STATIC WEBSITE HOSTING USING AWS S3 & CLOUDFRONT

AWS PROJECT

PRESENTED BY :

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INTRODUCTION

- What is a static website?

A static website consists of fixed web pages built with HTML, CSS, and JavaScript, delivering the same content to all users without server-side processing. These pages are pre-built and served as-is from the server, ensuring faster load times and enhanced security.

- What is AWS S3?

Amazon S3 (Simple Storage Service) is a cloud-based object storage service offered by Amazon Web Services (AWS) that provides scalable, secure, and durable storage for data. It enables users to store and retrieve any amount of data at any time, from anywhere on the web.

- What is Amazon CloudFront?

Amazon CloudFront is a content delivery network (CDN) service that accelerates the delivery of static and dynamic web content to users by caching it at edge locations worldwide. This reduces latency and improves performance by serving content from the nearest server to the user.

- Purpose of combining S3 + CloudFront

Combining S3 with CloudFront delivers static content globally with ultra-low latency and high throughput by caching S3 objects at edge locations. It also enables HTTPS on custom domains, tighter access control, and often lowers data transfer costs compared to serving directly from S3

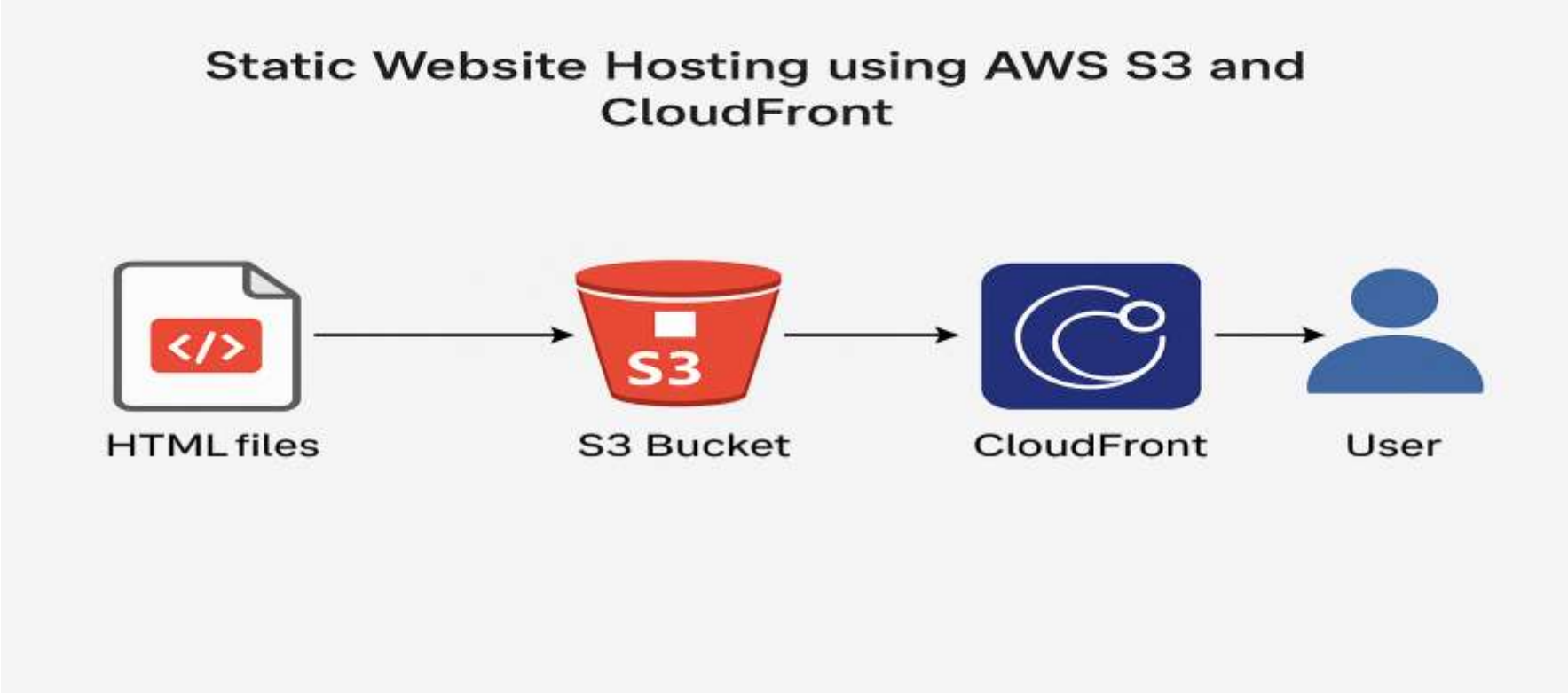
OBJECTIVE

- To host a **static website** using **Amazon S3**.
- To use **Amazon CloudFront** for fast and secure content delivery.
- To understand the **workflow of deploying web content on the cloud**.
- To gain hands-on experience with **AWS services** like S3, CloudFront, and IAM.
- To explore how **CDNs (Content Delivery Networks)** improve website performance globally.
- To learn basic **permission management and bucket policies** for public access.

ARCHITECTURE DIAGRAM

- A simple diagram showing:

  HTML files → S3 Bucket → CloudFront → User



TOOLS & SERVICES USED

- Amazon S3
- CloudFront
- HTML/CSS
- AWS Console

STEP-BY-STEP WORKFLOW

1. Create a Note of webpage code
2. Create an S3 Bucket and upload static website files
3. Create a **CloudFront distribution** pointing to the S3 bucket
4. Configure CloudFront settings
5. Access the site via the **CloudFront domain URL**

IMPLEMENTATION

STEP 1 :

Search webpage on google for which you need to create website.

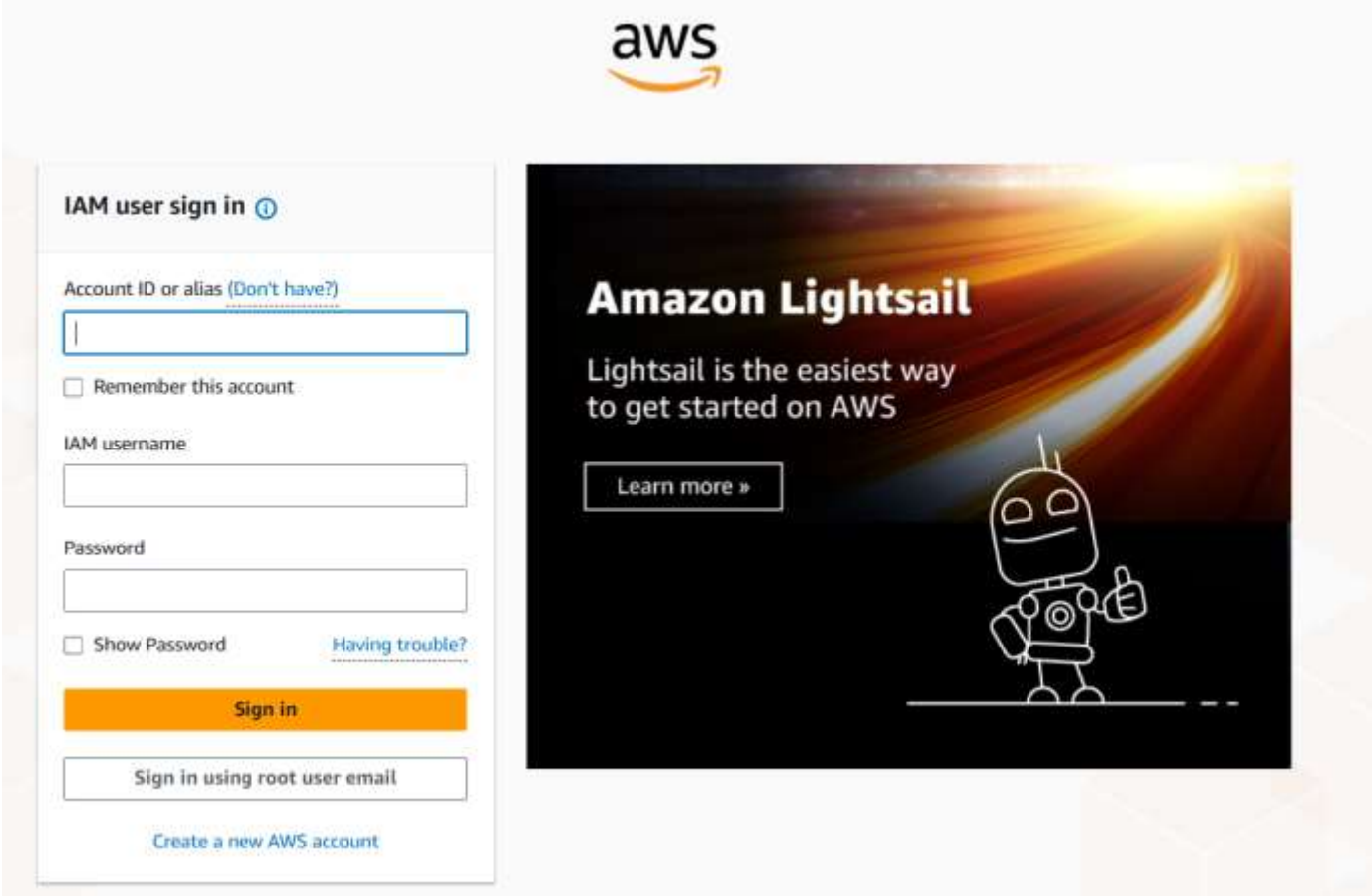
1. right-click somewhere on the Web page and select "View Source.
2. Copy Code in Notepad.
3. Save as, Name of the file select file type as All.

STEP 2 :

1. Login to AWS Management Console.

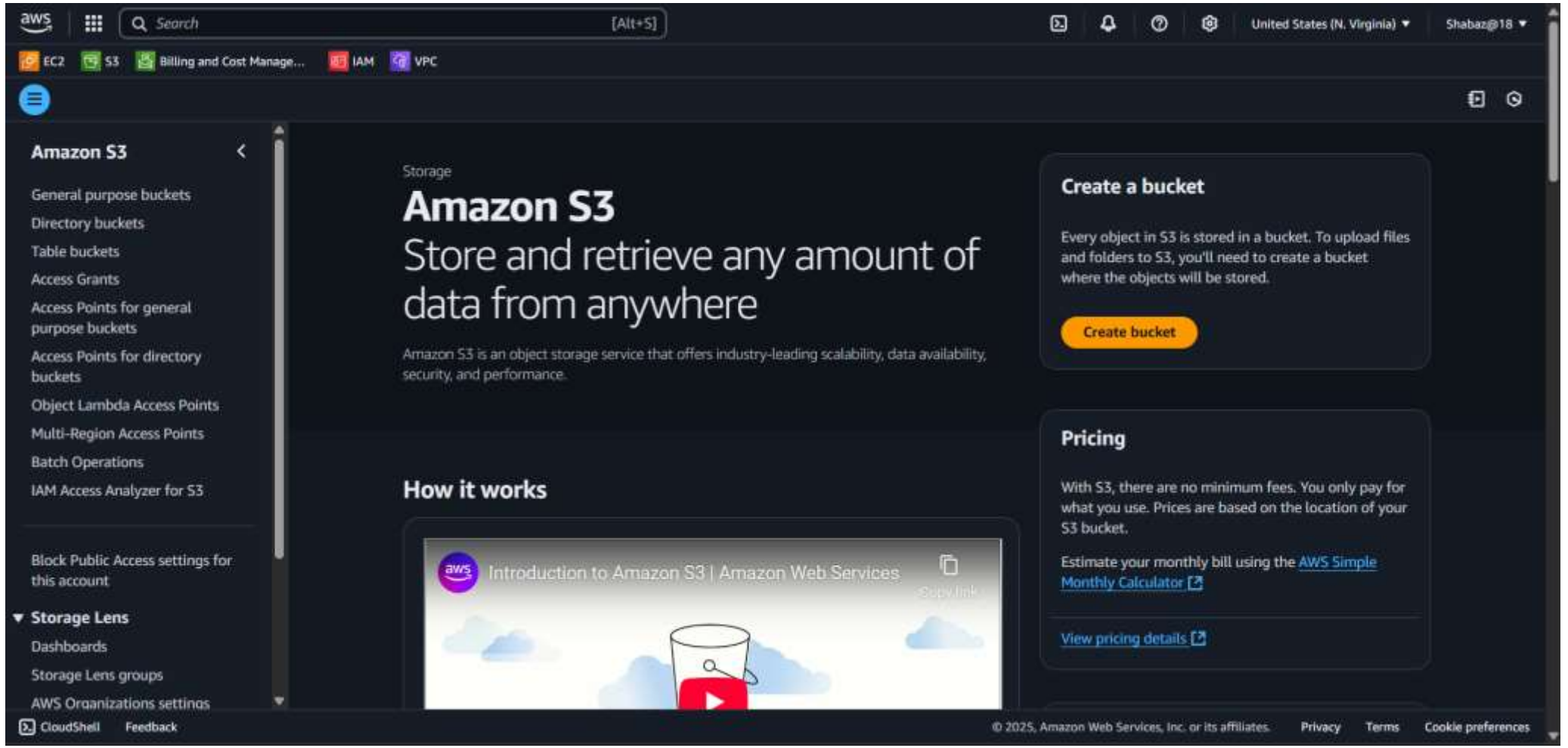
Link: https://aws.amazon.com/console/

2. Login as Root Username and Password



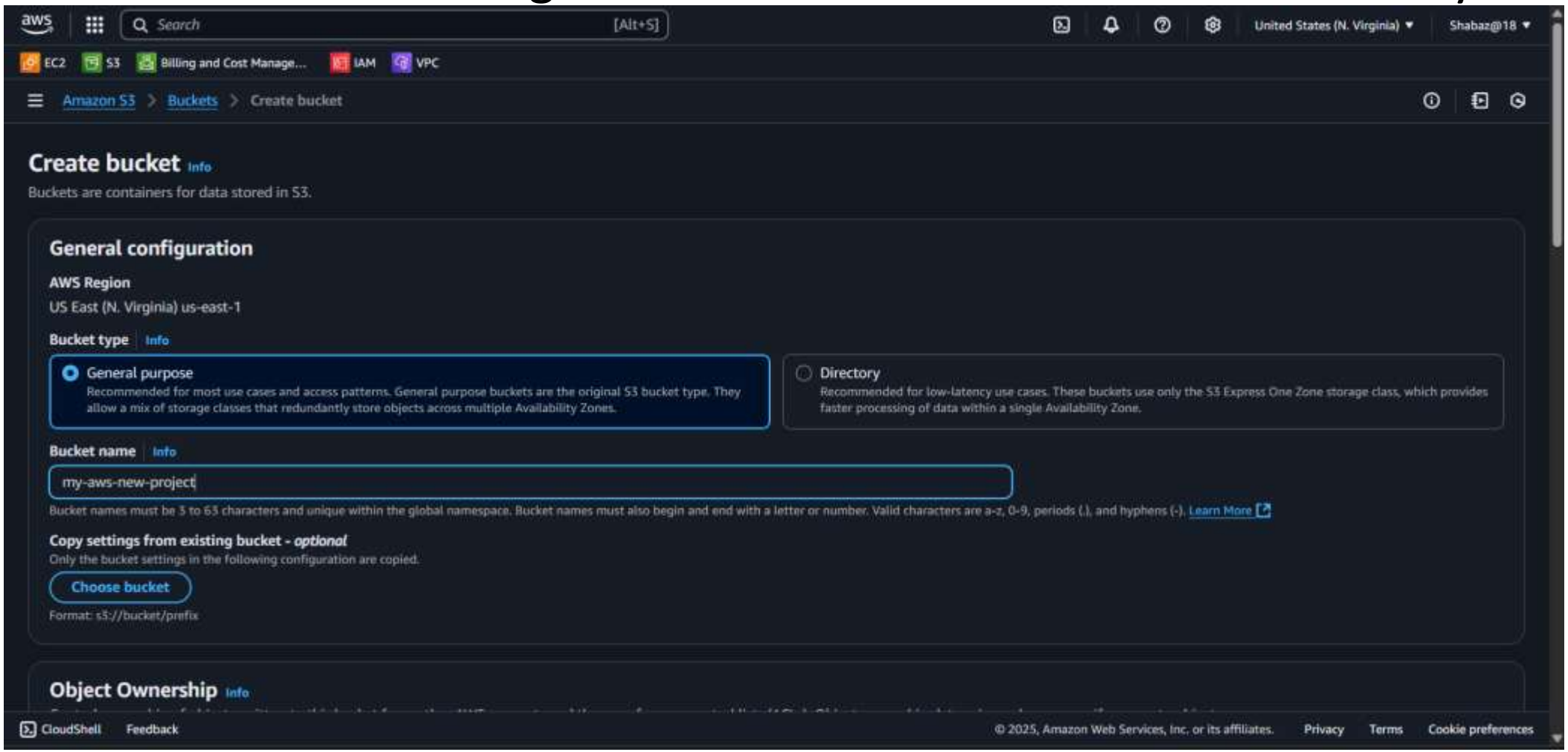
STEP 3:

- Navigate to S3 Bucket (Simple Storage Service)
- And Click on Create Bucket

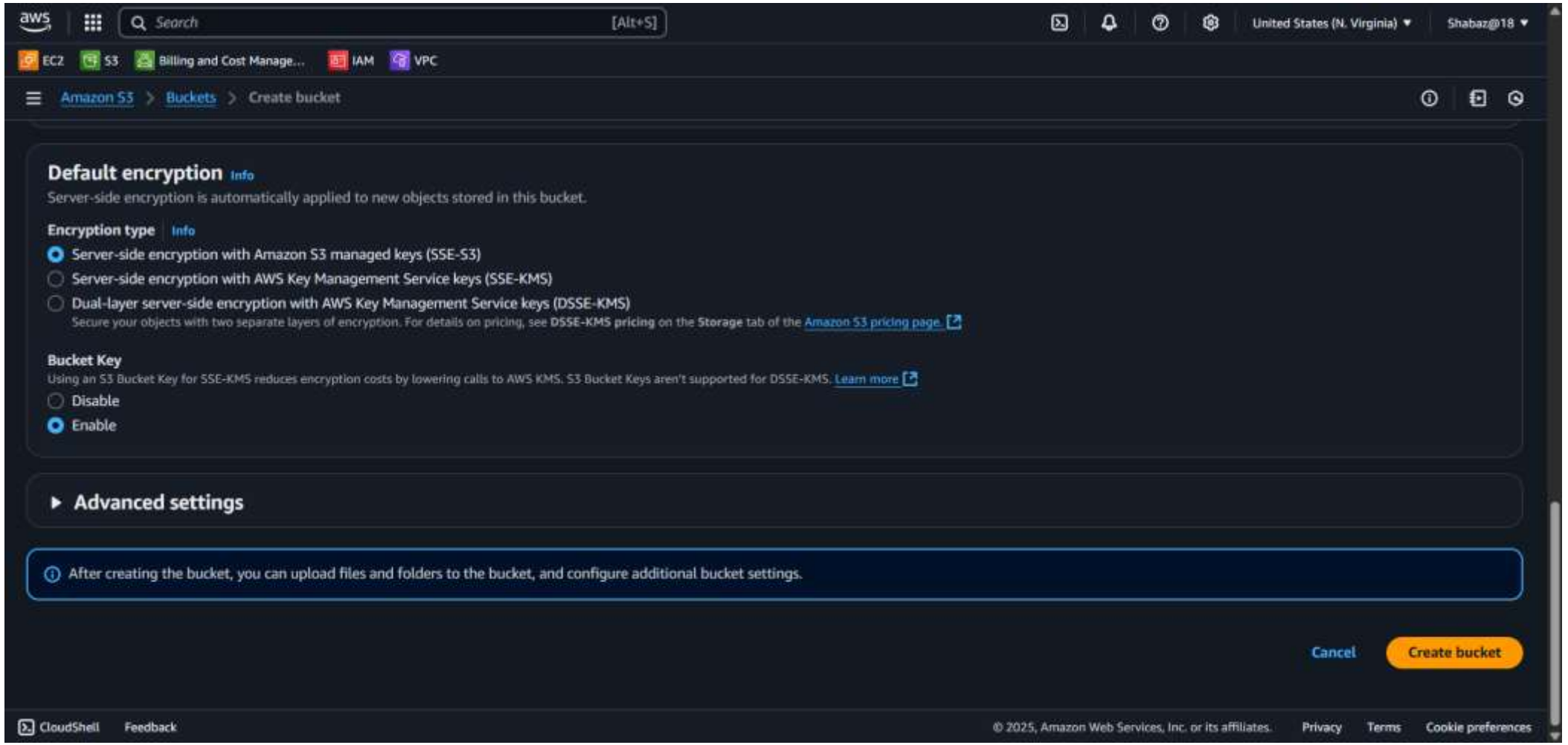


- Select Bucket Type as General Purpose
- Give Bucket Name as my-aws-new-project (whatever you want) –

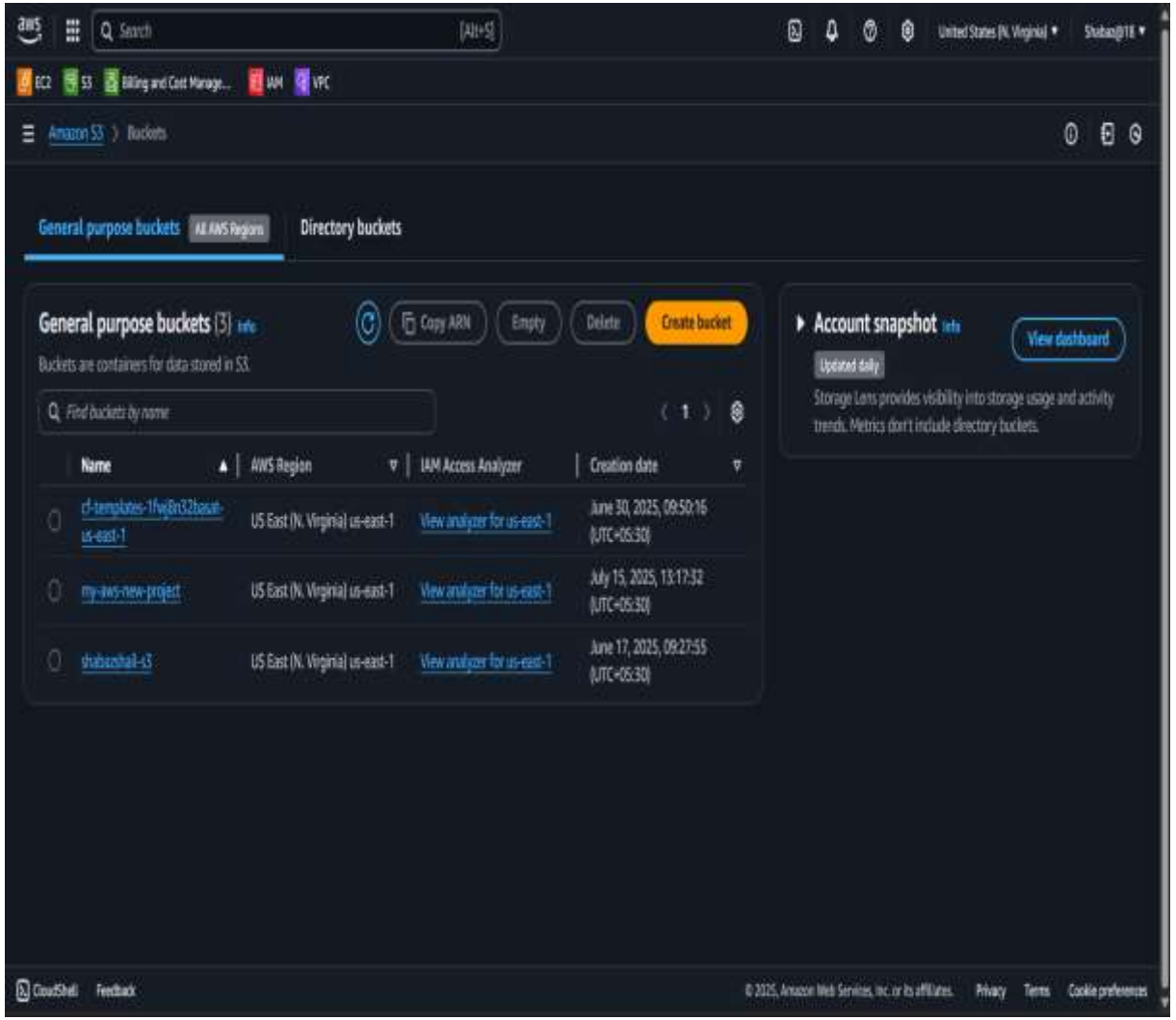
But Remember one thing it case sensitive so use small letters only

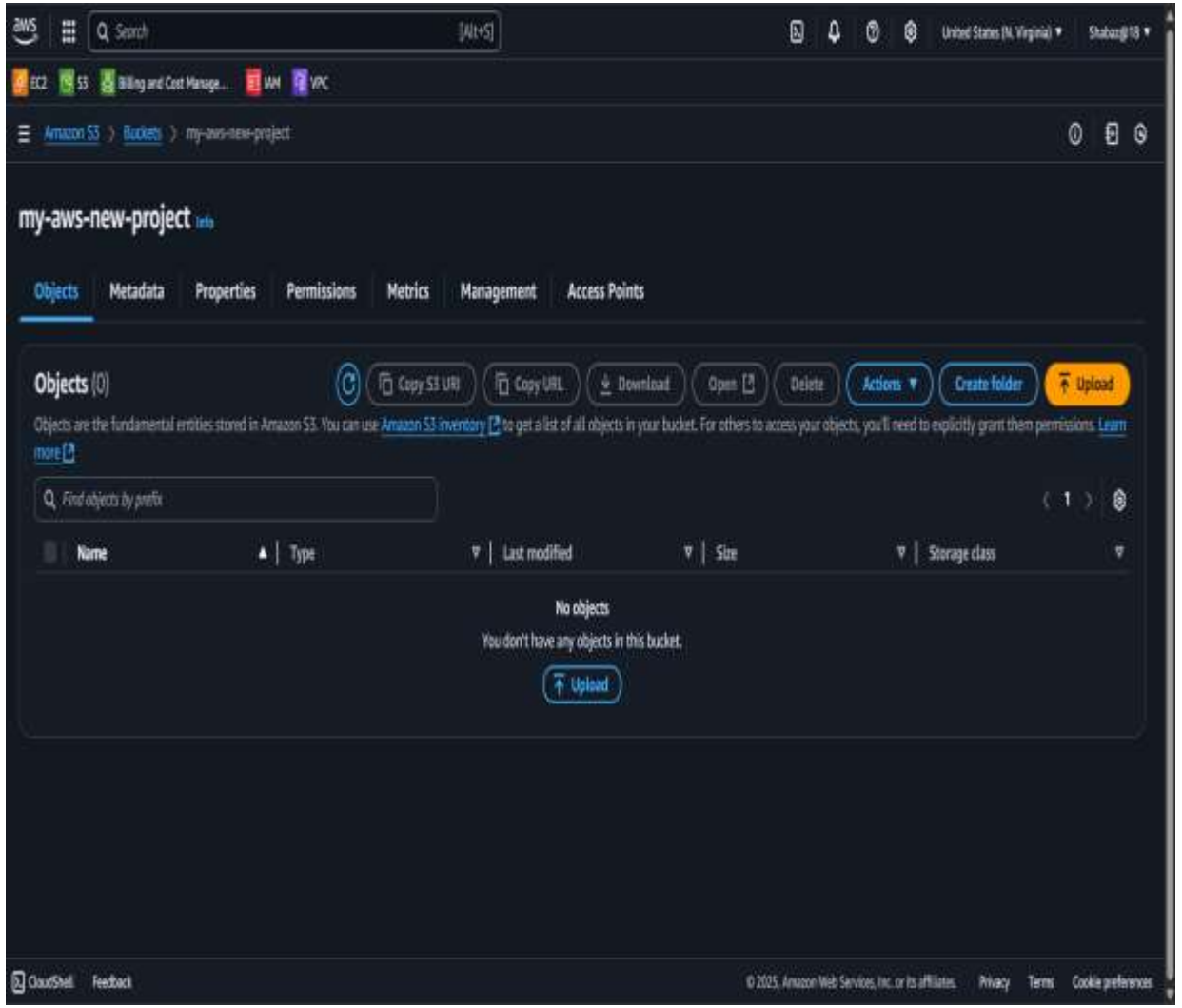


- Don’t Change anything
- Scroll down and Click on Create Bucket

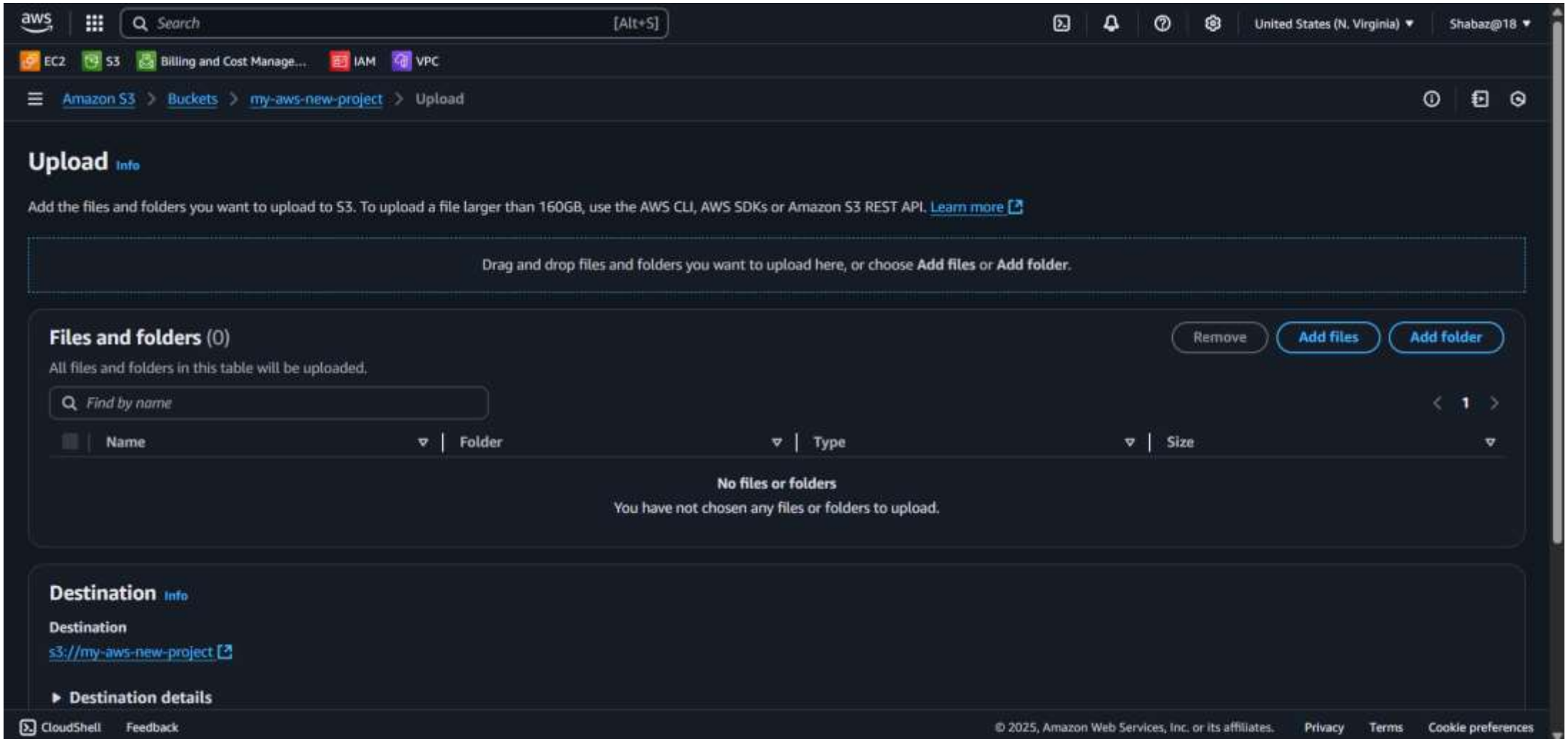


- After Creating the Bucket, if you click on Buckets list you can see your created bucket name in the list
- Next click on your created Bucket name & click upload

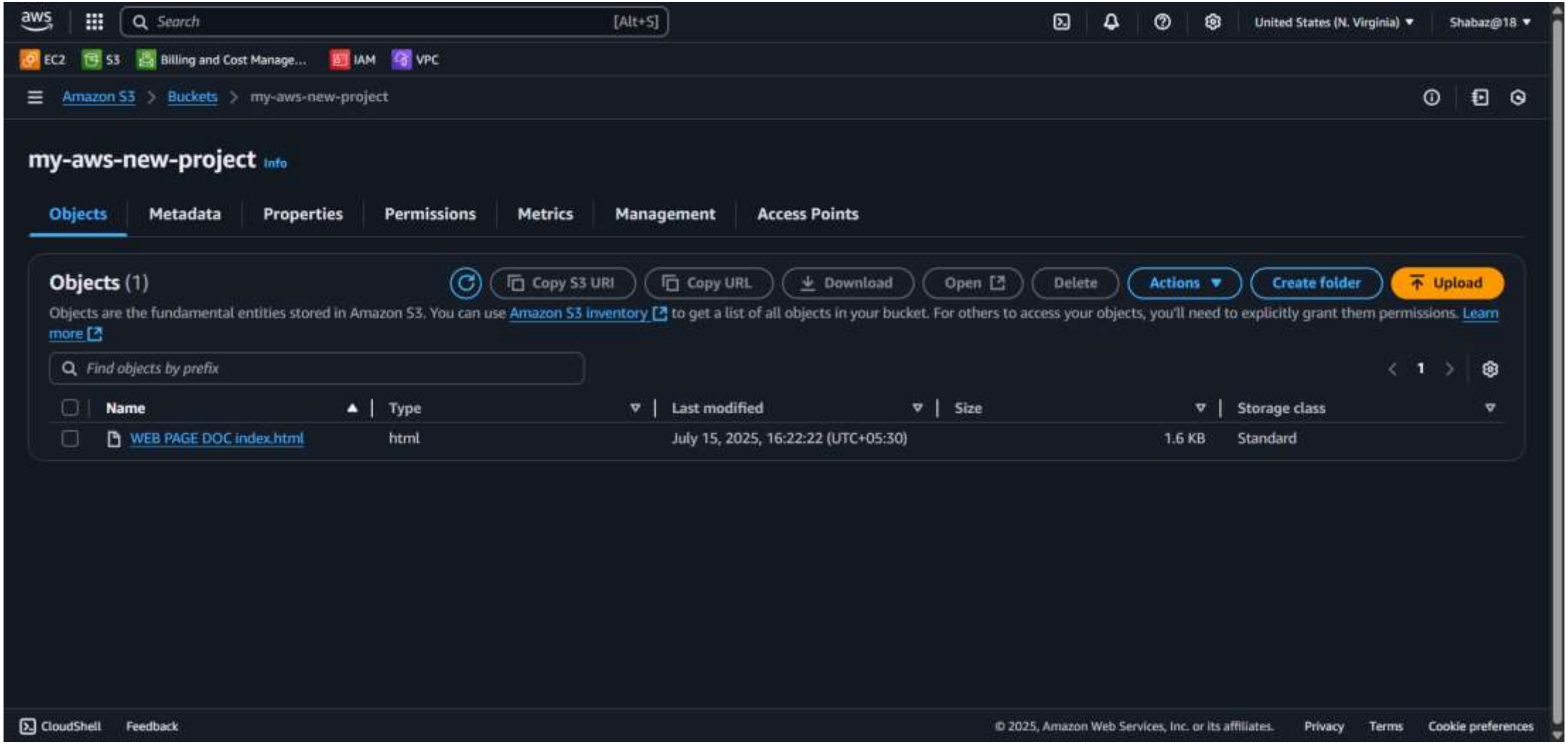




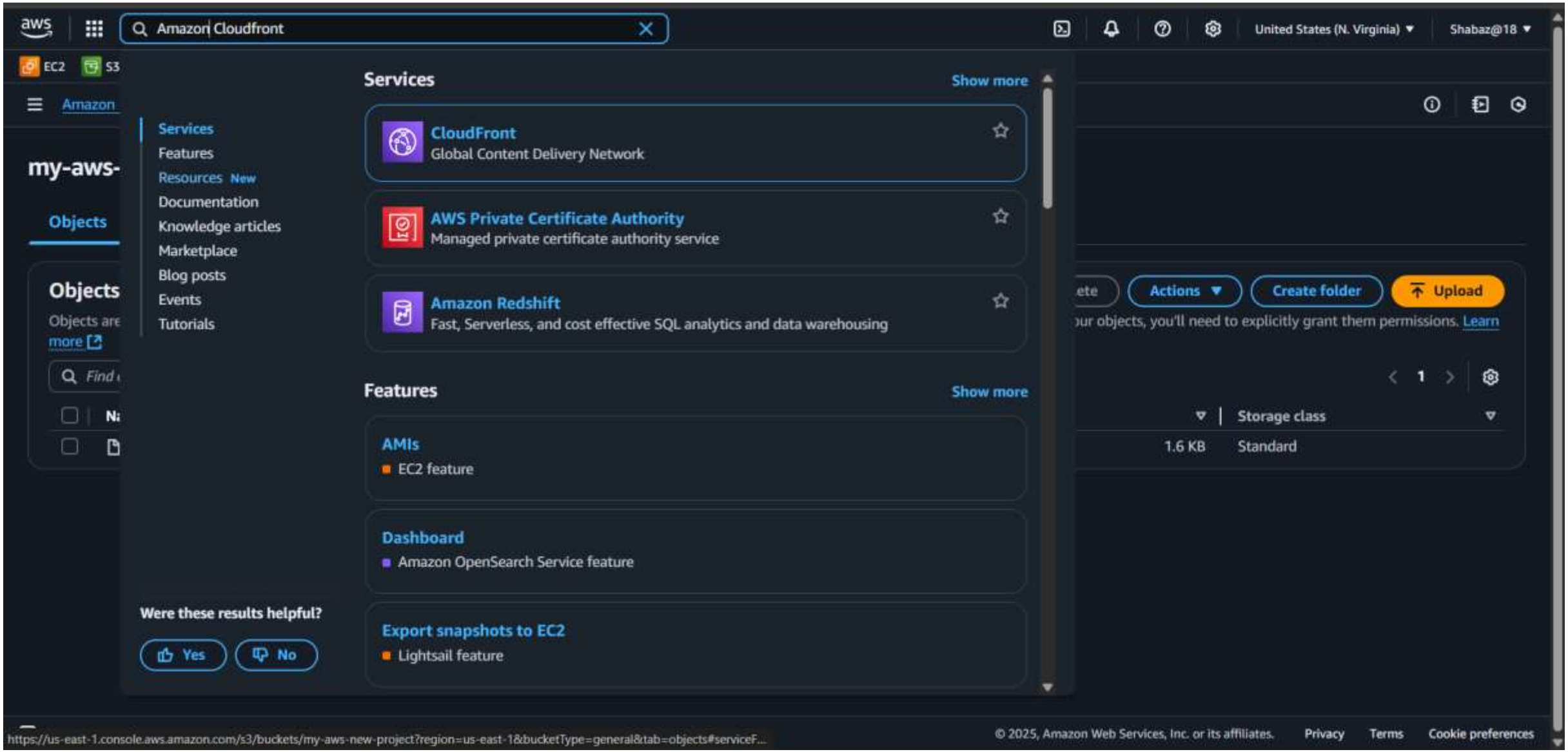
- If you Click on upload the interface will be shown like this , Just click on ADD files and add your saved Website Note



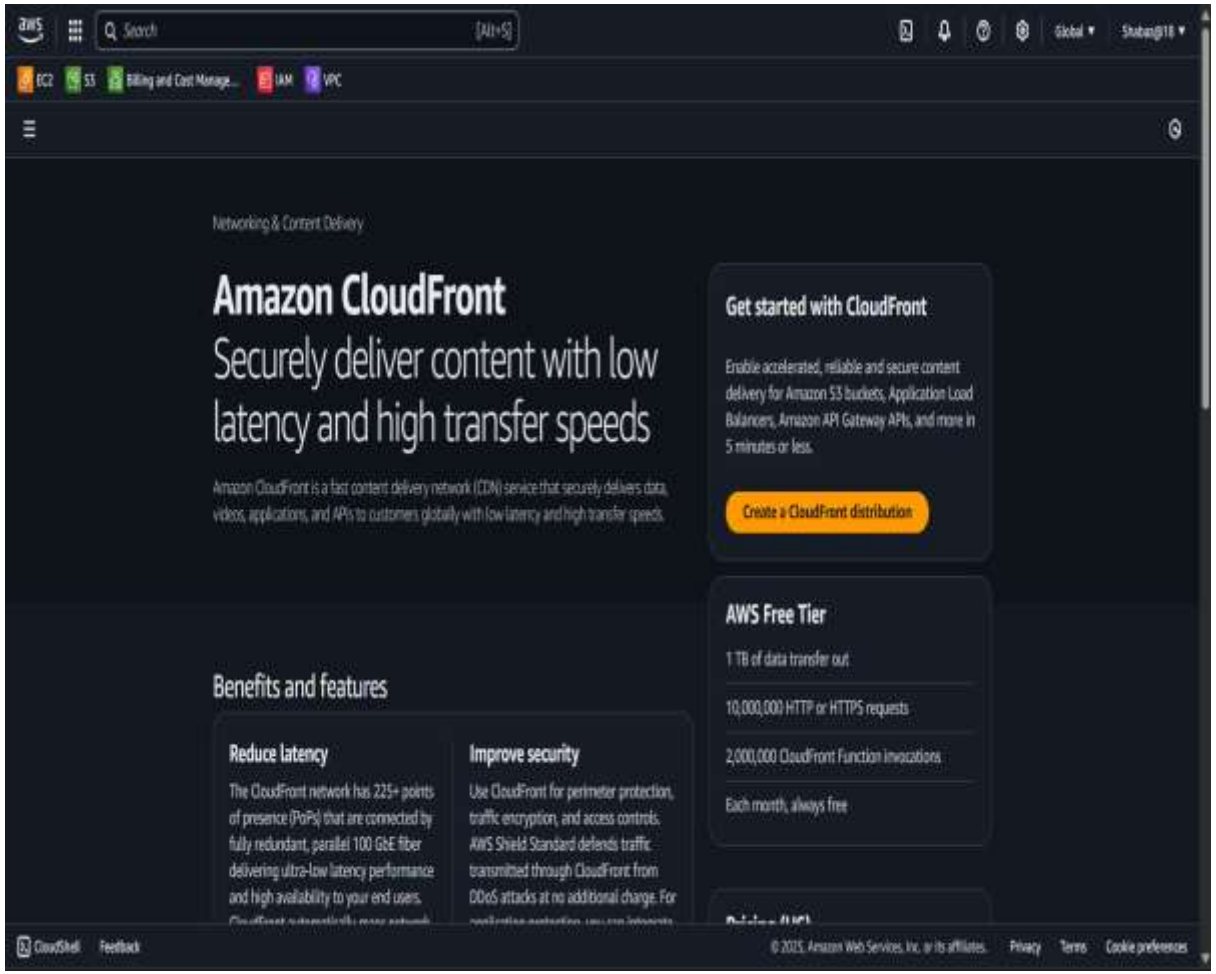
- Open Cusmized Bucket, Click on Objects
- Here you can see the my added file

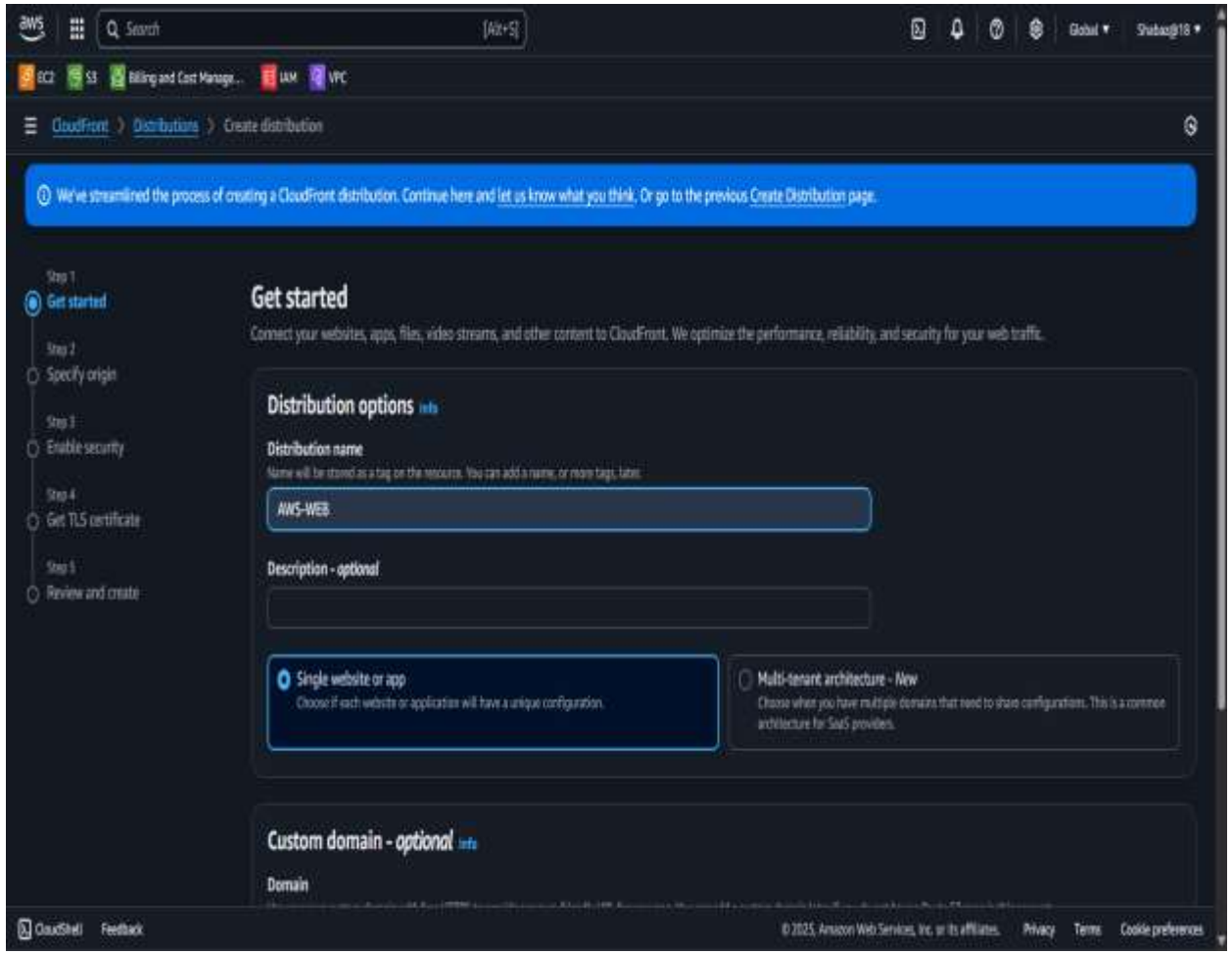


- After that click on search bar & Search <u>CLOUDFRONT</u>

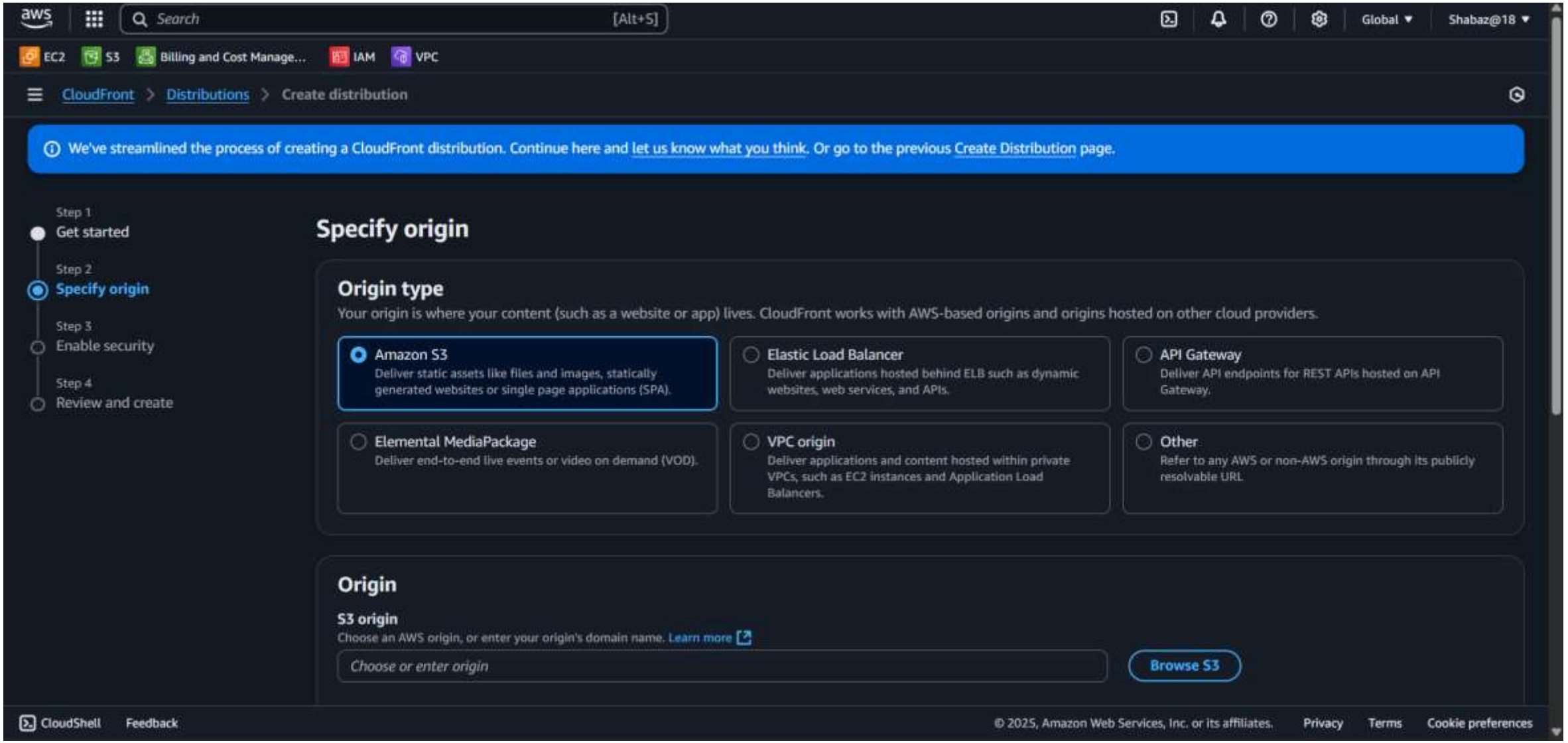


- Click on Create a Cloudfront Distribution
- Give name as AWS-WEB , Scroll down & Click on Next

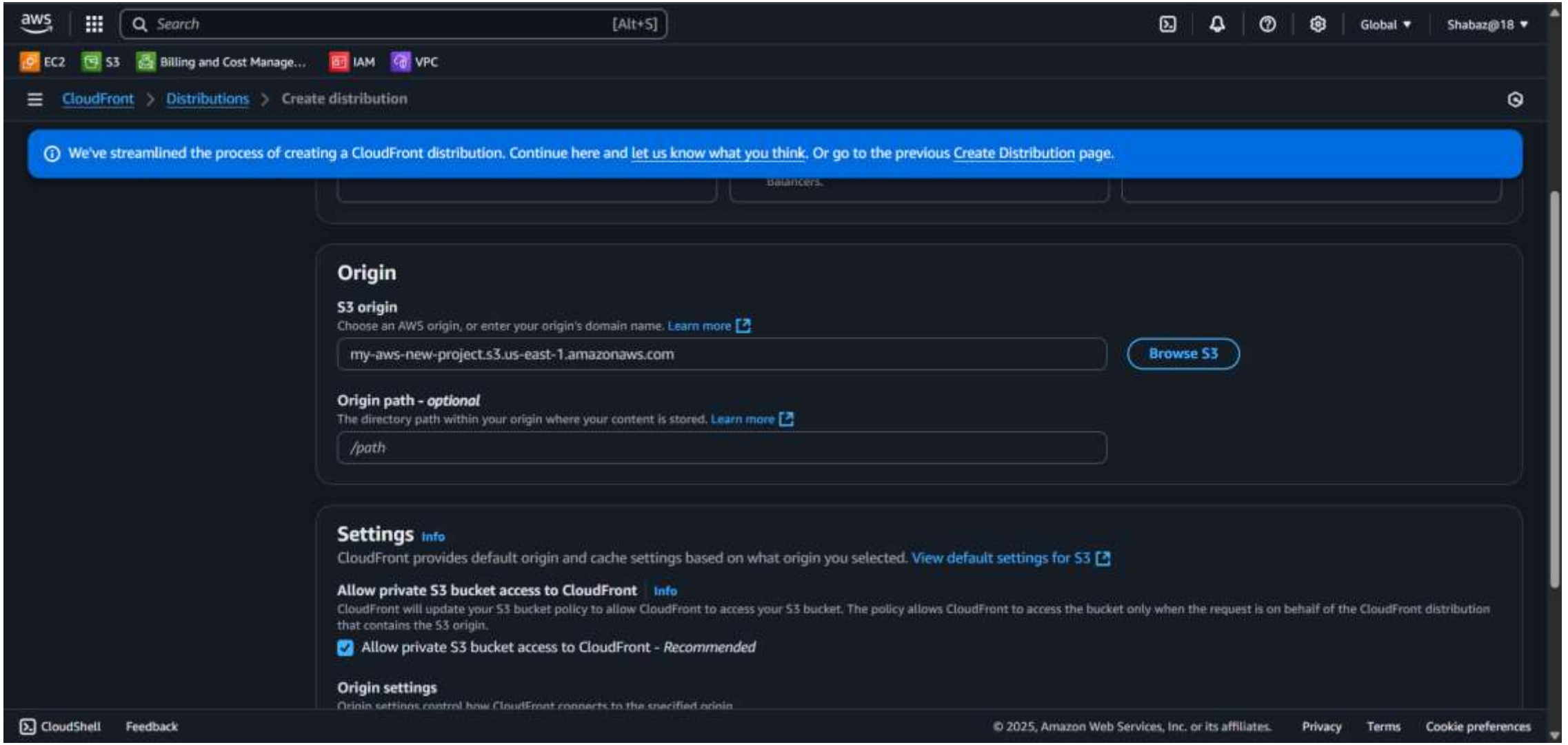




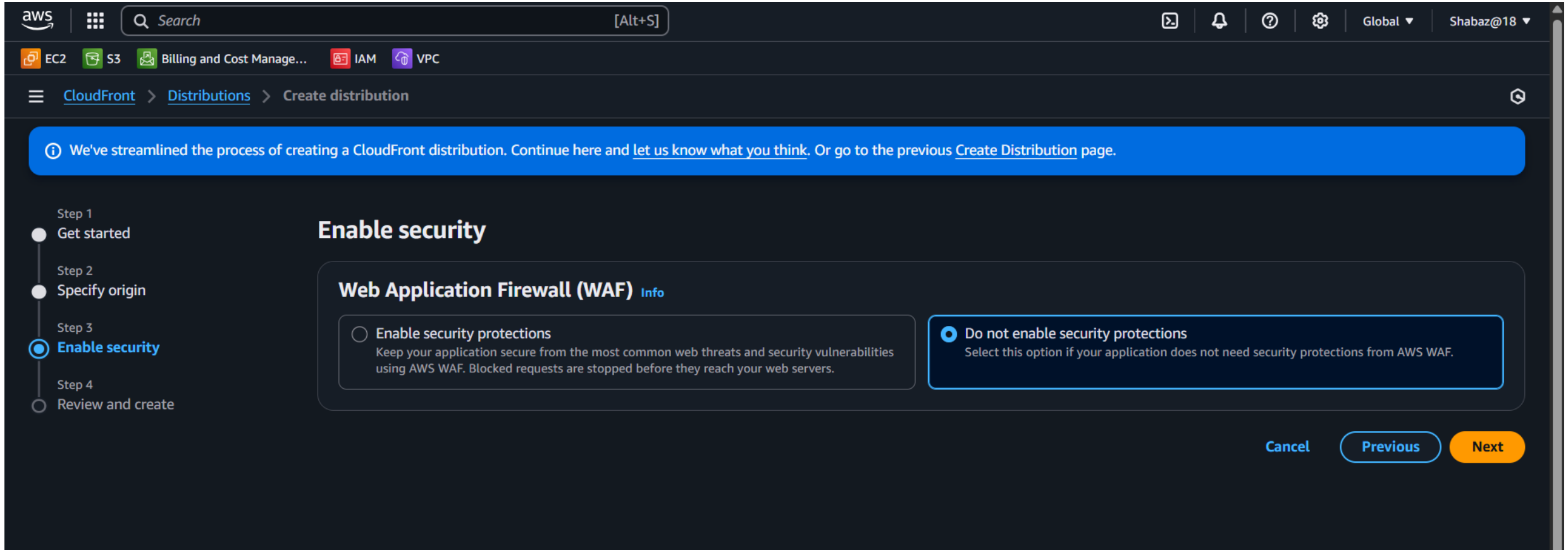
- Select Amazon S3



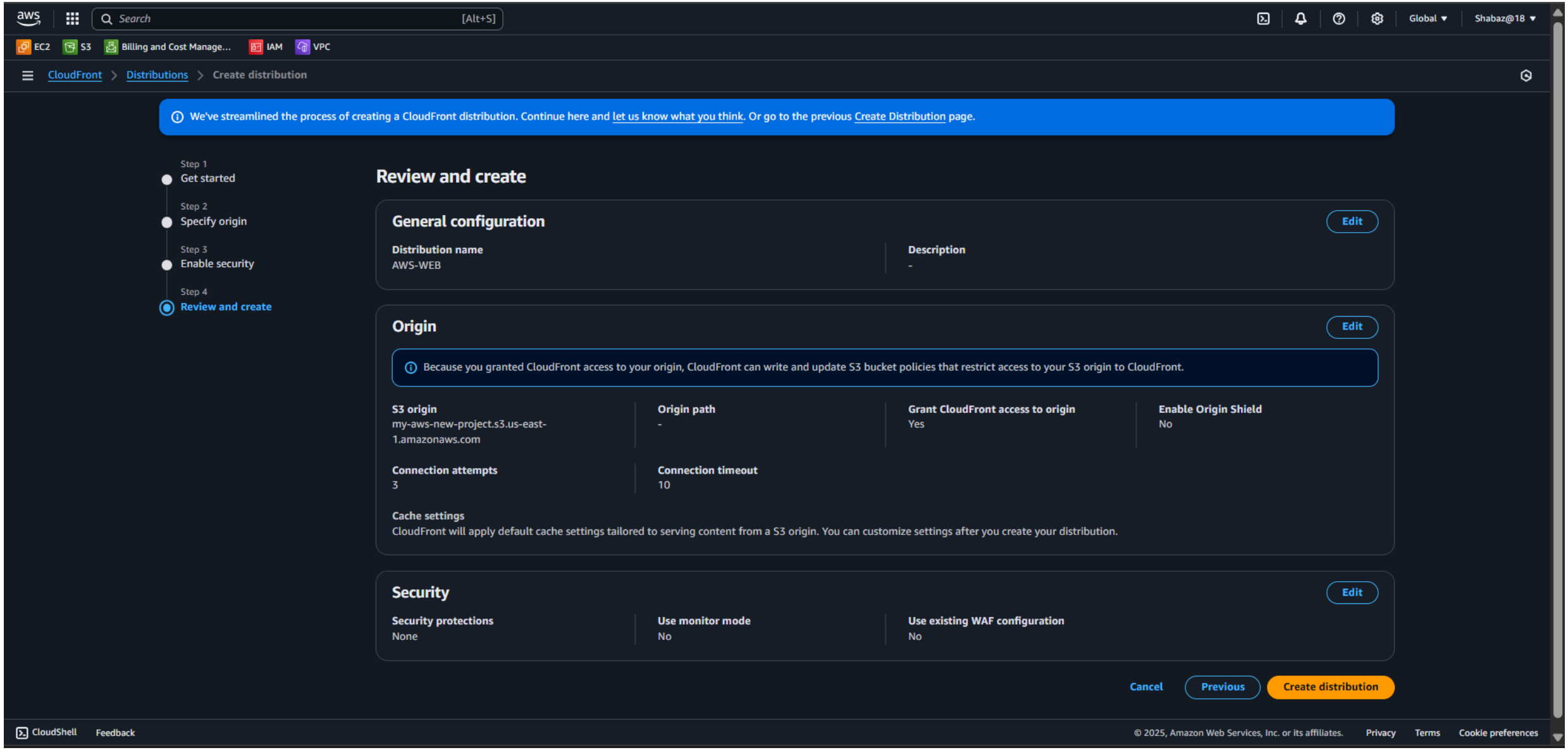
- Next, At Origin click on **Browse S3** and select your created S3 Bucket , Scroll Down & Click on Next



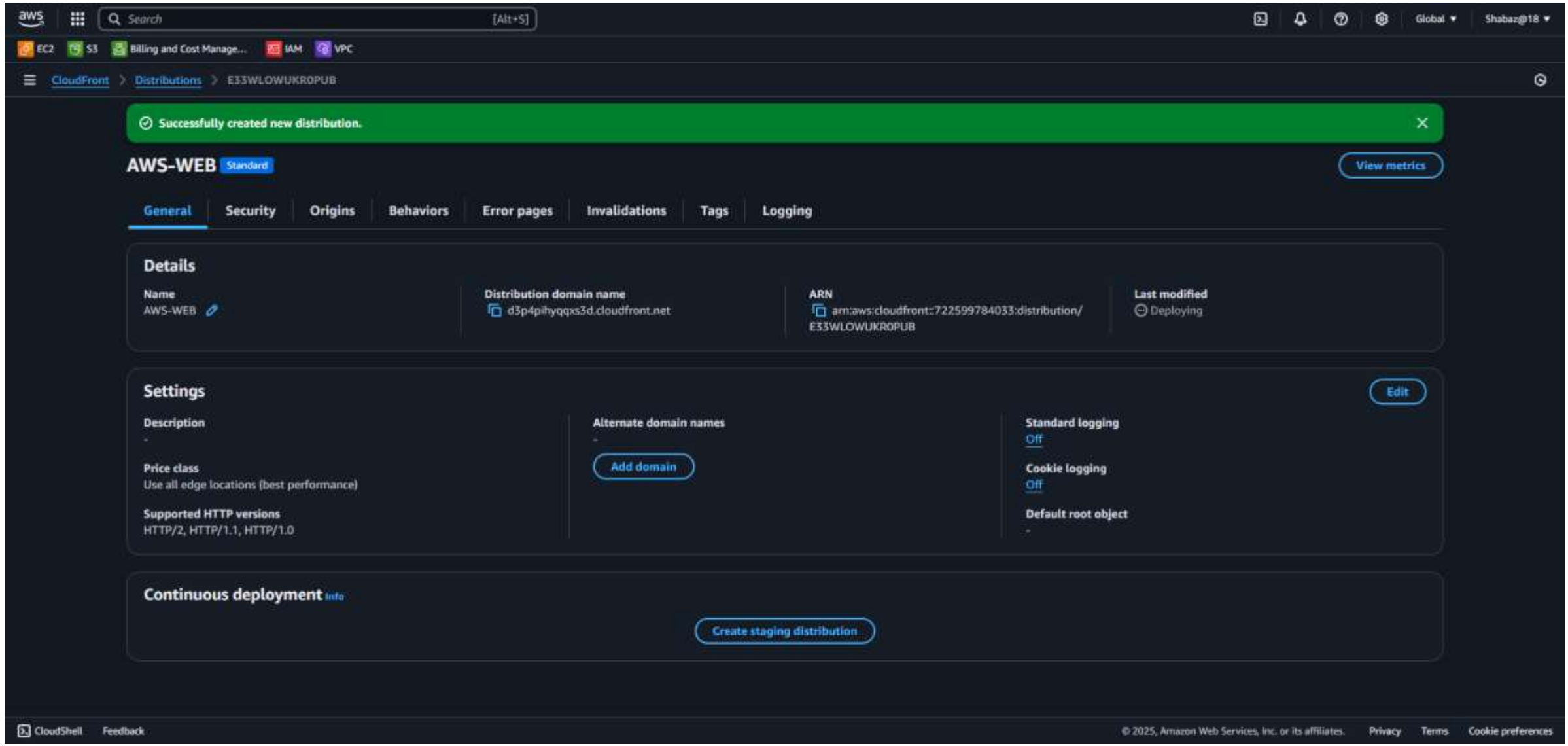
- Next , At Enable security – if you want to select Enable WAF, you can, but remember one thing it is chargable
- I Don’t want to select so I selected Don’t not Enable & Click on Next



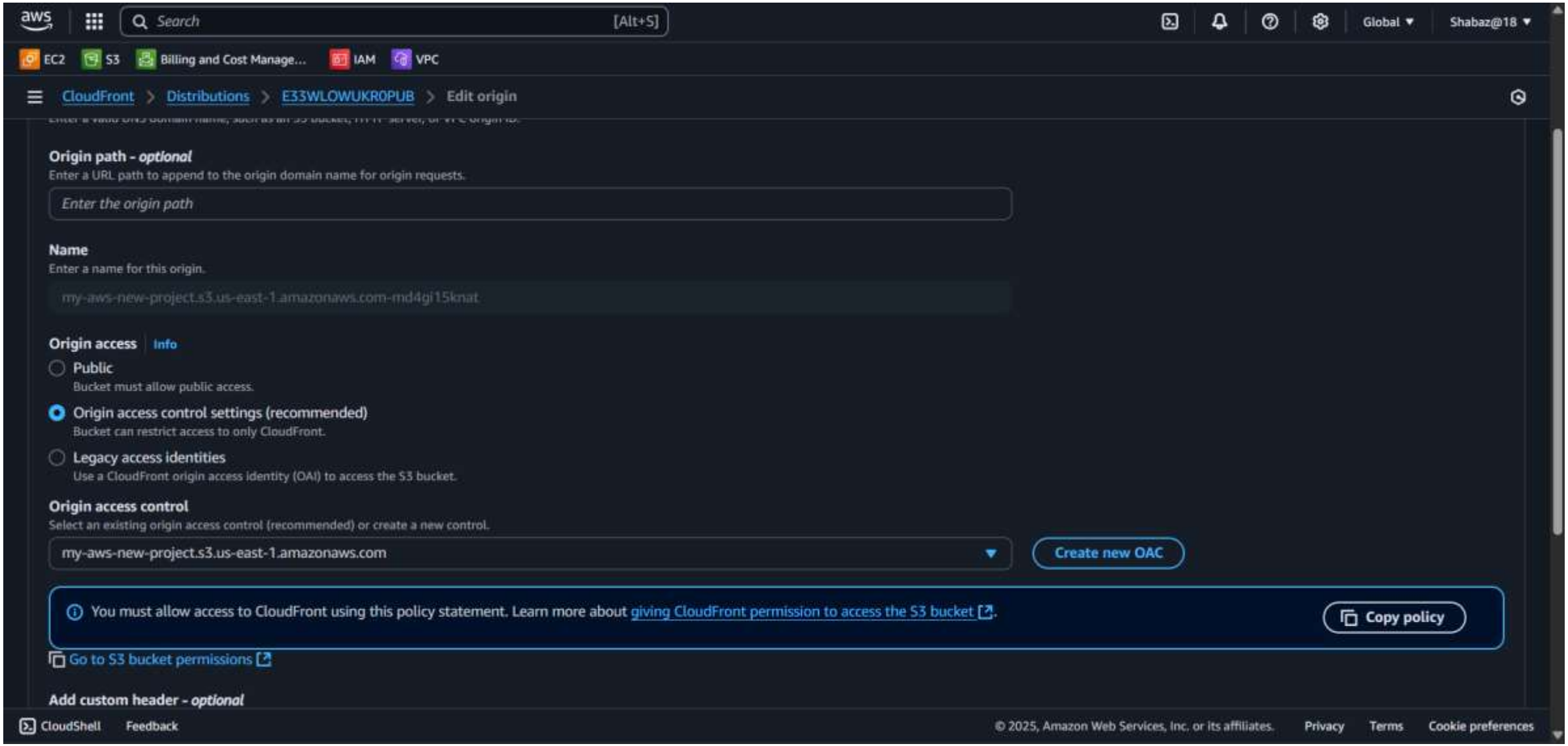
- Next Click on Create Distribution



- Distribution created, Next Click on Origins tab

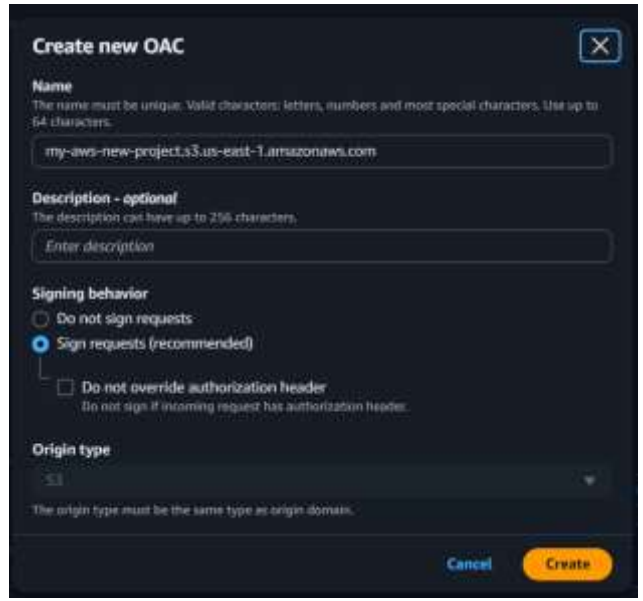


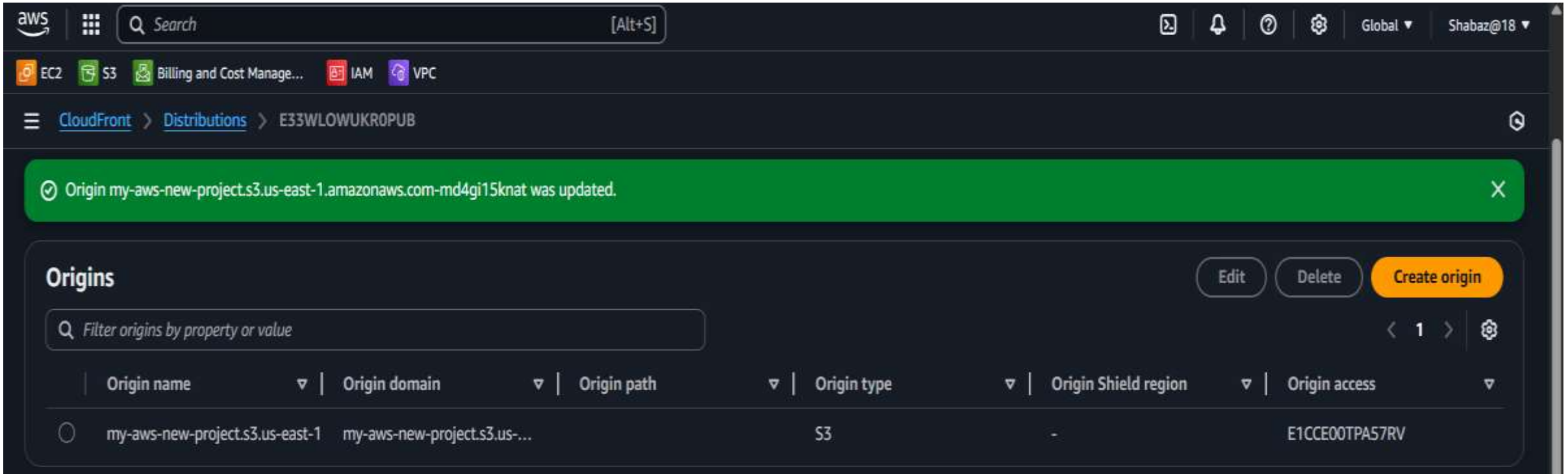
- After Clicking on origins, Scroll down & Click on CREATE NEW OAC



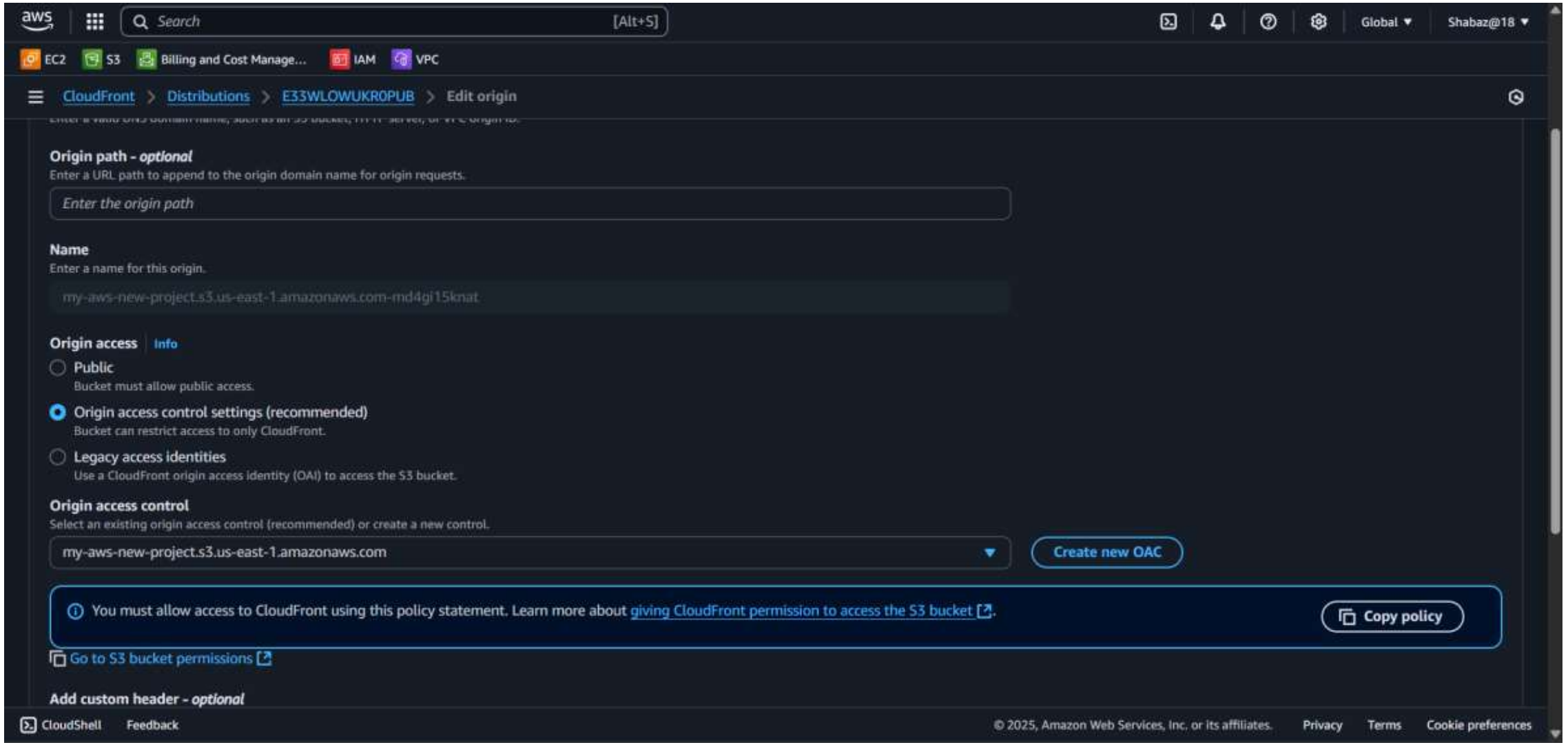
- Don’t do Anything, Click on Create

- After that you will get one pop-up Notification as shown in the below picture

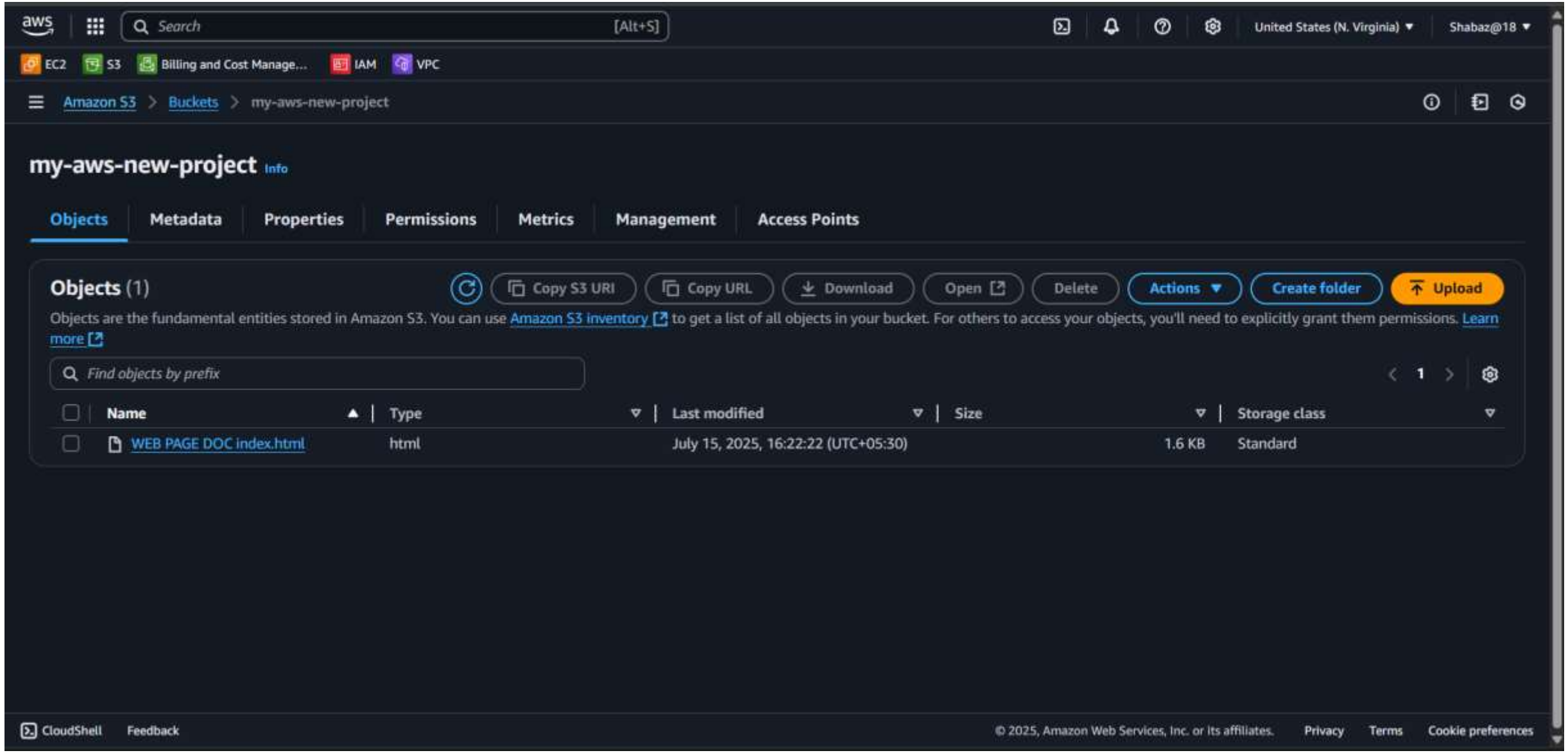




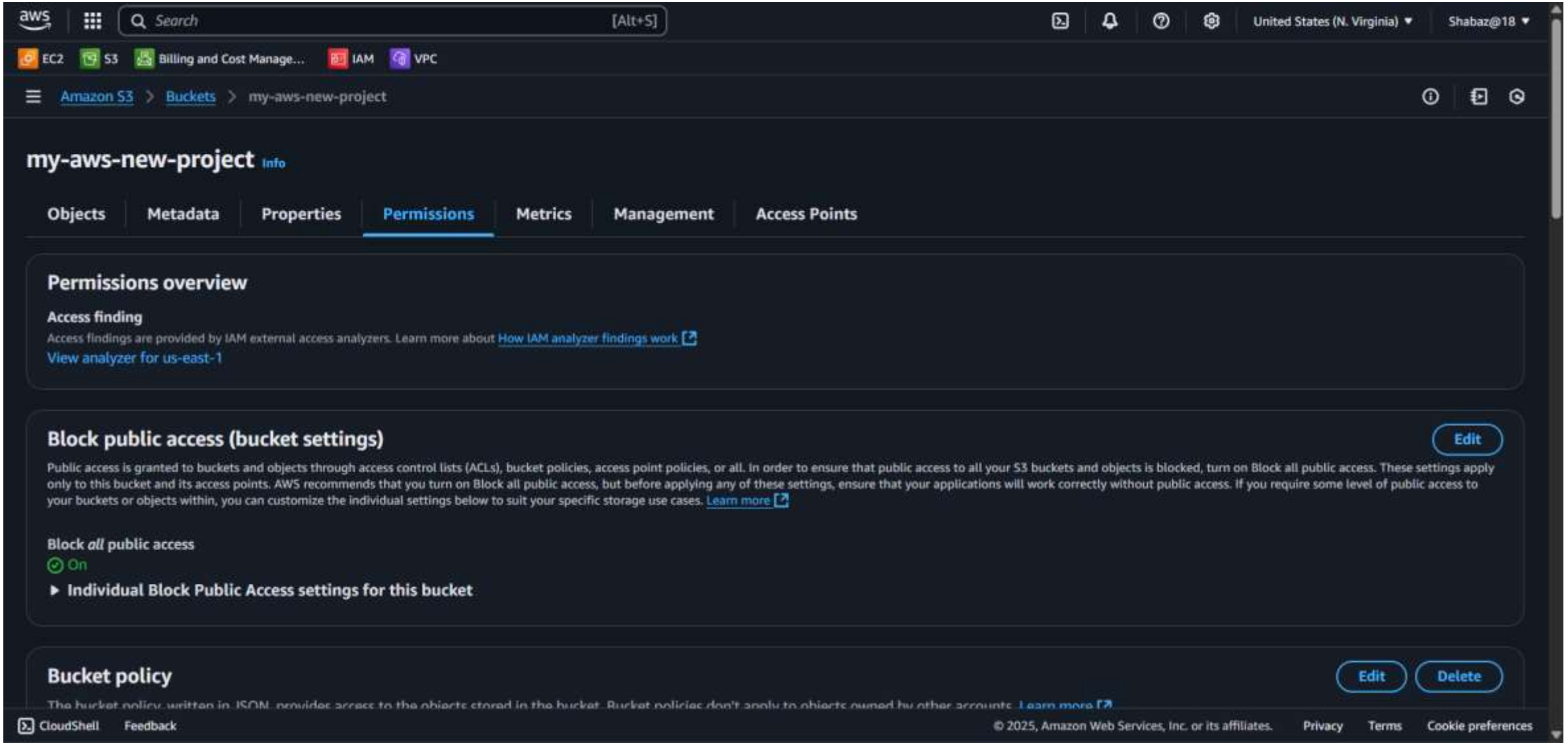
- Next, Click on Copy policy and copy that



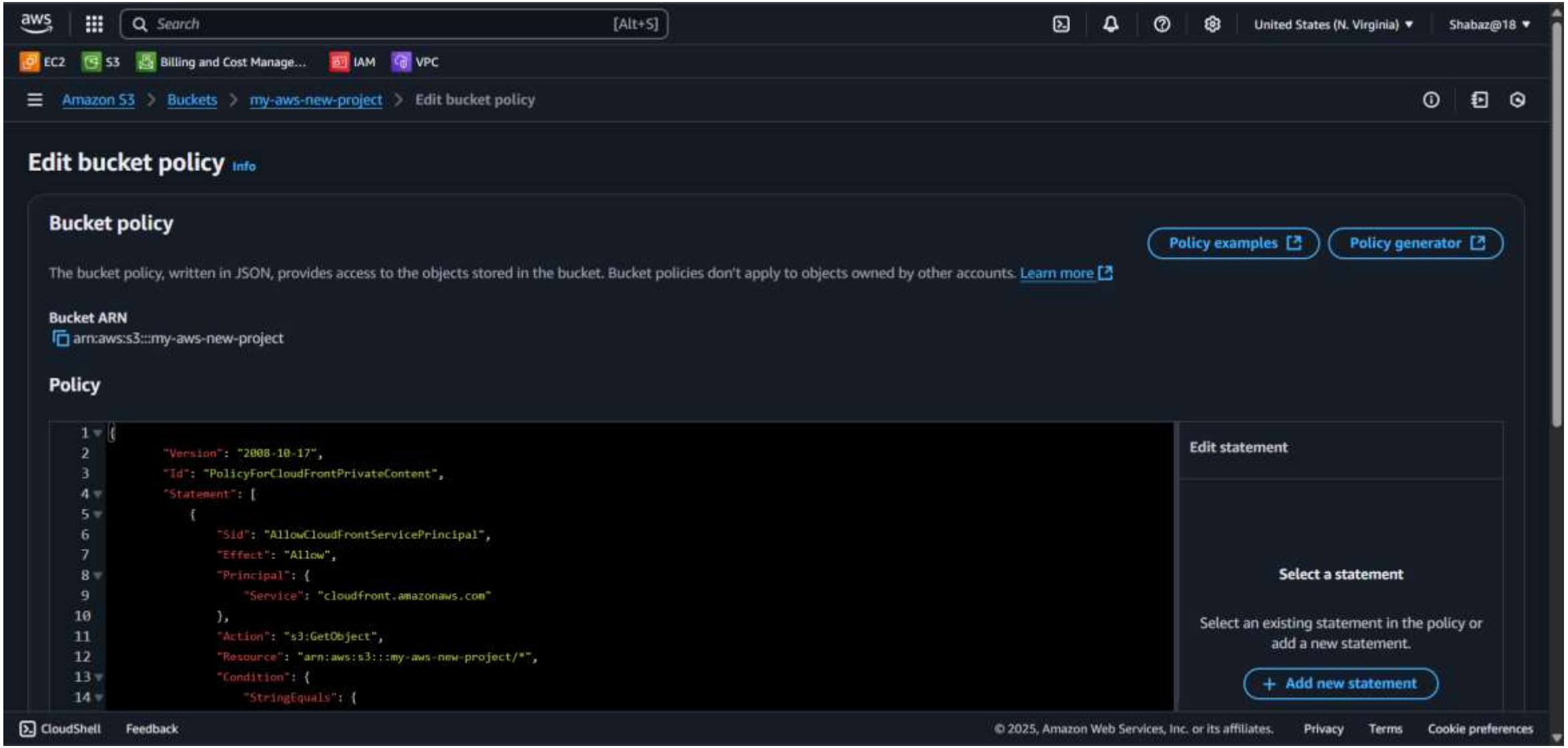
- Next Navigate to your customized S3 Bucket (my-aws-new-project)



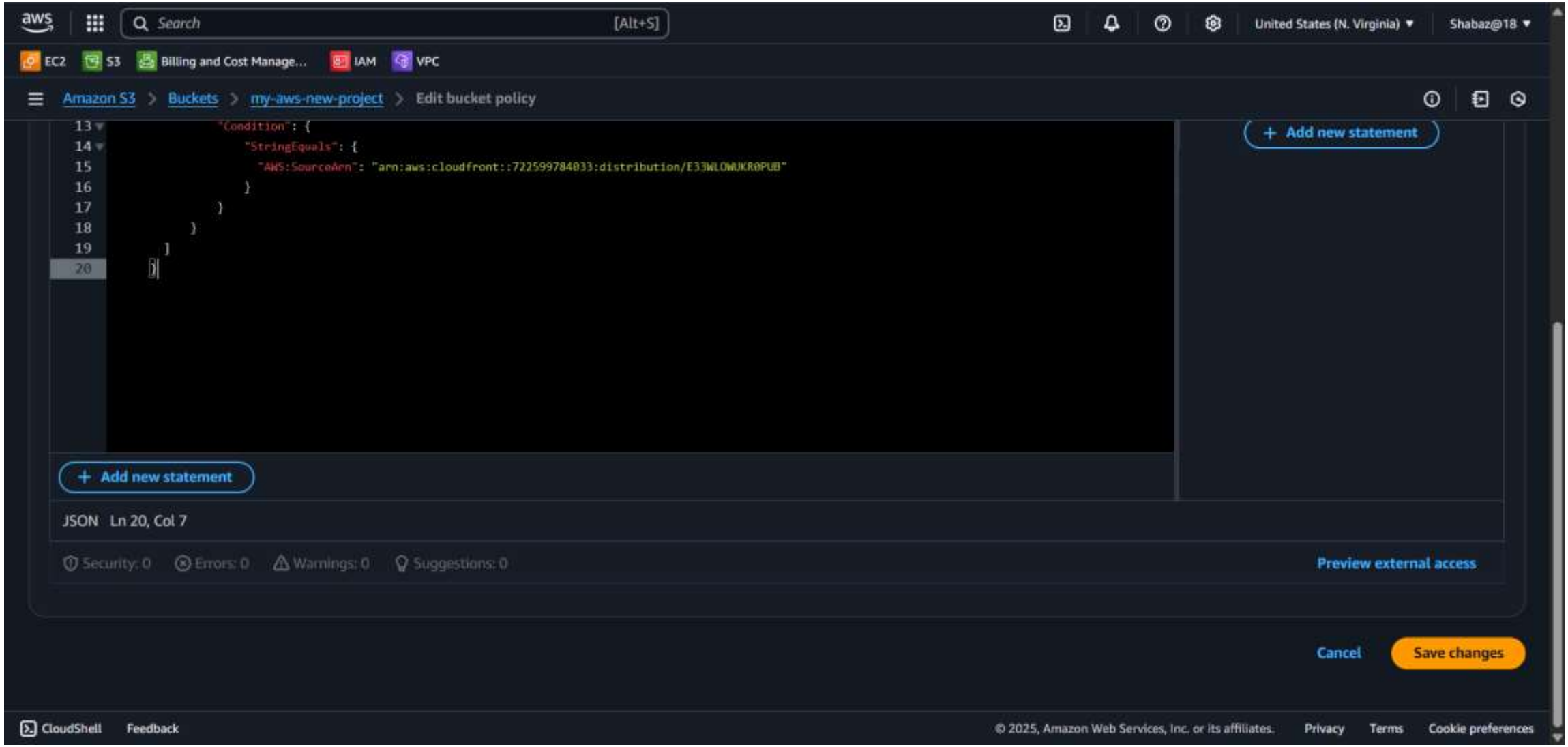
- Click on bucket name & choose permissions
- Then, Scroll down & Click on Edit at the Bucket Policy



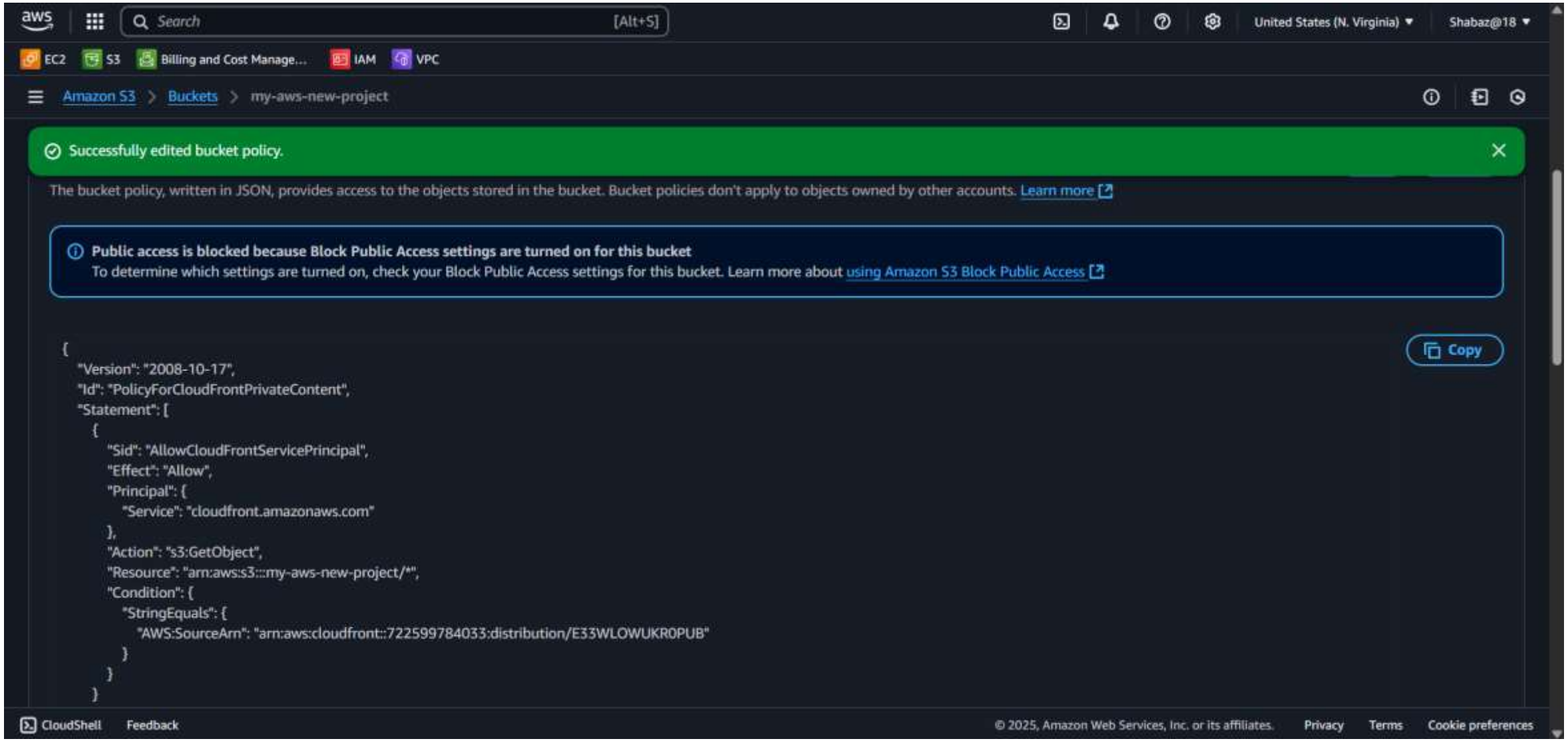
- Next, at the Policy Delete that Policy and Paste our copied policy



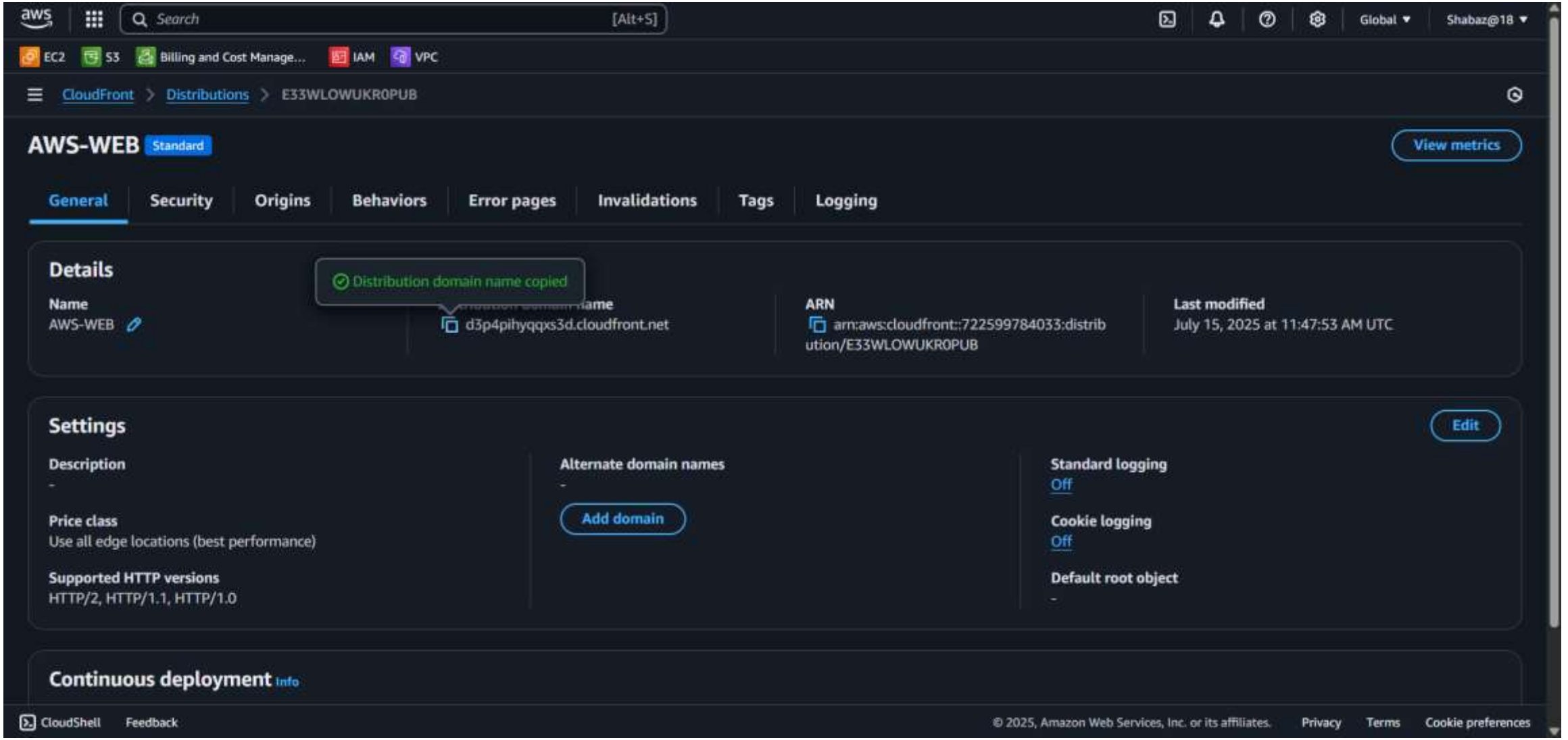
- Scroll down Click on Save Changes



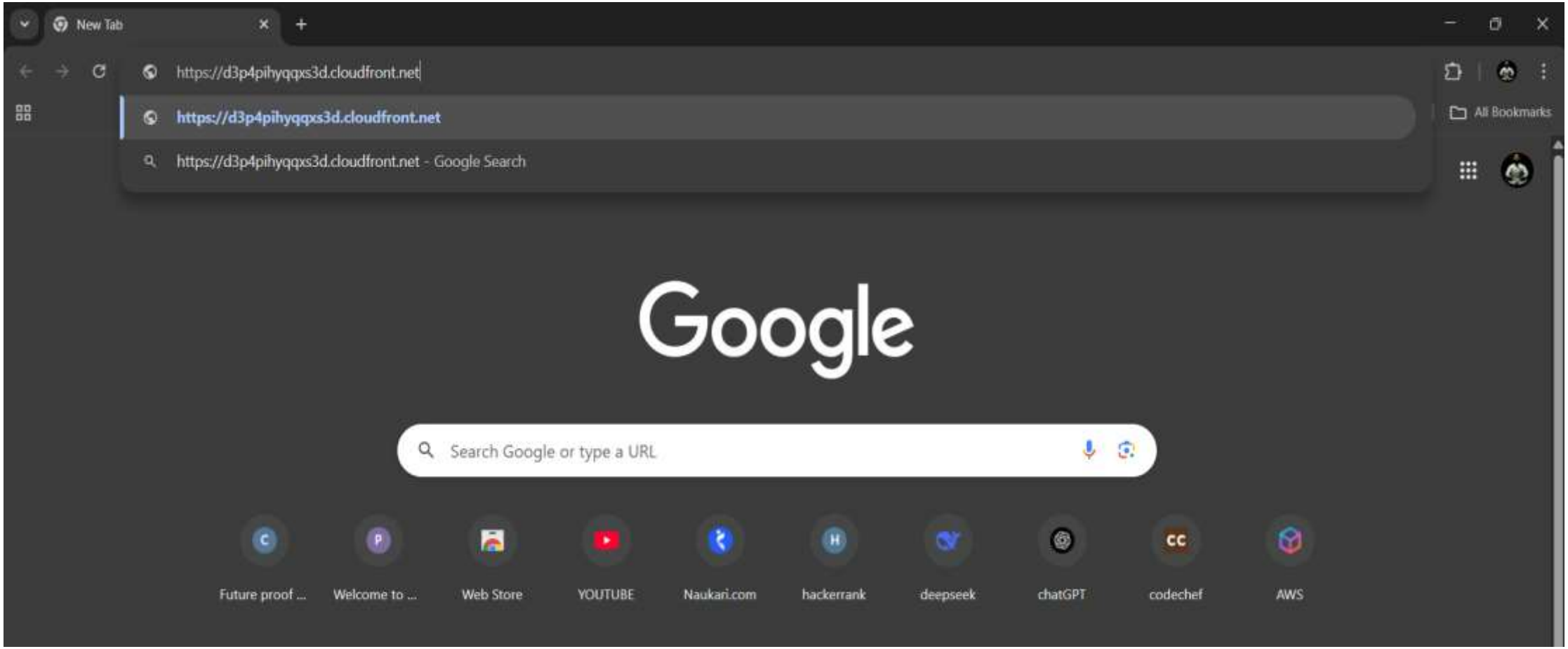
- After saving changes, a pop-up notification will be appear



- After that go back to Cloudfront > Your Customized Distribution (AWS-WEB)
- Click on General & copy the DISTRIBUTION DOMAIN NAME



- Open Browser and open a new Tab Paste that Distribution Domain Name URL and see the Magic



SUMMARY

- Hosting with S3 is simple but powerful
- CloudFront helps in faster global delivery
- Importance of correct policy and cache settings
- **Pay-as-you-go pricing and reduced egress costs** makes S3 + CloudFront a highly cost-effective hosting combo
- **Origin Access Control restricts direct S3 access**, improving security by funneling all traffic through CloudFron

CONCLUSION

- Successfully hosted a fast and secure static website
- Learned core AWS services (S3 + CloudFront)
- Real-world deployment experience
- **Simplified architecture**: No need to manage servers—just upload files to S3, configure CloudFront, and you're live
- **Global scalability & availability**: S3 provides 99.999999999% data durability and CloudFront handles sudden traffic spikes seamlessly
- **Great learning experience**: You now understand core AWS services and CDN-based hosting workflows, a great foundation for more advanced cloud work