

## Cloud Computing Seminar

Name: Olamide Akinoso

Student ID: 609563

Term: Spring 2025

Topic: High Availability

The screenshot displays the AWS Management Console interface for an EC2 instance. The left sidebar shows the navigation menu with categories like EC2, Images, Elastic Block Store, and Network & Security. The main content area is titled 'Instance summary for i-0f13cb4847609ca87 (Miu-Server-1)'. It provides a comprehensive overview of the instance's configuration, including its ID, state (Running), IP addresses, DNS settings, and various identifiers like VPC, Subnet, and IAM Role. Below the summary, there are tabs for 'Details', 'Status and alarms', 'Monitoring', 'Security', 'Networking', 'Storage', and 'Tags'. The 'Details' tab is active, showing specific information such as the AMI ID, AMI name, launch time, and platform details.

Instance summary for i-0f13cb4847609ca87 (Miu-Server-1)		
<b>Instance ID</b> i-0f13cb4847609ca87	<b>Public IPv4 address</b> 54.161.130.75   <a href="#">open address</a>	<b>Private IPv4 addresses</b> 172.31.82.111
<b>IPv6 address</b> -	<b>Instance state</b> Running	<b>Public IPv4 DNS</b> ec2-54-161-130-75.compute-1.amazonaws.com   <a href="#">open address</a>
<b>Hostname type</b> IP name: ip-172-31-82-111.ec2.internal	<b>Private IP DNS name (IPv4 only)</b> ip-172-31-82-111.ec2.internal	<b>Elastic IP addresses</b> -
<b>Answer private resource DNS name</b> -	<b>Instance type</b> t2.micro	<b>AWS Compute Optimizer finding</b> Opt-in to AWS Compute Optimizer for recommendations.   <a href="#">Learn more</a>
<b>Auto-assigned IP address</b> 54.161.130.75 [Public IP]	<b>VPC ID</b> vpc-08e231ebacea2f12a	<b>Auto Scaling Group name</b> -
<b>IAM Role</b> -	<b>Subnet ID</b> subnet-02e41017a8709af09	<b>Managed</b> false
<b>IMDSv2</b> Required	<b>Instance ARN</b> arn:aws:ec2:us-east-1:417068831321:instance/i-0f13cb4847609ca87	
<b>Operator</b> -		

▼ Instance details		
<b>AMI ID</b> ami-0f88e80871fd81e91	<b>Monitoring</b> disabled	<b>Platform details</b> Linux/UNIX
<b>AMI name</b> al2023-ami-2023.7.20250428.1-kernel-6.1-x86_64	<b>Allowed image</b> -	<b>Termination protection</b> Disabled
<b>Stop protection</b> Disabled	<b>Launch time</b> Mon May 05 2025 14:20:35 GMT-0500 (Central Daylight Time) (less than a m...)	<b>AMI location</b> amazon/al2023-ami-2023.7.20250428.1-kernel-6.1-x86_64

Fig 1.1 EC2 First Instance Created



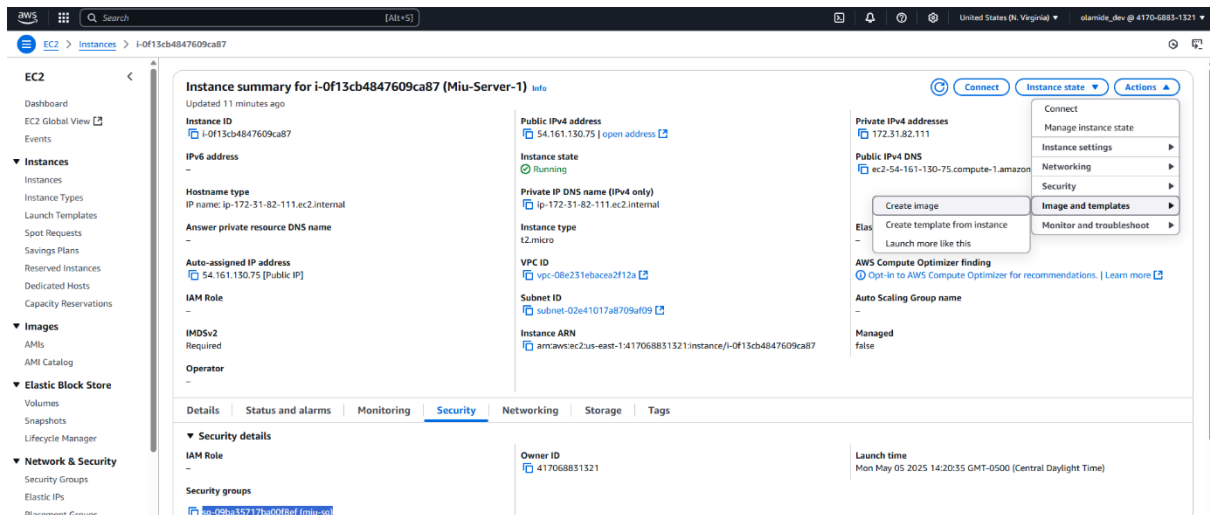


Fig 1.4 Creating an Image of EC2 First Instance

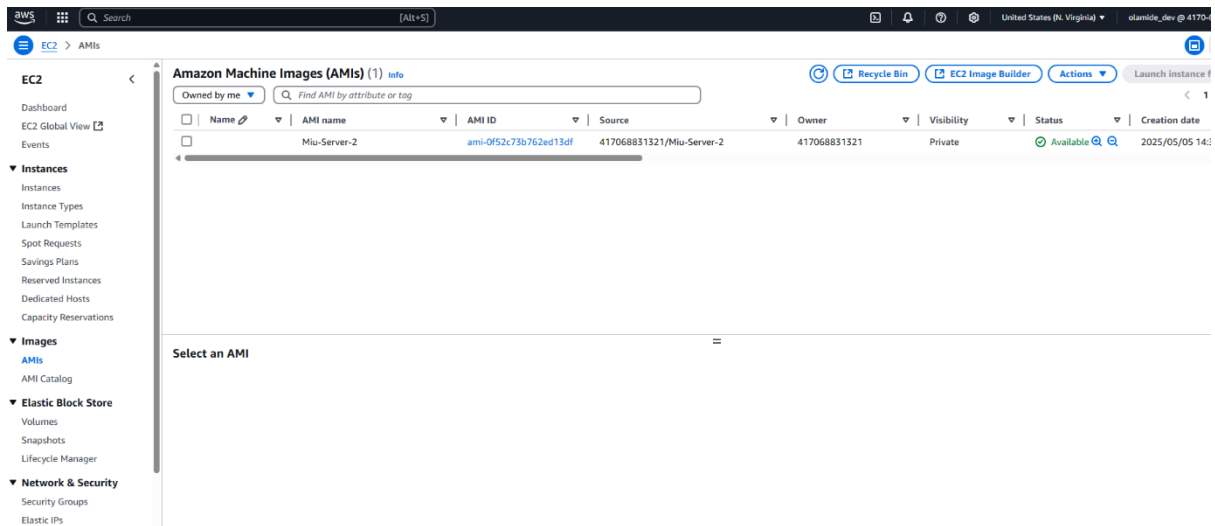


Fig 1.5 EC2 First Instance Image Created

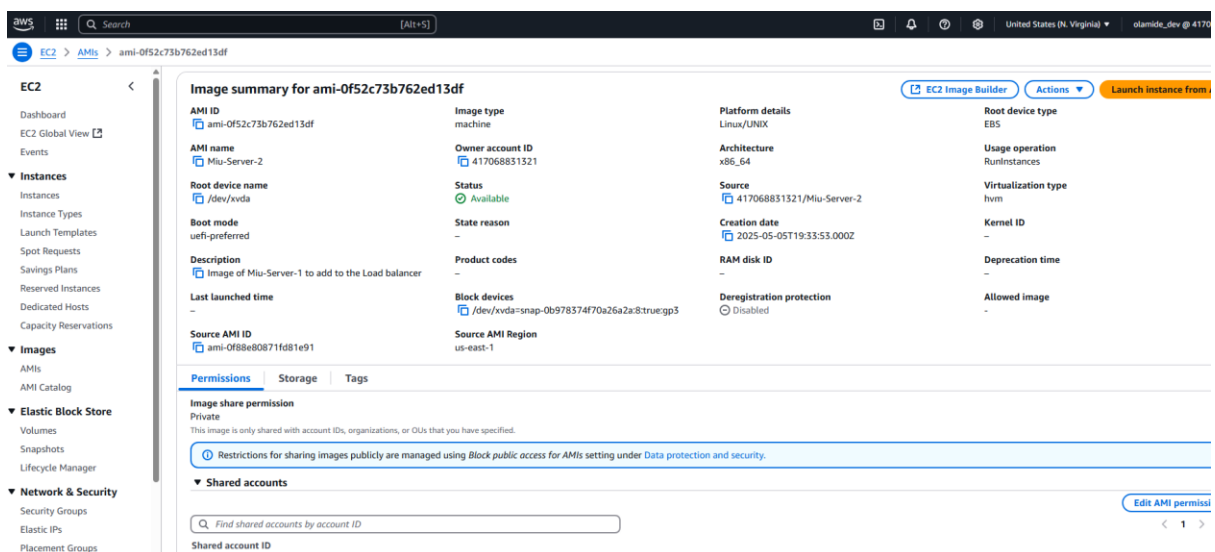


Fig 1.6 Details of AMI Image Created

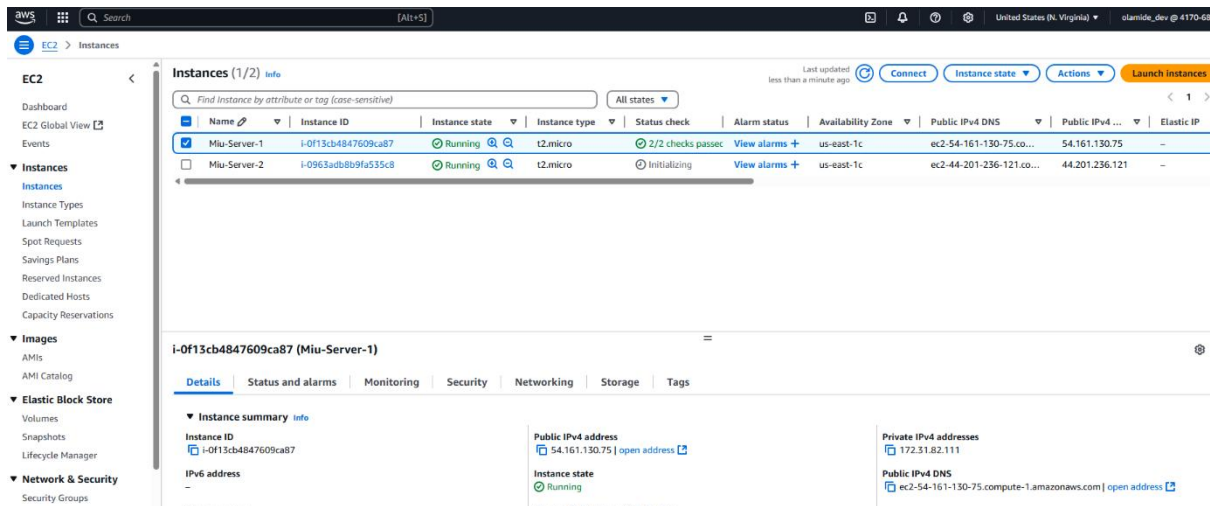


Fig 1.7 EC2 Second Instance Created From AMI



Fig 2.1 Website from EC2 First Instance



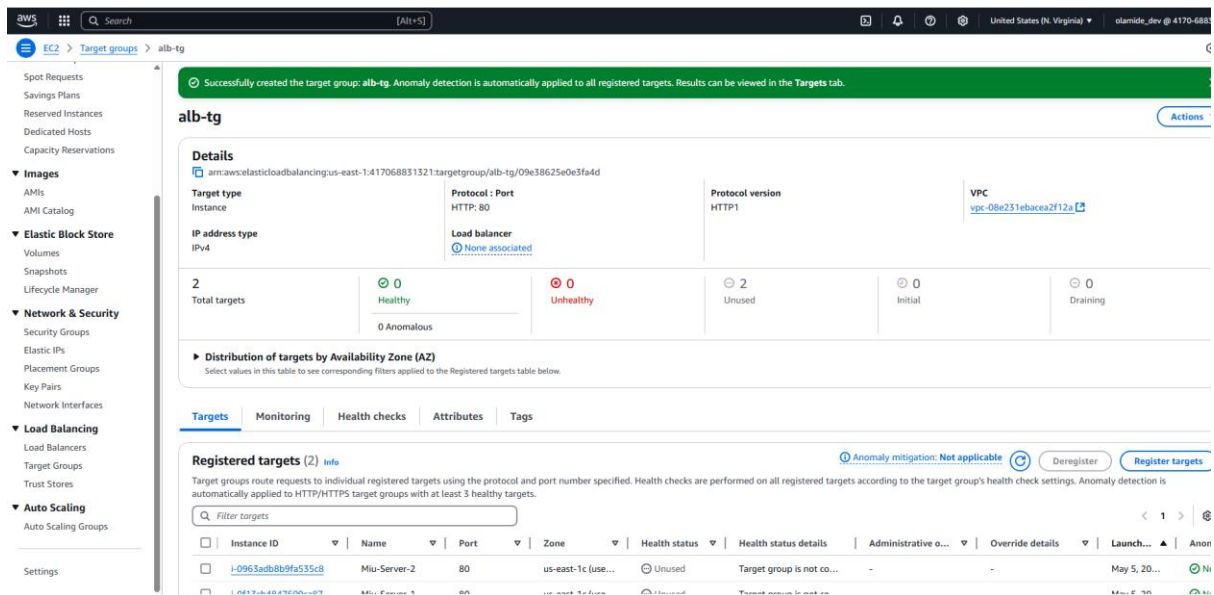


Fig 3.1 Target Group Created

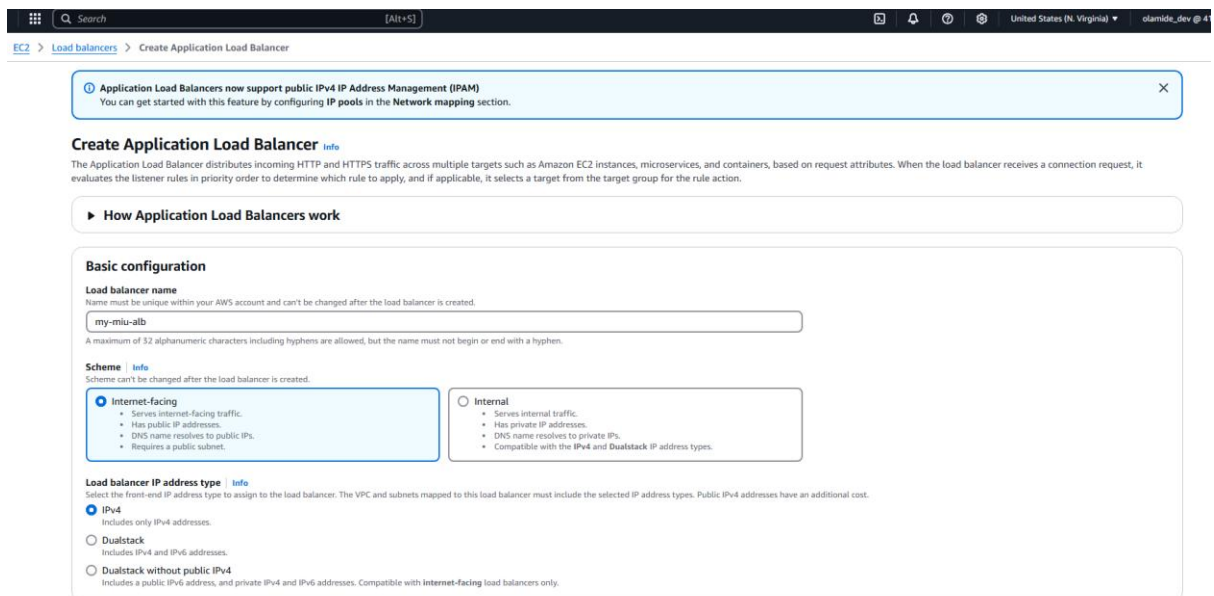


Fig 3.2 ALB Creation

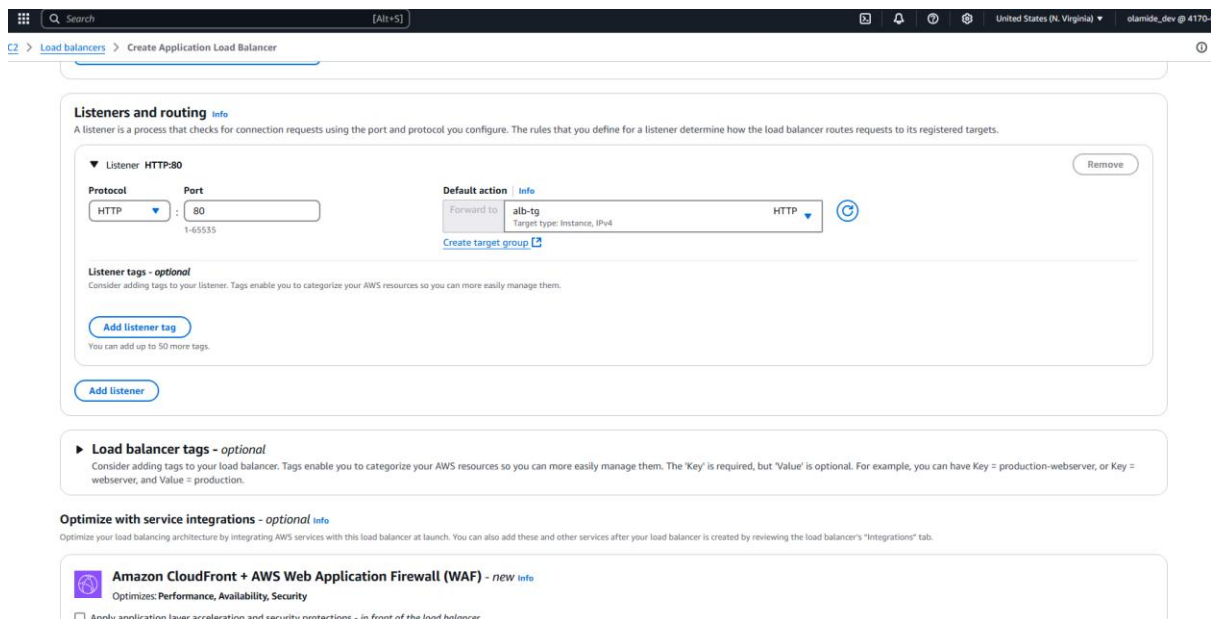


Fig 3.3 Adding Target Group To ALB

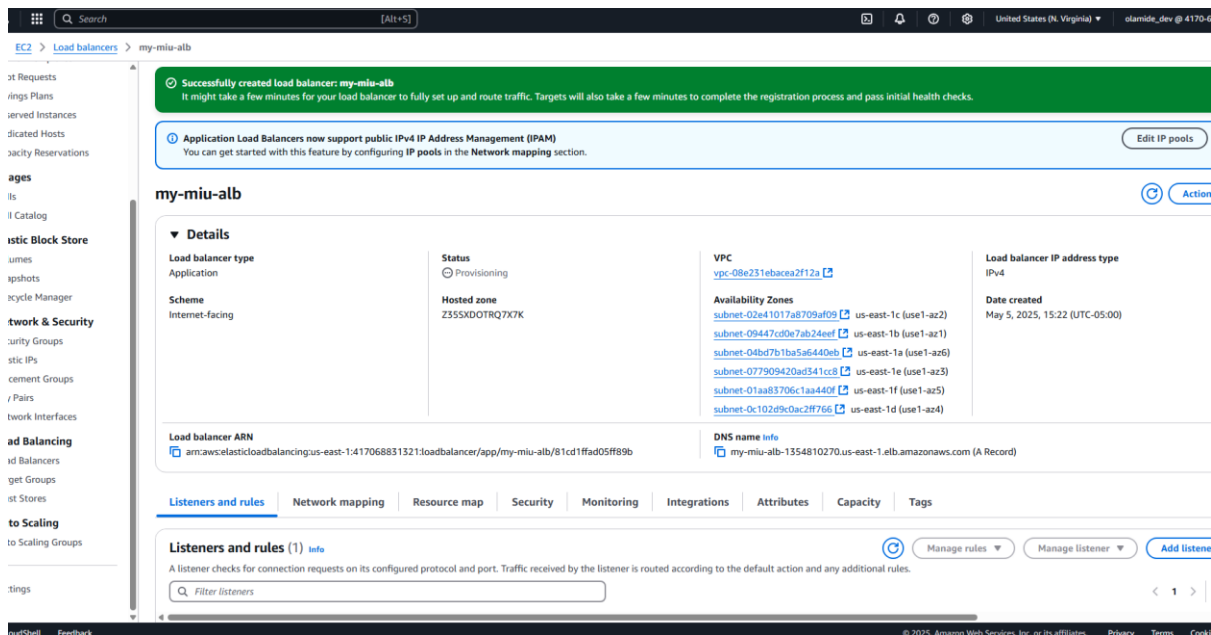


Fig 3.4 ALB Created

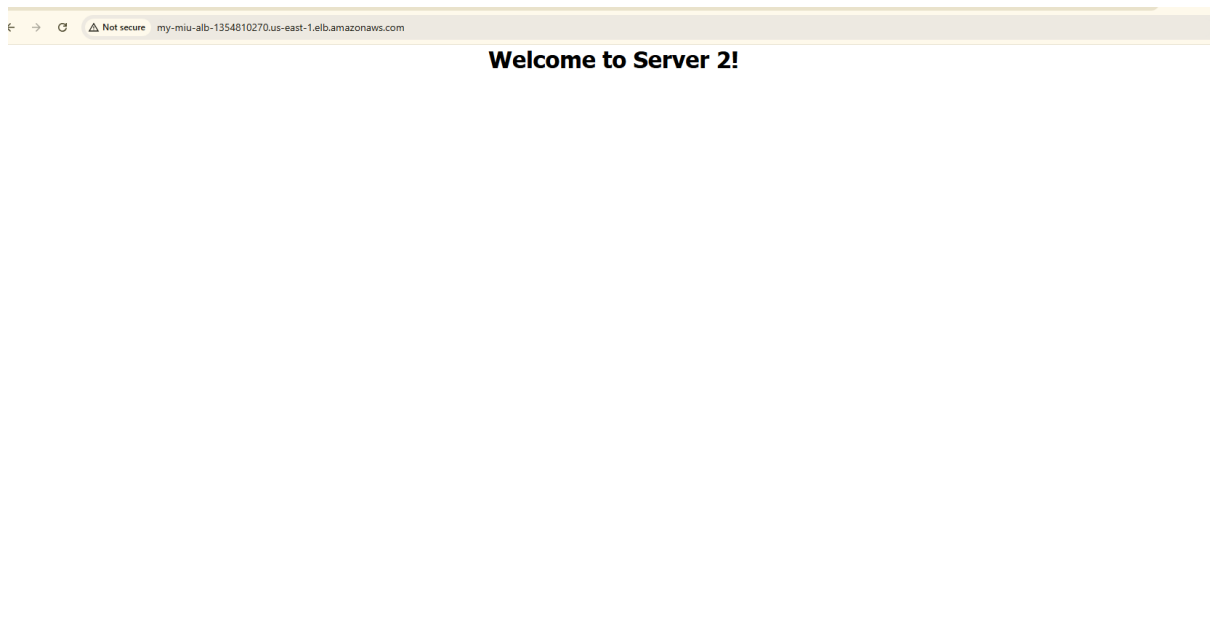


Fig 4.1 Website from ALB DNS

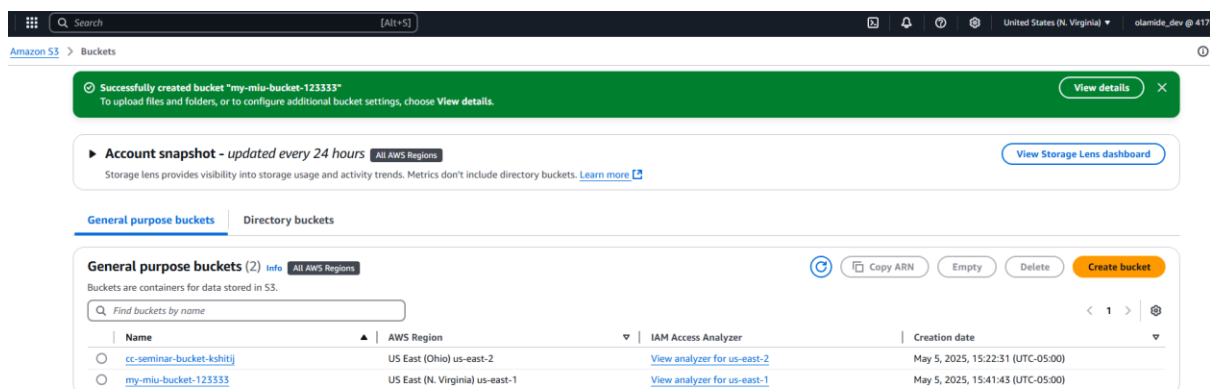


Fig 5.1 S3 Bucket



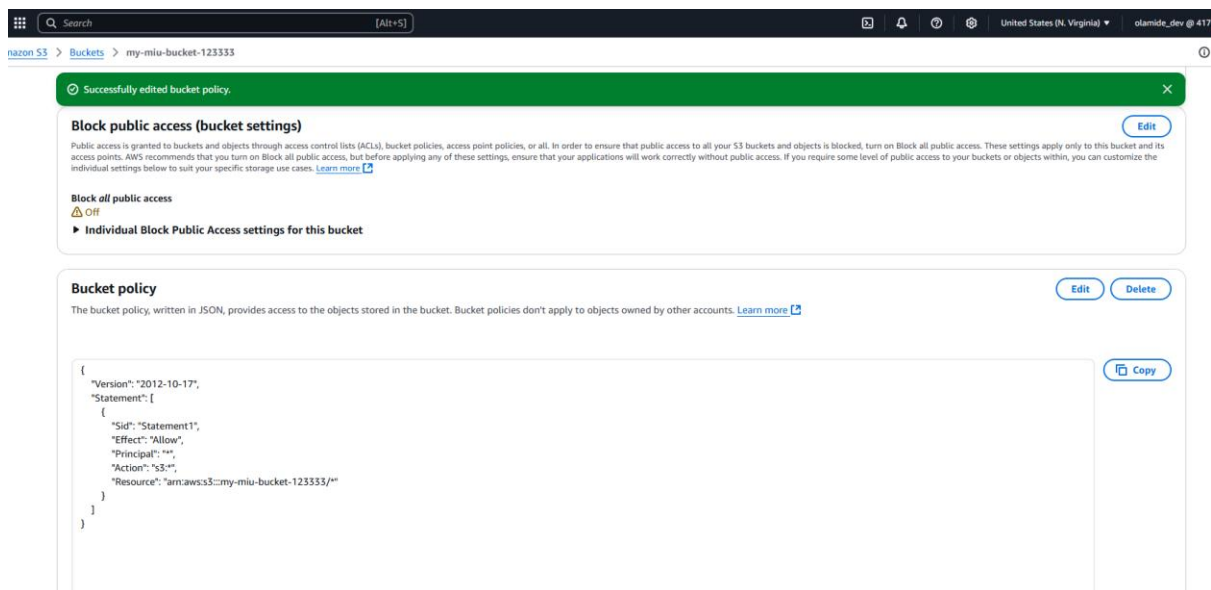


Fig 5.2 Editing Permission for Bucket

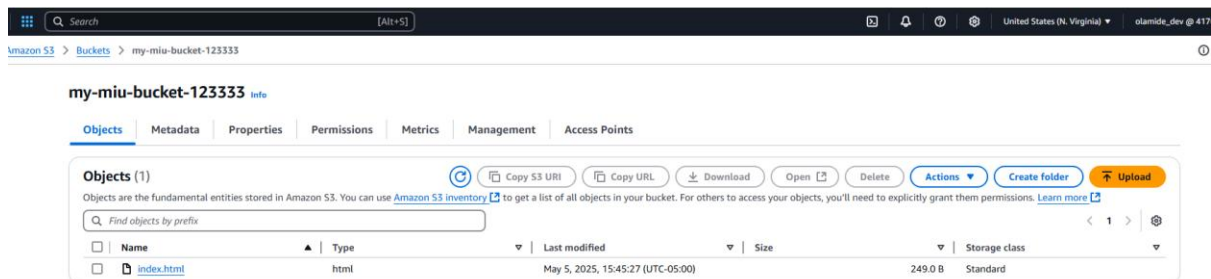


Fig 5.3 Bucket Created

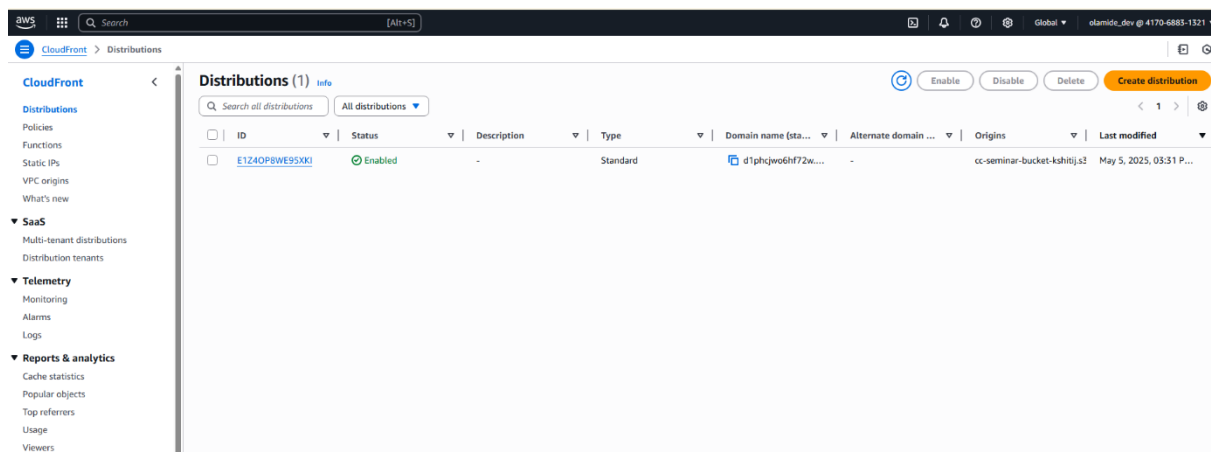


Fig 6.1 Creating Distribution from CloudFront

CloudFront > Distributions > Create

To add a list of alternative domain names, use the [bulk editor](#).

**Custom SSL certificate - optional**  
Associate a certificate from AWS Certificate Manager. The certificate must be in the US East (N. Virginia) Region (us-east-1).

[Request certificate](#)

**Supported HTTP versions**  
Add support for additional HTTP versions. HTTP/1.0 and HTTP/1.1 are supported by default.

☒ HTTP/2  
☐ HTTP/3

**Default root object - optional**  
The object (file name) to return when a viewer requests the root URL (/) instead of a specific object.

**IPv6**  
☐ Off  
☒ On

**Description - optional**

**Standard logging** [info](#)  
Additional charges may apply. See info for more details.

**Log delivery**  
Get logs of viewer requests to CloudWatch, Amazon S3 or Firehose

☒ Off  
☐ On

[Cancel](#) [Create distribution](#)

Fig 6.2 Creating Distribution

CloudFront > Distributions > EN3OTGA59TFTF

Successfully created new distribution.  
To get in-depth monitoring information for your distribution's internet traffic, create an [Internet Monitor](#)

Notifications: 0 1 0 0 0 0

**EN3OTGA59TFTF** [Standard](#) [View metrics](#)

[General](#) [Security](#) [Origins](#) [Behaviors](#) [Error pages](#) [Invalidations](#) [Tags](#) [Logging](#)

**Details**

Distribution domain name <a href="#">d12j0ven0m9ydk.cloudfront.net</a>	ARN <a href="#">arn:aws:cloudfront:417068831321:distribution/EN3OTGA59TFTF</a>	Last modified Deploying
---	---	----------------------------

**Settings** [Edit](#)

Description -	Alternate domain names -	Standard logging <a href="#">Off</a>
Price class Use all edge locations (best performance)		Cookie logging <a href="#">Off</a>
Supported HTTP versions HTTP/2, HTTP/1.1, HTTP/1.0		Default root object index.html

**Continuous deployment** [info](#) [Create staging distribution](#)

Fig 6.3 Distribution Created

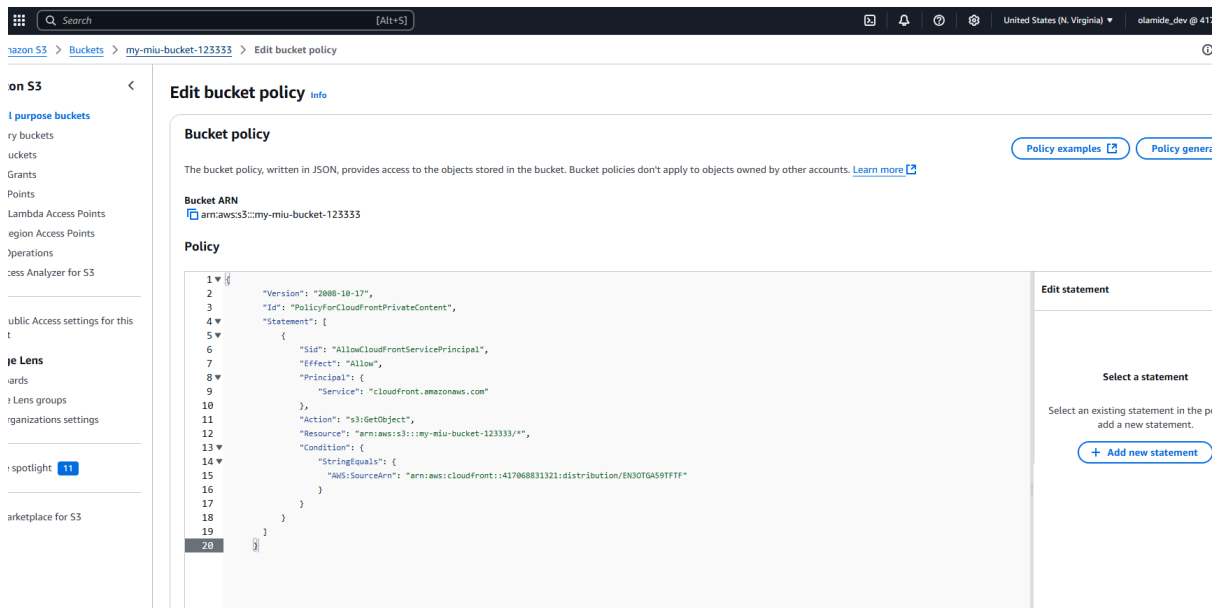


Fig 6.4 Edit Policy for Bucket For CloudFront



**This is the frontend**

Fig 6.5 Accessing Bucket from CloudFront DNS

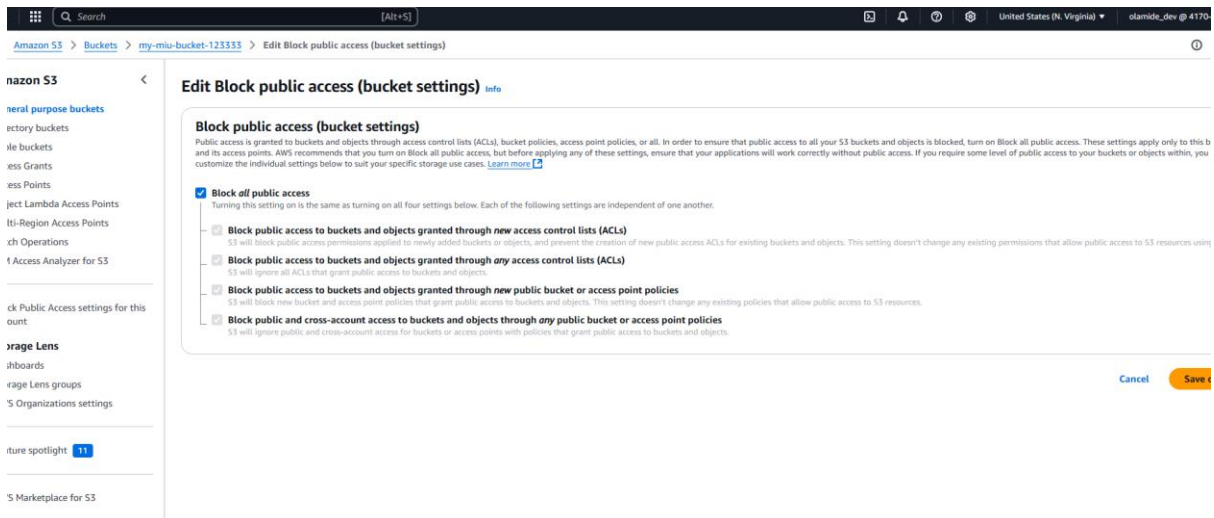


Fig 6.6 Block Public Access to S3 Bucket



This is the frontend

Fig 7.1 Before Invalidation

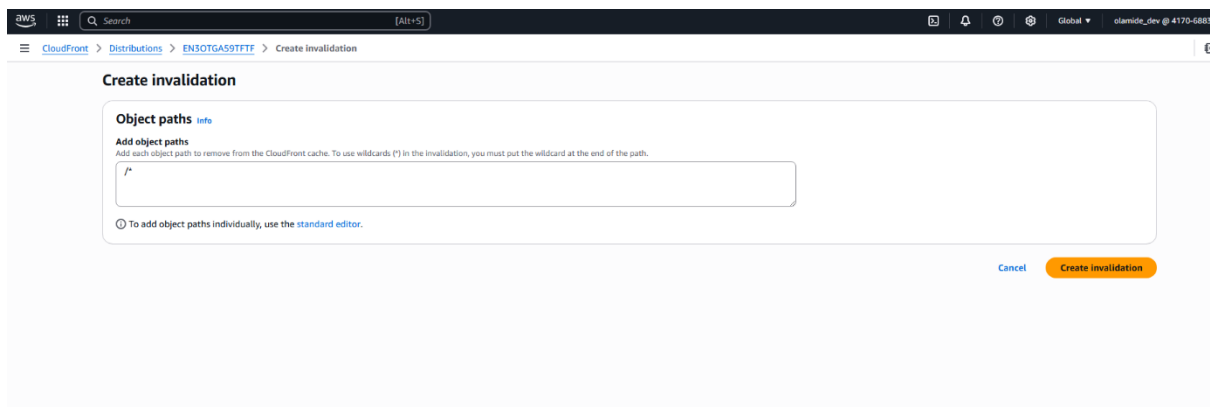


Fig 7.2 Invalidation of all content on the bucket



**This is the frontend after an update**

Fig 7.3 After Invalidation