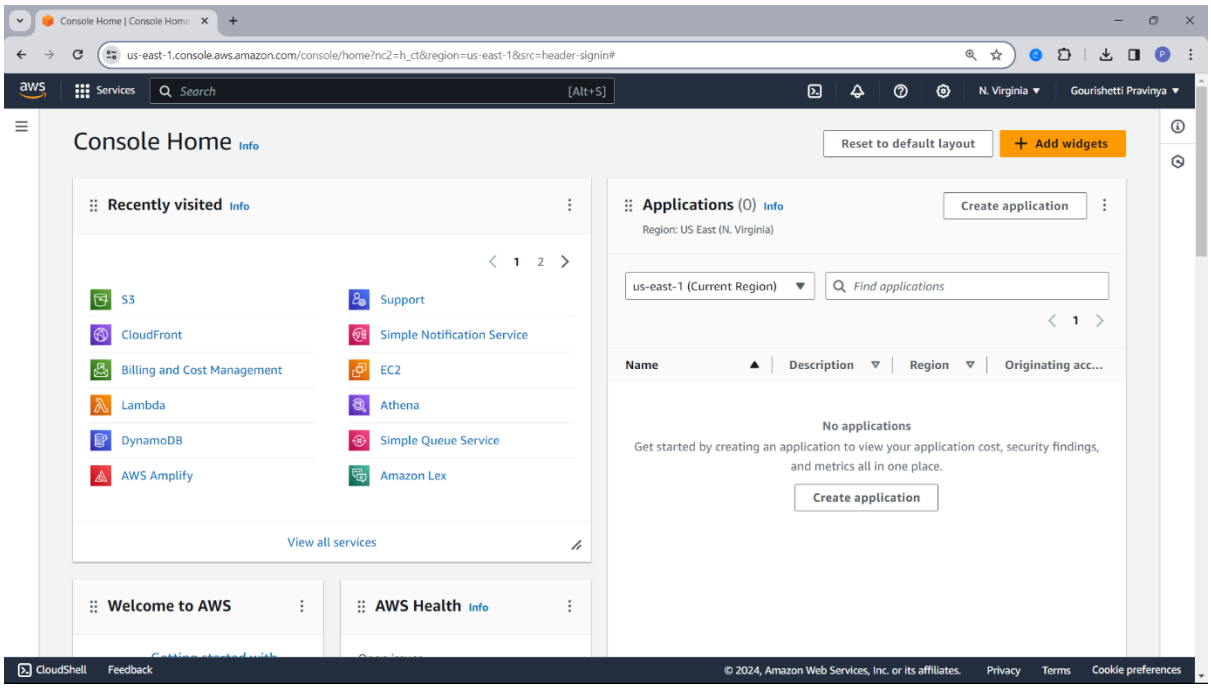
2100031668
G. Pravinya

Architecture:

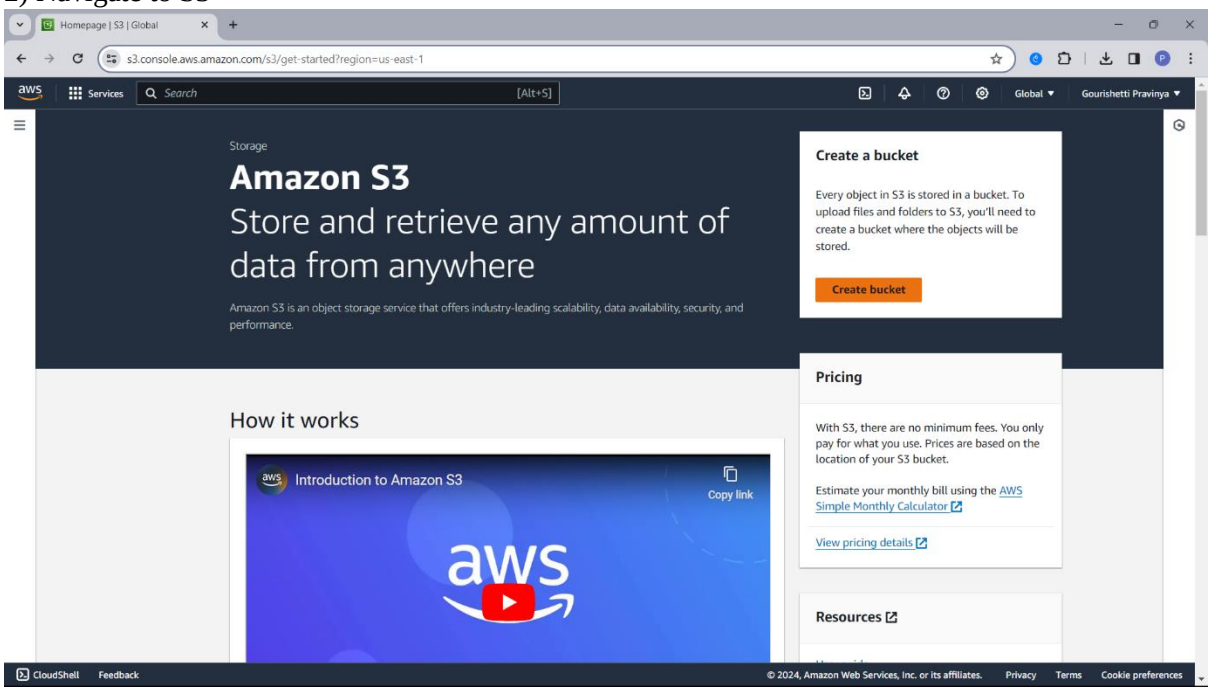


Step-By-Step Procedure:

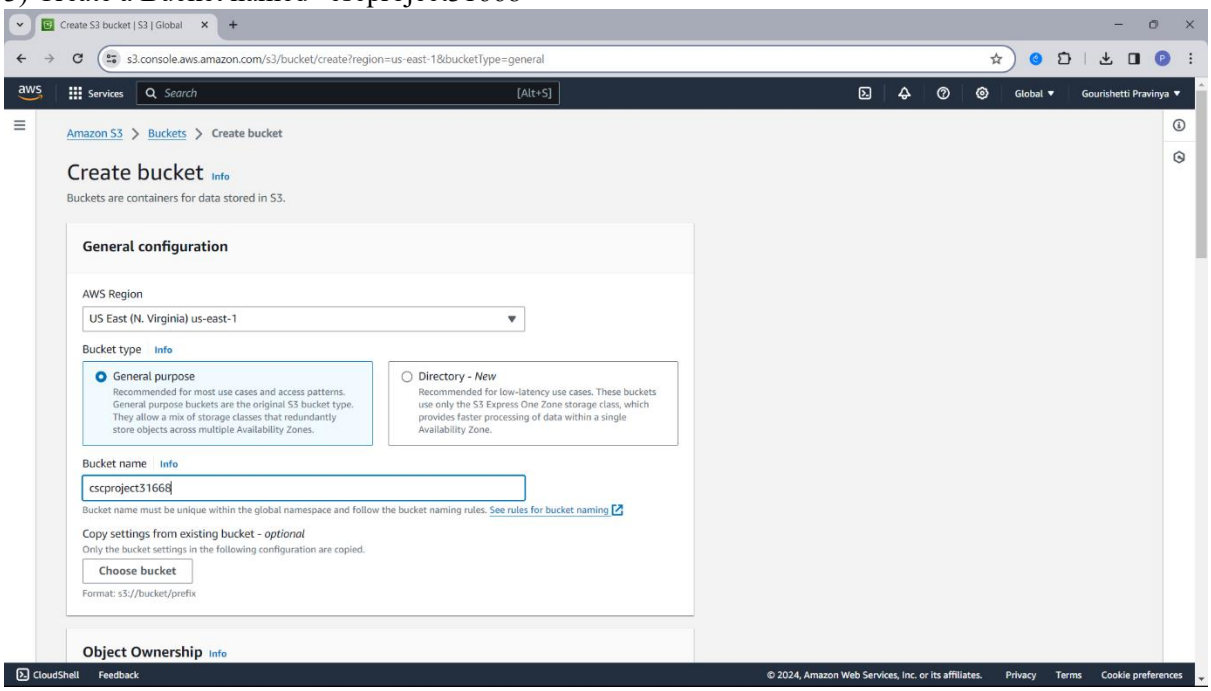
1)Sign in to AWS console



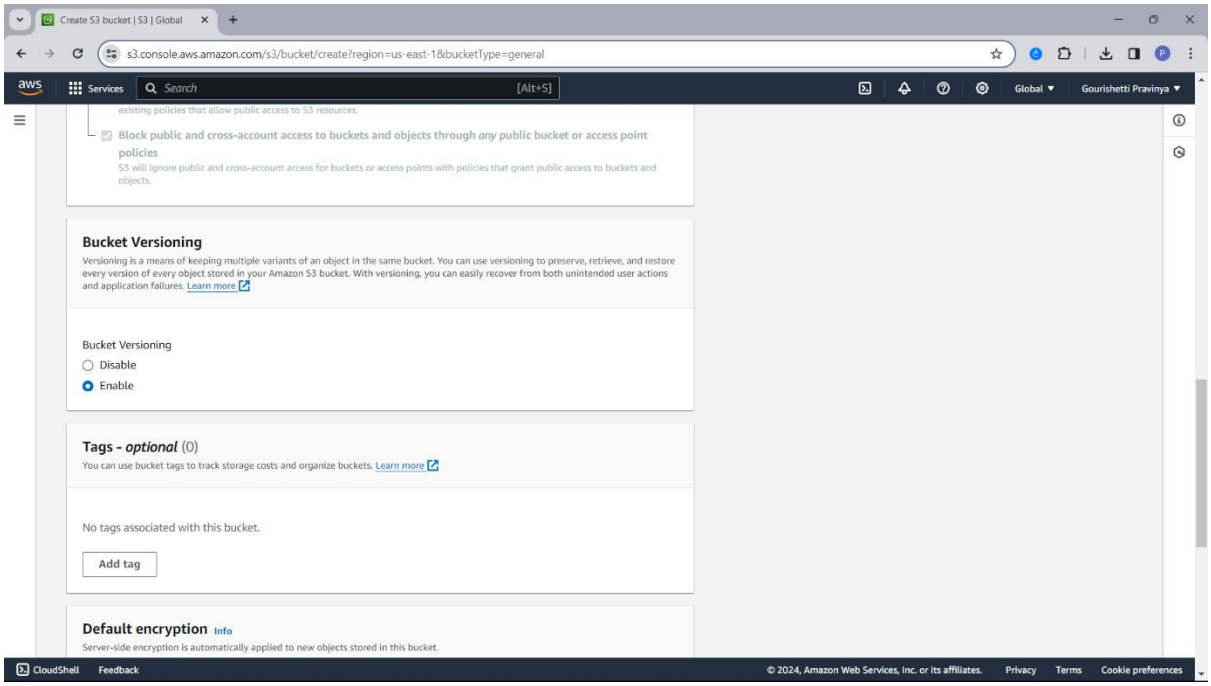
2) Navigate to S3



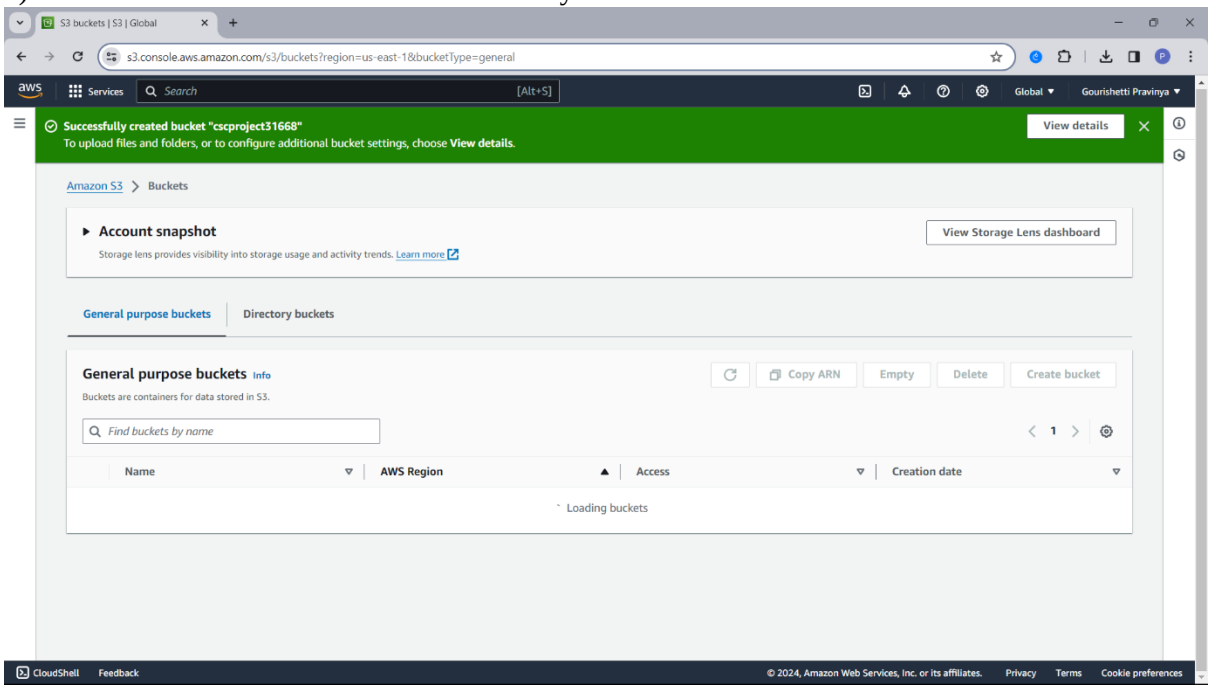
3) Create a Bucket named “cscproject31668”



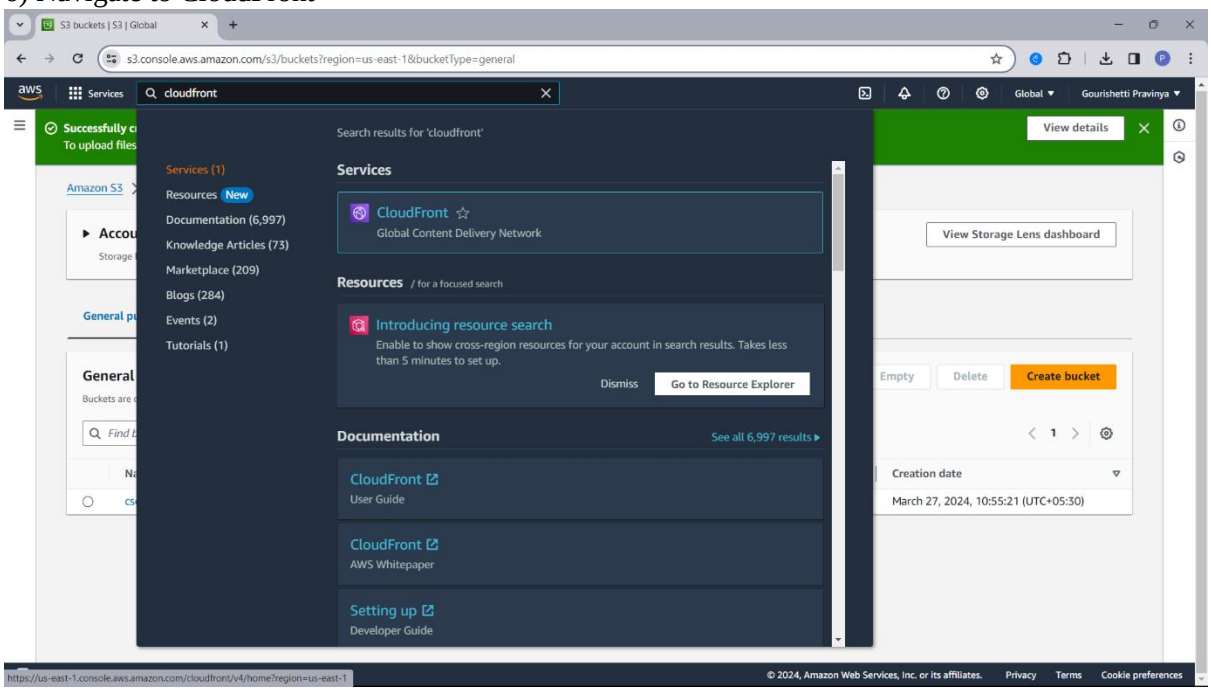
4) Enable bucket versioning as it provides protection against accidental deletion



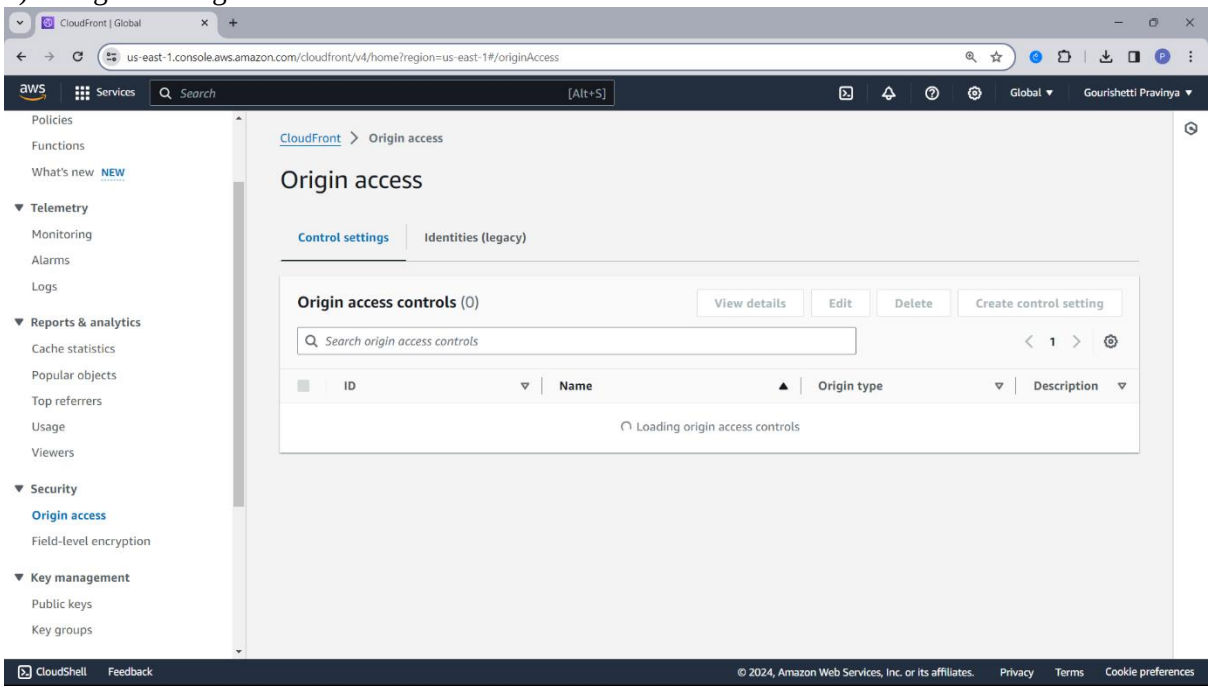
5) Click on create bucket. Bucket is successfully created



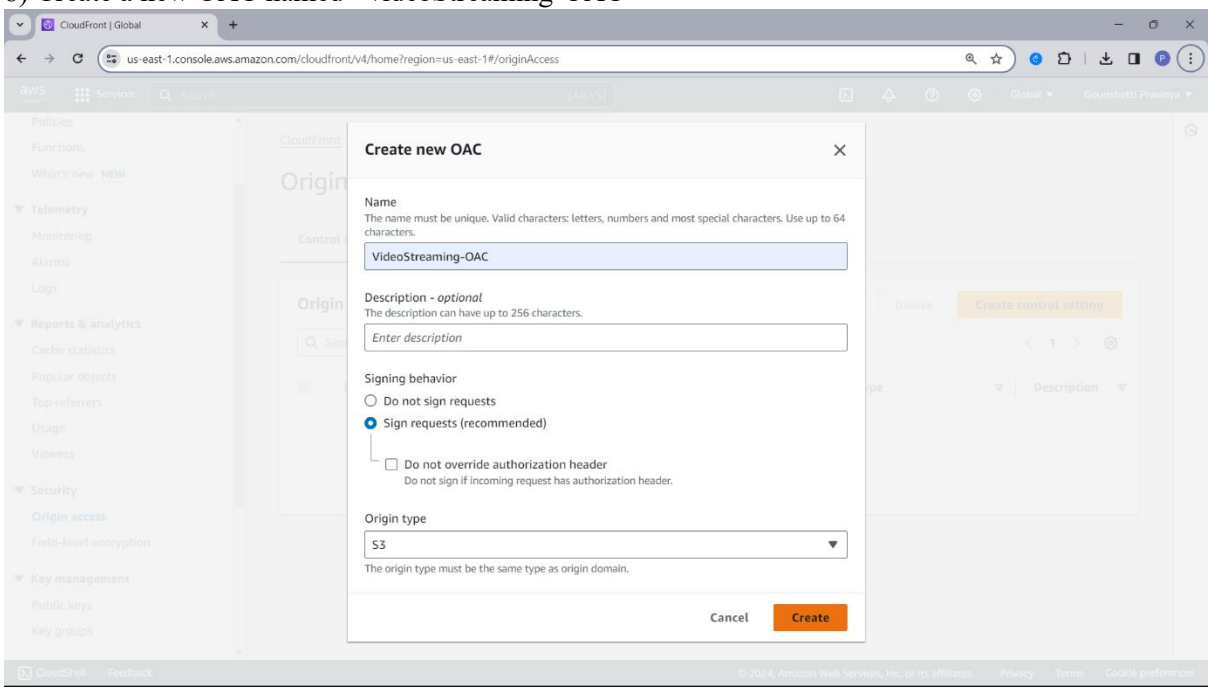
6) Navigate to CloudFront



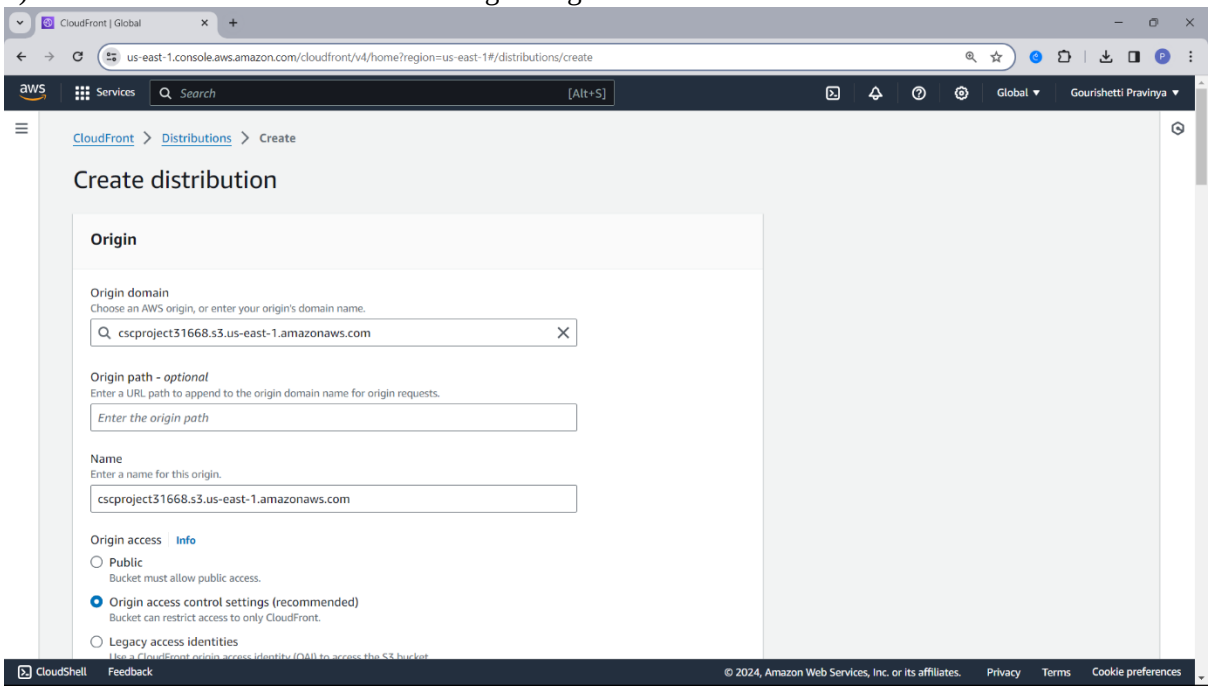
7) Navigate to origin access in CloudFront



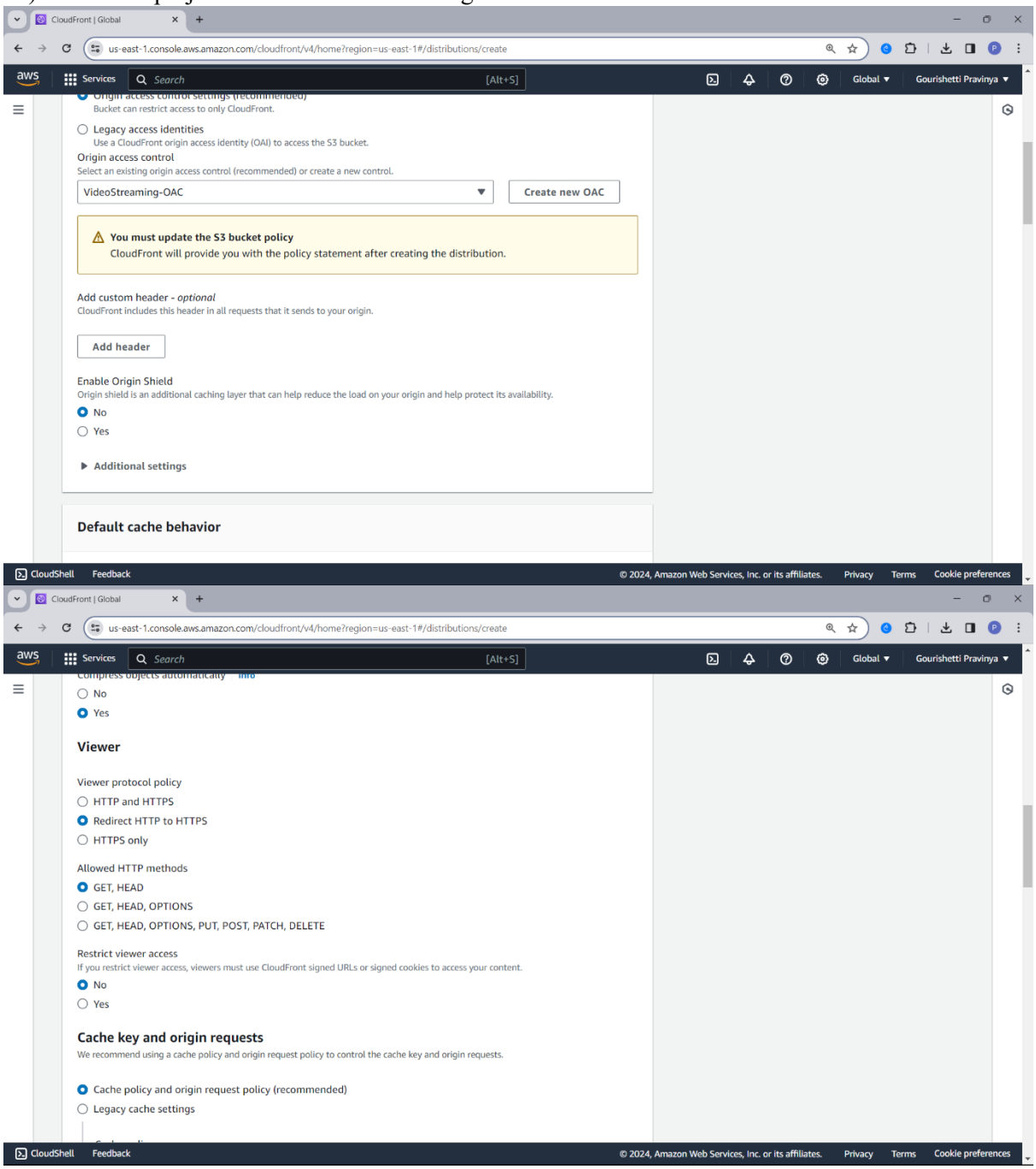
8) Create a new OAC named “VideoStreaming-OAC”



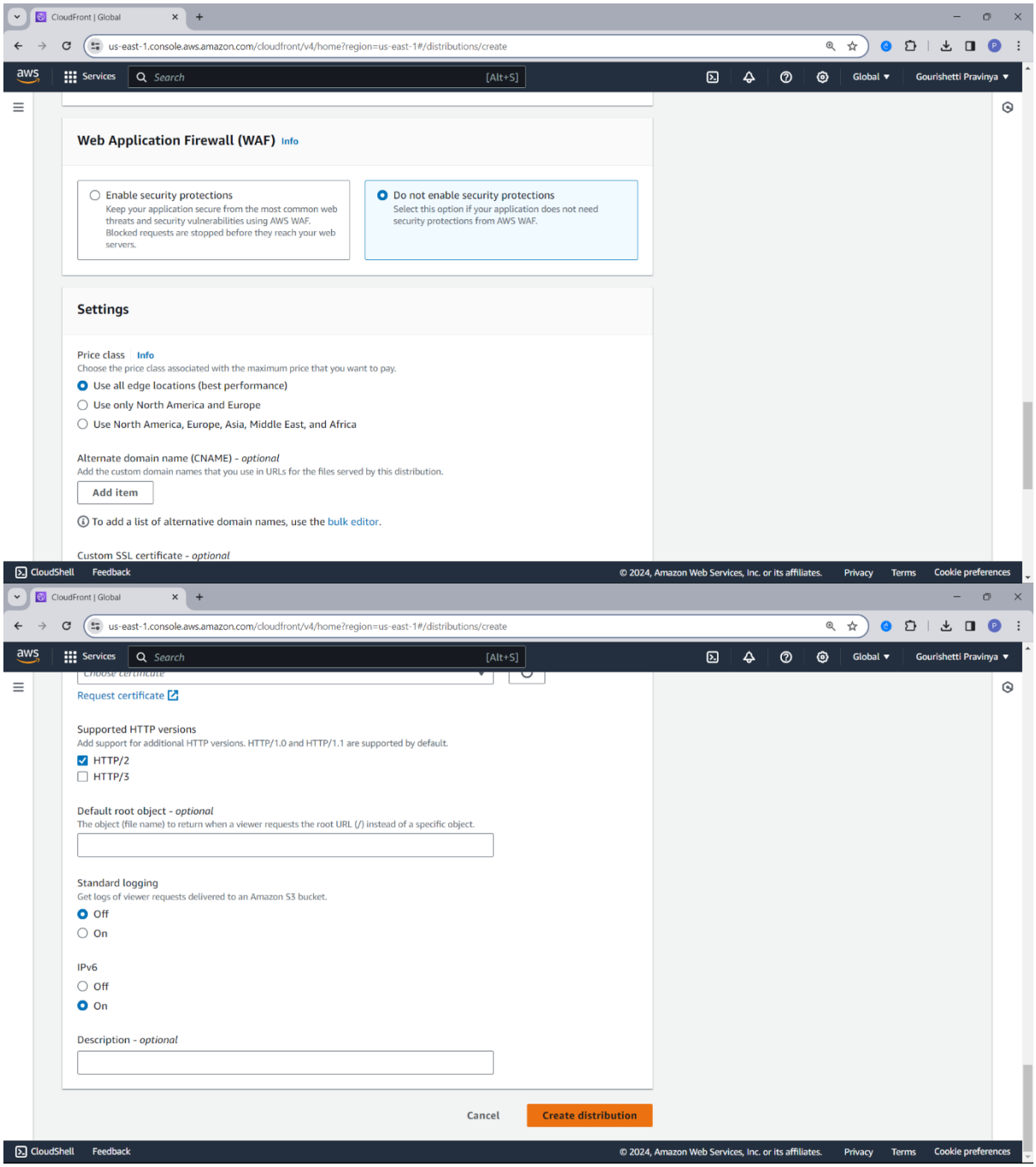
9) Create a distribution with the following configurations



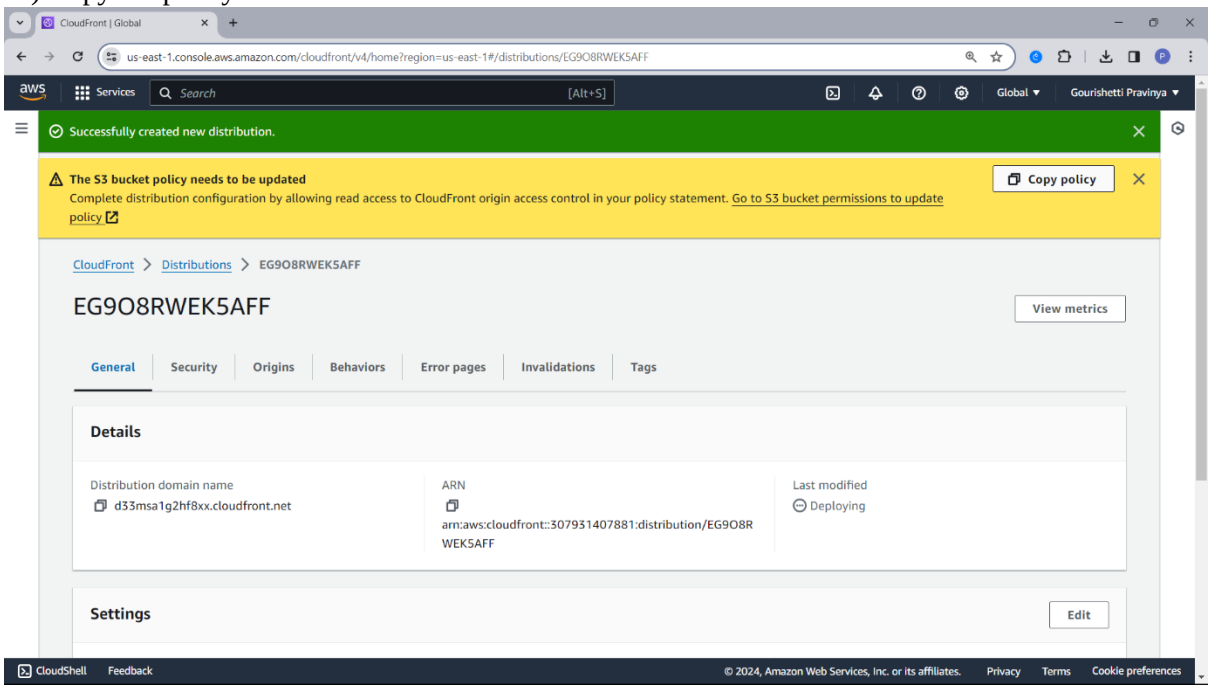
10) Select “cscproject31668” s3 bucket as origin domain



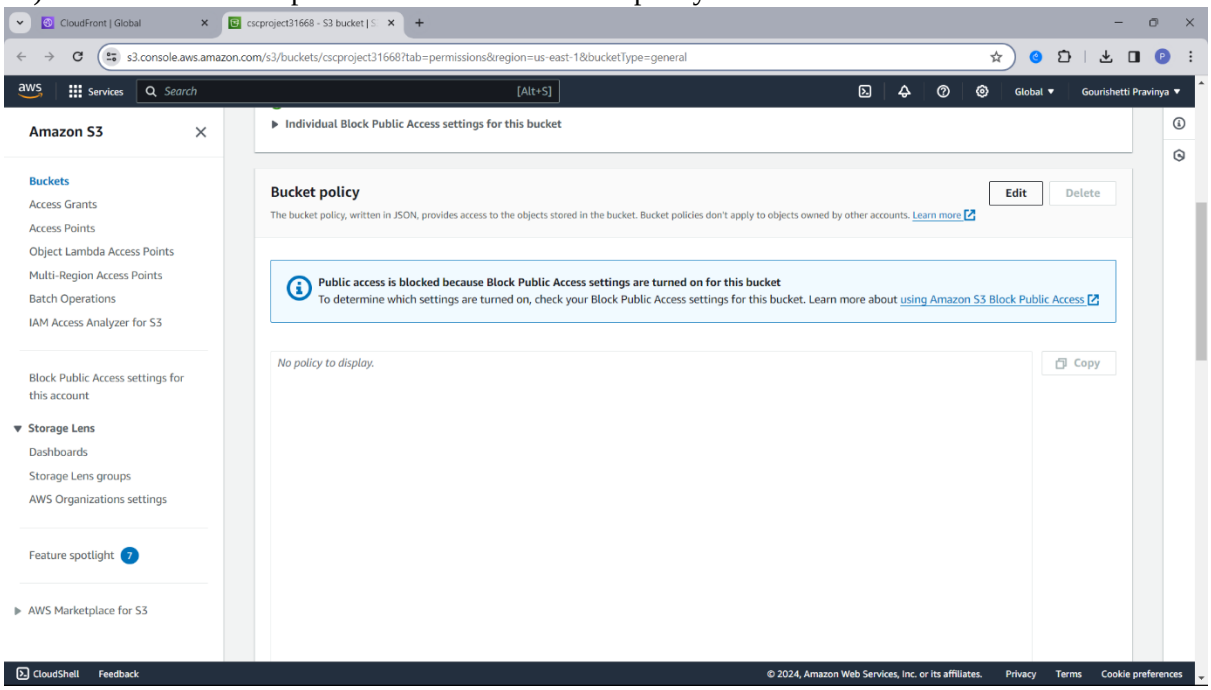
2100031668
G. Pravinya



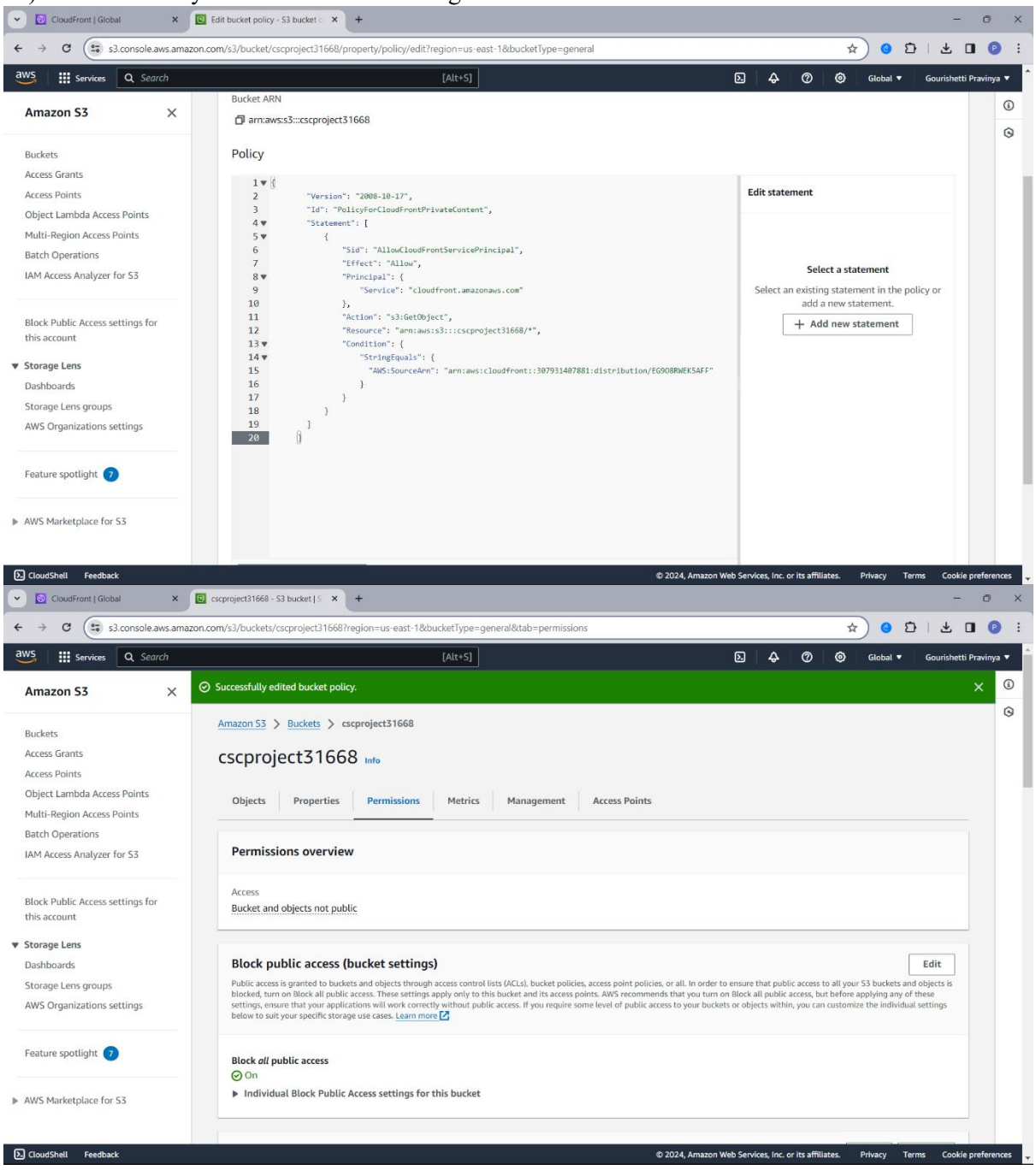
11) Copy the policy



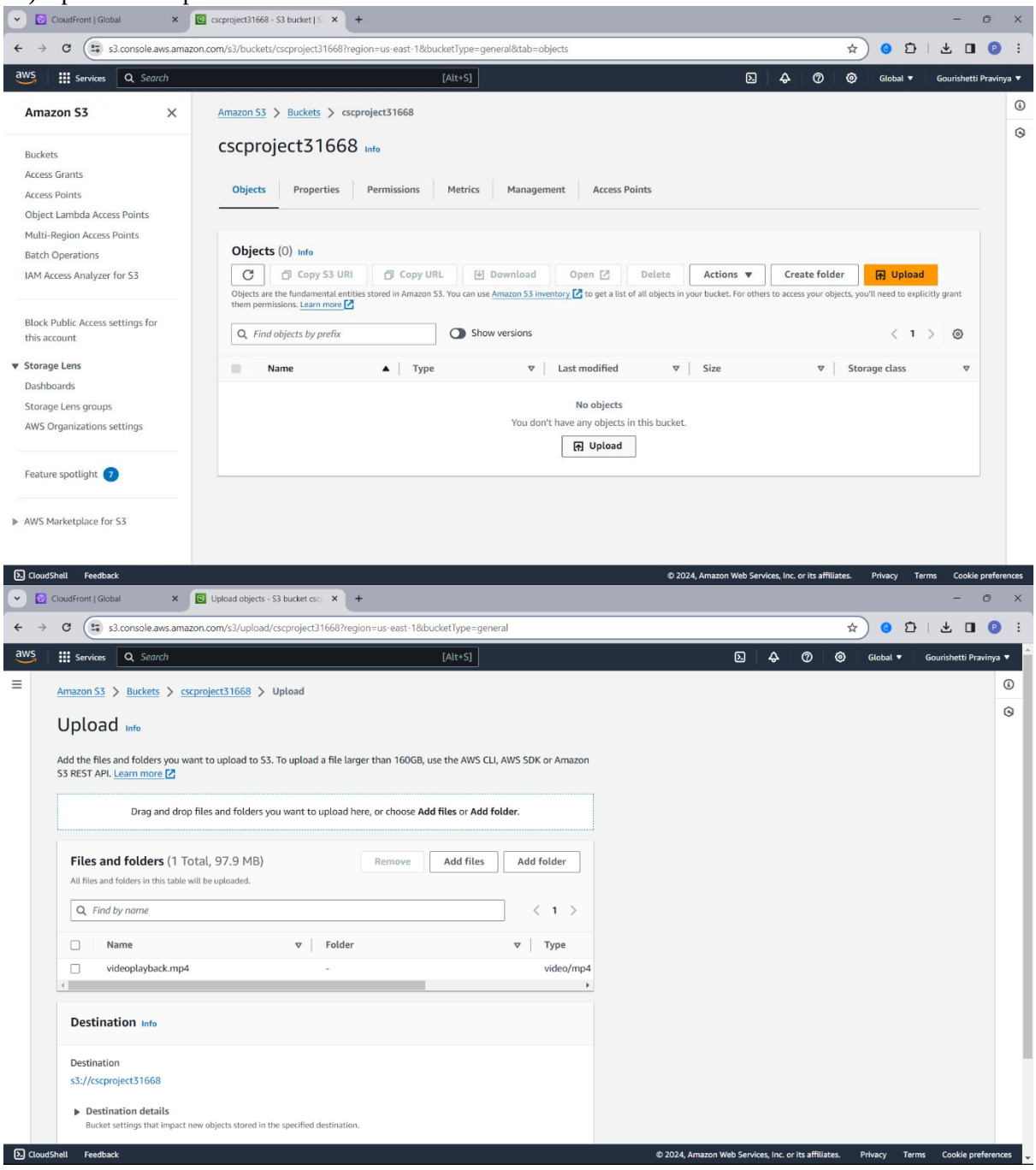
12) Go to bucket and In permissions tab click on edit policy

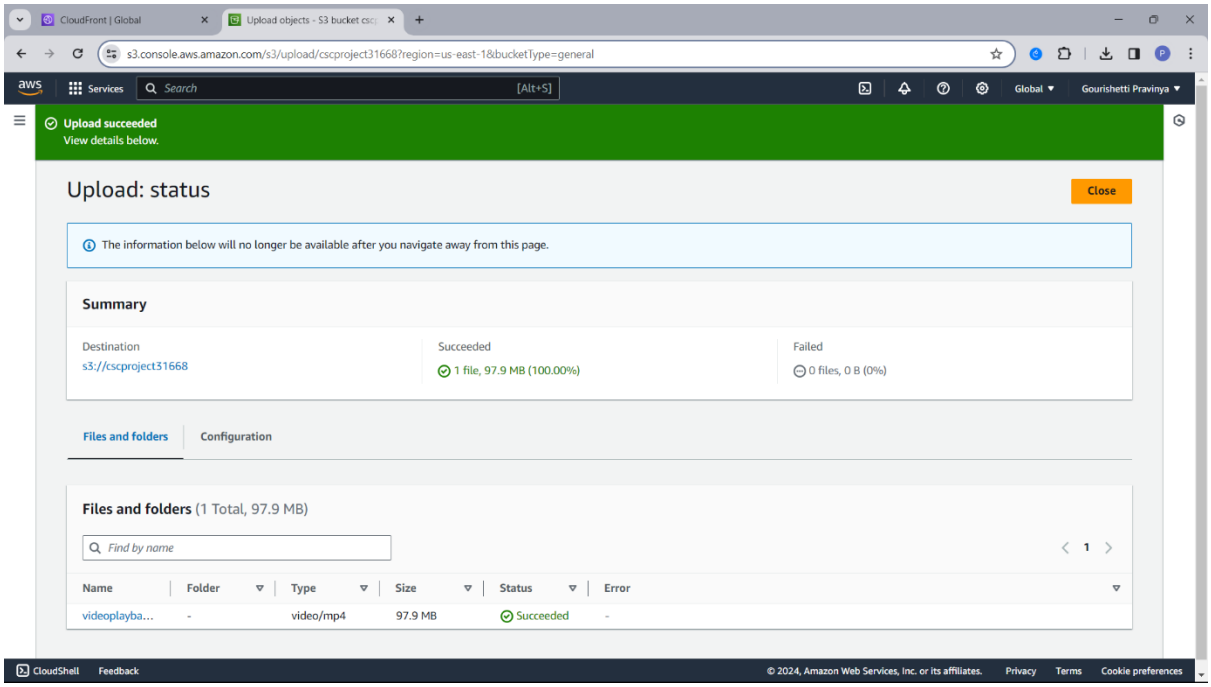


13) Paste the Policy and click on “save changes”

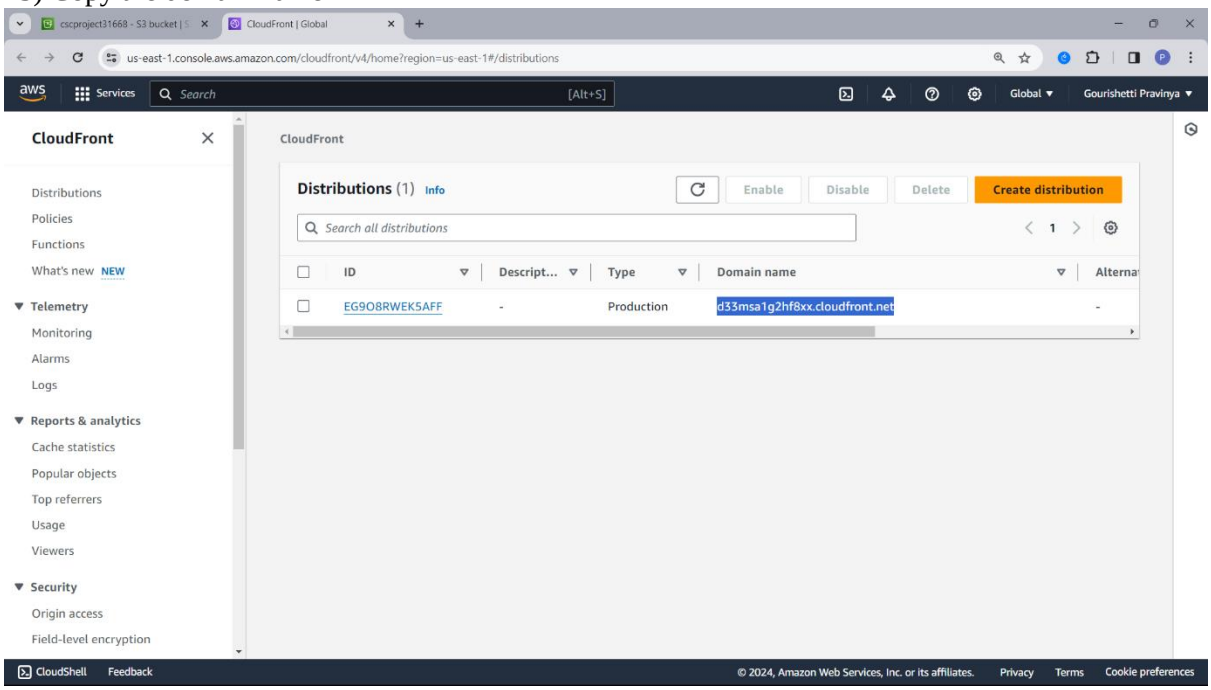


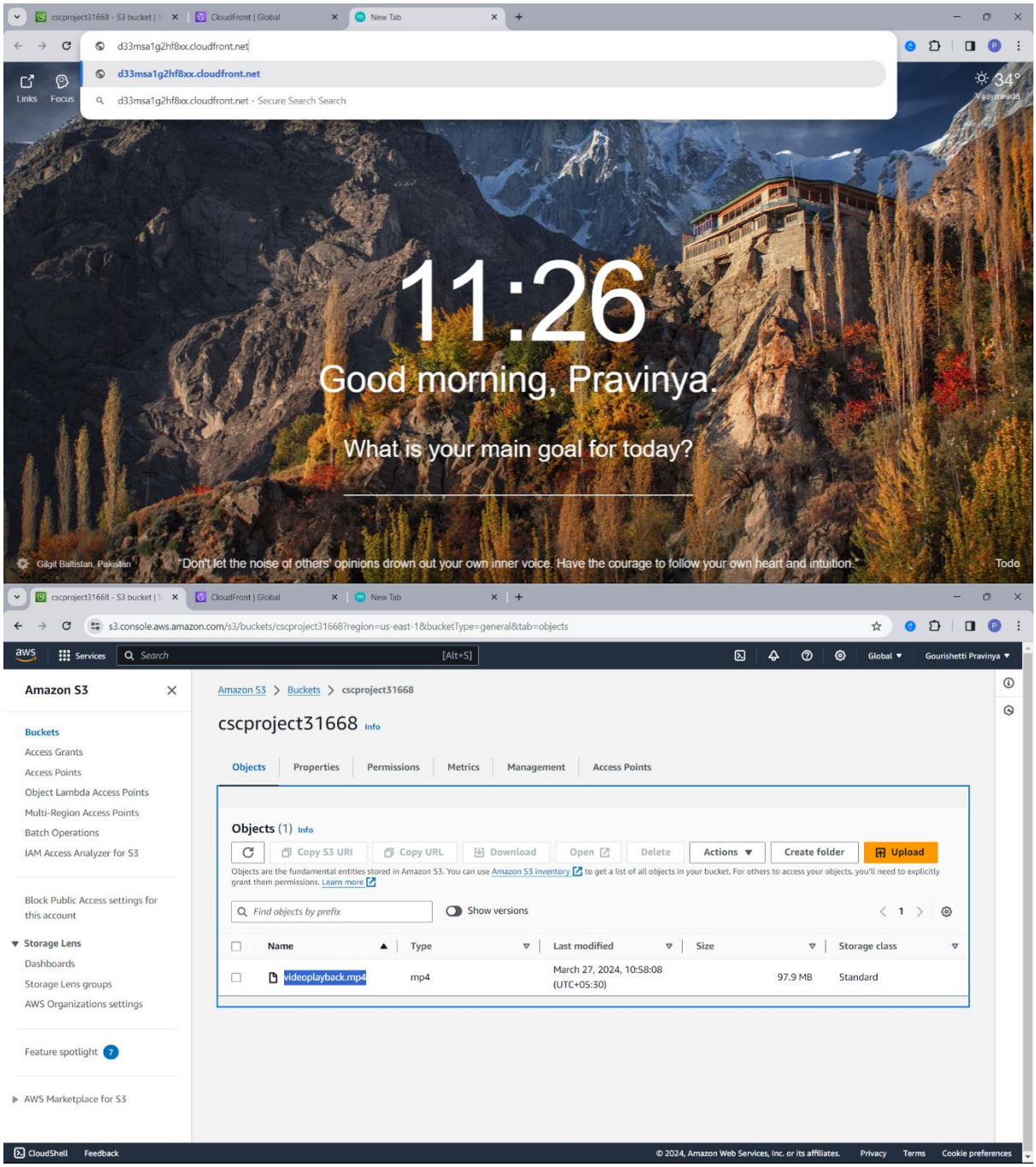
14) Upload the Mp4 Video file in to the bucket





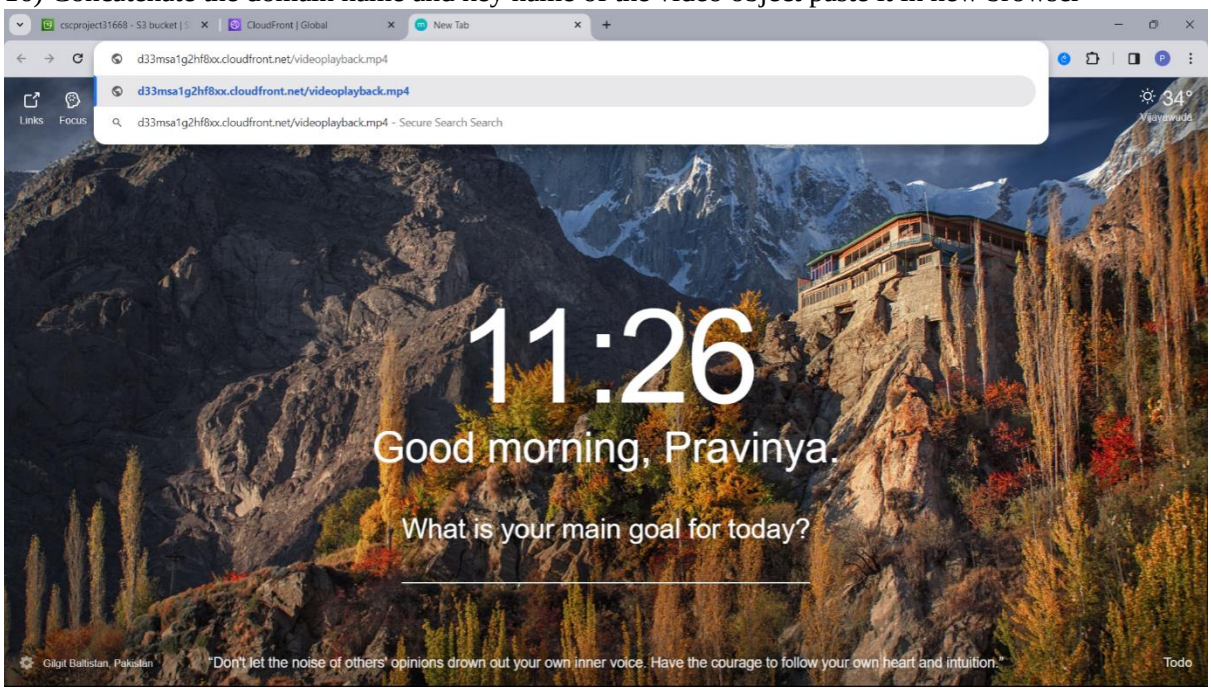
15) Copy the domain name




d33msa1g2hf8xx.cloudfront.net
d33msa1g2hf8xx.cloudfront.net - Secure Search Search
Links
Focus
34°
11:26
Good morning, Pravinya.
What is your main goal for today?
Gilgit Baltistan, Pakistan
"Don't let the noise of others' opinions drown out your own inner voice. Have the courage to follow your own heart and intuition."
Todo
s3.console.aws.amazon.com/s3/buckets/cscproject31668?region=us-east-1&bucketType=general&tab=objects
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
AWS Organizations settings
Feature spotlight
AWS Marketplace for S3
Amazon S3 > Buckets > cscproject31668
cscproject31668 Info
Objects
Properties
Permissions
Metrics
Management
Access Points
Objects (1) Info
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Find objects by prefix
Show versions
Name
Type
Last modified
Size
Storage class
videoplayback.mp4
mp4
March 27, 2024, 10:58:08 (UTC+05:30)
97.9 MB
Standard
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

2100031668
G. Pravinya

16) Concatenate the domain name and key name of the video object paste it in new browser



17) Serverless Media Orchestration is built successfully