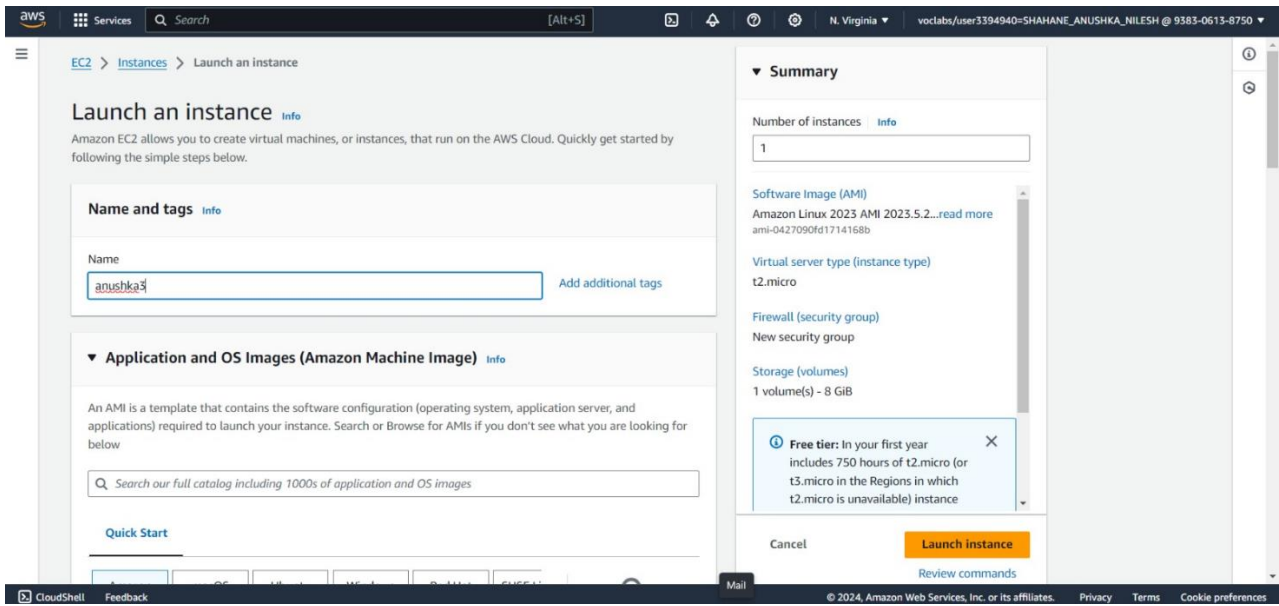


ADVANCE DEVOPS EXPERIMENT 1



Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name

[Add additional tags](#)

Quick Start

Amazon Linux
aws

macOS
Mac

Ubuntu
ubuntu

Windows
Microsoft

Red Hat
Red Hat

SUSE Li
SUSE

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-04a81a99f5ec58529 (64-bit (x86)) / ami-0c14ff330901e49ff (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description
Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).

Architecture
64-bit (x86)

AMI ID
ami-04a81a99f5ec58529

Verified provider

▼ Configure storage [Info](#)

Advanced

1x GiB Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems [Edit](#)

The screenshot shows the 'Launch an instance' page in the AWS Management Console. At the top, a green banner indicates 'Success: Successfully initiated launch of instance (i-0df3904aed5f9e9d9)'. Below this is a 'Launch log' section. The 'Next Steps' section features a search bar with the placeholder text 'What would you like to do next with this instance, for example "create alarm" or "create backup"'. Below the search bar are four recommended actions, each with a description and a button:

- Create billing and free tier usage alerts**: To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds. Button: [Create billing alerts](#)
- Connect to your instance**: Once your instance is running, log into it from your local computer. Button: [Connect to instance](#). Link: [Learn more](#)
- Connect an RDS database**: Configure the connection between an EC2 instance and a database to allow traffic flow between them. Button: [Connect an RDS database](#). Link: [Create a new RDS database](#), [Learn more](#)
- Create EBS snapshot policy**: Create a policy that automates the creation, retention, and deletion of EBS snapshots. Button: [Create EBS snapshot policy](#)

This screenshot shows the same 'Launch an instance' page, but with the 'Launch log' section expanded. It displays a list of steps that have been completed successfully:

- Initializing requests: [Succeeded](#)
- Creating security groups: [Succeeded](#)
- Creating security group rules: [Succeeded](#)
- Launch initiation: [Succeeded](#)

The 'Next Steps' section remains the same, with the search bar and four recommended actions.

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

▼ Images

Instances (1) info

Find Instance by attribute or tag (case-sensitive)

All states

Connect

Instance state

Actions

Launch instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
Anushka	i-0df3904aed5f9e9d9	Running	t2.micro	Initializing	View alarms	us-east-1b	ec2-54-197-204-120...

Select an instance

Instances (1/1) info

Find Instance by attribute or tag (case-sensitive)

All states

Connect

Instance state

Actions

Launch instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
Anushka	i-0df3904aed5f9e9d9	Running	t2.micro	Initializing	View alarms	us-east-1b	ec2-54-197-204-120...	54.197.204.120	-

i-0df3904aed5f9e9d9 (Anushka)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance summary info

Instance ID

i-0df3904aed5f9e9d9 (Anushka)

IPv6 address

-

Hostname type

IP name: ip-172-31-42-176.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

Public IPv4 address

54.197.204.120 | [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-42-176.ec2.internal

Instance type

t2.micro

VPC ID

Private IPv4 addresses

172.31.42.176

Public IPv4 DNS

ec2-54-197-204-120.compute-1.amazonaws.com | [open address](#)

Elastic IP addresses

-

AWS Compute Optimizer finding

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-31-42-176:~$ ls
ubuntu@ip-172-31-42-176:~$ echo "hello"
hello
ubuntu@ip-172-31-42-176:~$ cat > myfile.txt
This is Advance devops lab
^C
ubuntu@ip-172-31-42-176:~$ cat myfile
cat: myfile: No such file or directory
ubuntu@ip-172-31-42-176:~$ cat myfile.txt
This is Advance devops lab
ubuntu@ip-172-31-42-176:~$
```

Hosting a static website using EC2 instance:

```
*** System restart required ***
Pending kernel upgrade!
Running kernel version:
  6.8.0-1009-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.8.0-1012-aws.
Last login: Tue Jul 30 08:37:47 2024 from 18.206.107.28
ubuntu@ip-172-31-41-78:~$ sudo su
root@ip-172-31-41-78:/home/ubuntu# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.58-1ubuntu8.4).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@ip-172-31-41-78:/home/ubuntu# systemctl
```

i-0104434d25a50dc8d (anushka1)

PublicIPs: 18.215.241.79 PrivateIPs: 172.31.41.78

```
└─12917 /usr/sbin/apache2 -k start
└─12919 /usr/sbin/apache2 -k start
└─12921 /usr/sbin/apache2 -k start

Jul 30 08:44:17 ip-172-31-41-78 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Jul 30 08:44:17 ip-172-31-41-78 systemd[1]: Started apache2.service - The Apache HTTP Server.
root@ip-172-31-41-78:/home/ubuntu# cd /var/www/html/
bash: cd /var/www/html/: No such file or directory
root@ip-172-31-41-78:/home/ubuntu# cd /var/www/html/
root@ip-172-31-41-78:/var/www/html# /var/www/html#
bash: /var/www/html#: No such file or directory
root@ip-172-31-41-78:/var/www/html#
```

i-0104434d25a50dc8d (anushka1)

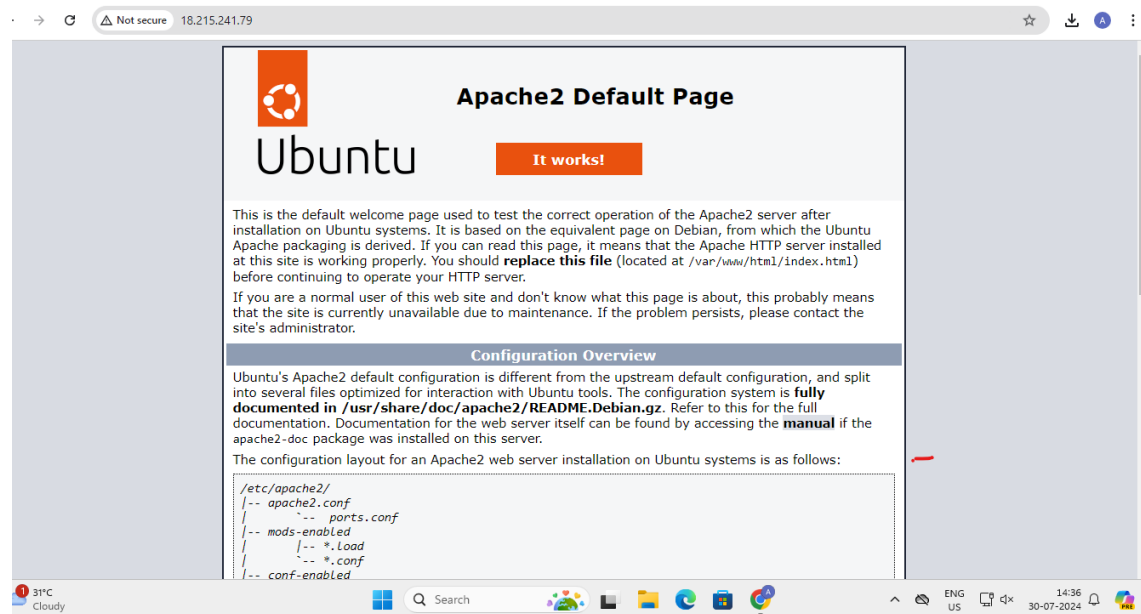
PublicIPs: 18.215.241.79 PrivateIPs: 172.31.41.78

```
command 'systemctl' from deb systemctl (1.4.4181-1.1)
Try: apt install <deb name>
root@ip-172-31-41-78:/home/ubuntu# systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Tue 2024-07-30 08:44:17 UTC; 12min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 12917 (apache2)
    Tasks: 55 (limit: 1130)
   Memory: 5.3M (peak: 5.4M)
      CPU: 74ms
   CGroup: /system.slice/apache2.service
           └─12917 /usr/sbin/apache2 -k start
             └─12919 /usr/sbin/apache2 -k start
               └─12921 /usr/sbin/apache2 -k start

Jul 30 08:44:17 ip-172-31-41-78 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Jul 30 08:44:17 ip-172-31-41-78 systemd[1]: Started apache2.service - The Apache HTTP Server.
root@ip-172-31-41-78:/home/ubuntu#
```

i-0104434d25a50dc8d (anushka1)

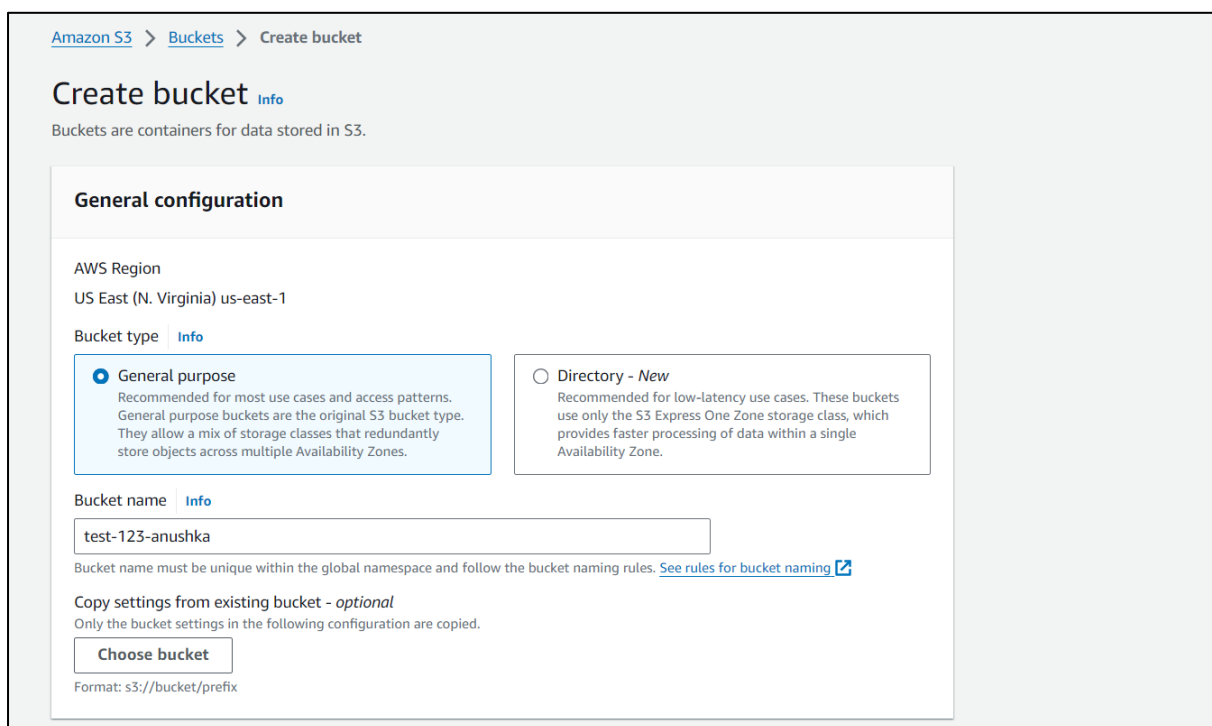
PublicIPs: 18.215.241.79 PrivateIPs: 172.31.41.78



Anushka Shahane D15A 55



Hosting using S3 bucket :



Default encryption [Info](#)

Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [Info](#)

☒ Server-side encryption with Amazon S3 managed keys (SSE-S3)

☐ Server-side encryption with AWS Key Management Service keys (SSE-KMS)

☐ Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)

Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the [Storage](#) tab of the [Amazon S3 pricing page](#). [↗](#)

Bucket Key

Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#) [↗](#)

☐ Disable

☒ Enable

► Advanced settings

ⓘ

After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

Cancel

Create bucket

Successfully created bucket "test-123-anushka" [View details](#) ✕
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Amazon S3 > Buckets

► Account snapshot - updated every 24 hours [All AWS Regions](#)

[View Storage Lens dashboard](#)

General purpose buckets

Directory buckets

General purpose buckets (1) [Info](#) [All AWS Regions](#)

[↺](#)

[Copy ARN](#)

[Empty](#)

[Delete](#)

[Create bucket](#)

Buckets are containers for data stored in S3.

Find buckets by name

< 1 > [⚙](#)

Name ▲	AWS Region ▼	IAM Access Analyzer	Creation date ▼
<input type="radio"/> test-123-anushka	US East (N. Virginia) us-east-1	View analyzer for us-east-1	August 11, 2024, 19:49:09 (UTC+05:30)

☑ Upload succeeded

View details below.

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

Summary

Destination

s3://test-123-anushka

Succeeded

🟢 1 file, 0 B (0%)

Failed

🔴 0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (1 Total, 0 B)

🔍 Find by name

⏪ 1 ⏩

Name	Folder	Type	Size	Status	Error
Test.txt	-	text/plain	0 B	🟢 Succeeded	-

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 7

Amazon S3 > Buckets > test-123-anushka > Test.txt

Test.txt info

Copy S3 URIDownloadOpenObject actions

PropertiesPermissionsVersions

Object overview

Owner

aws:labs0w4201793t1653663267

AWS Region

US East (N. Virginia) us-east-1

Last modified

August 11, 2024, 19:58:50 (UTC+05:30)

Size

-

Type

txt

Key

S3 URI

s3://test-123-anushka/Test.txt

Amazon Resource Name (ARN)

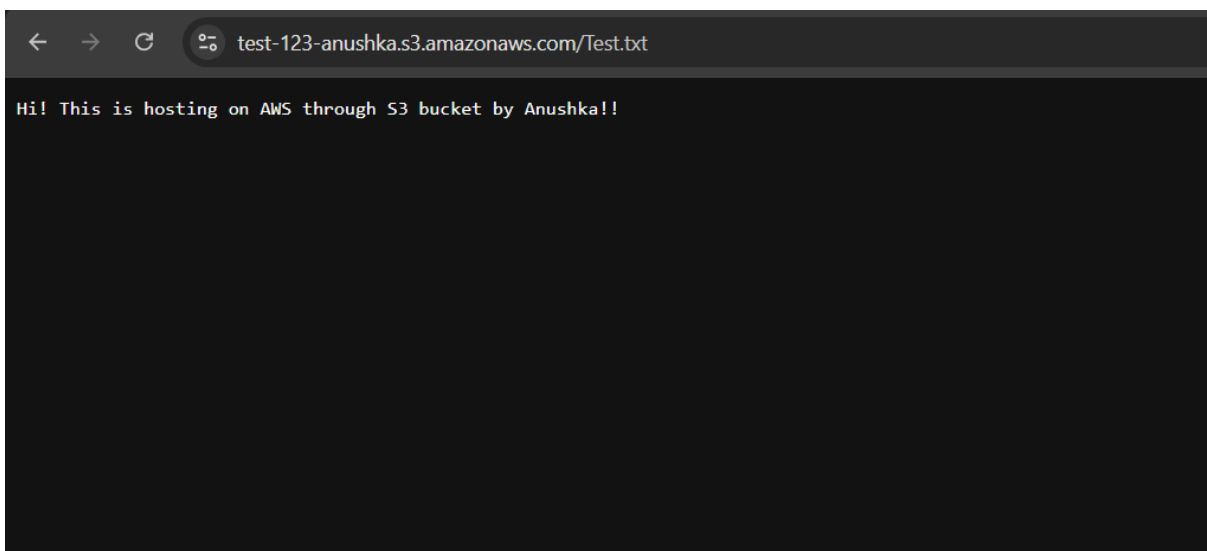
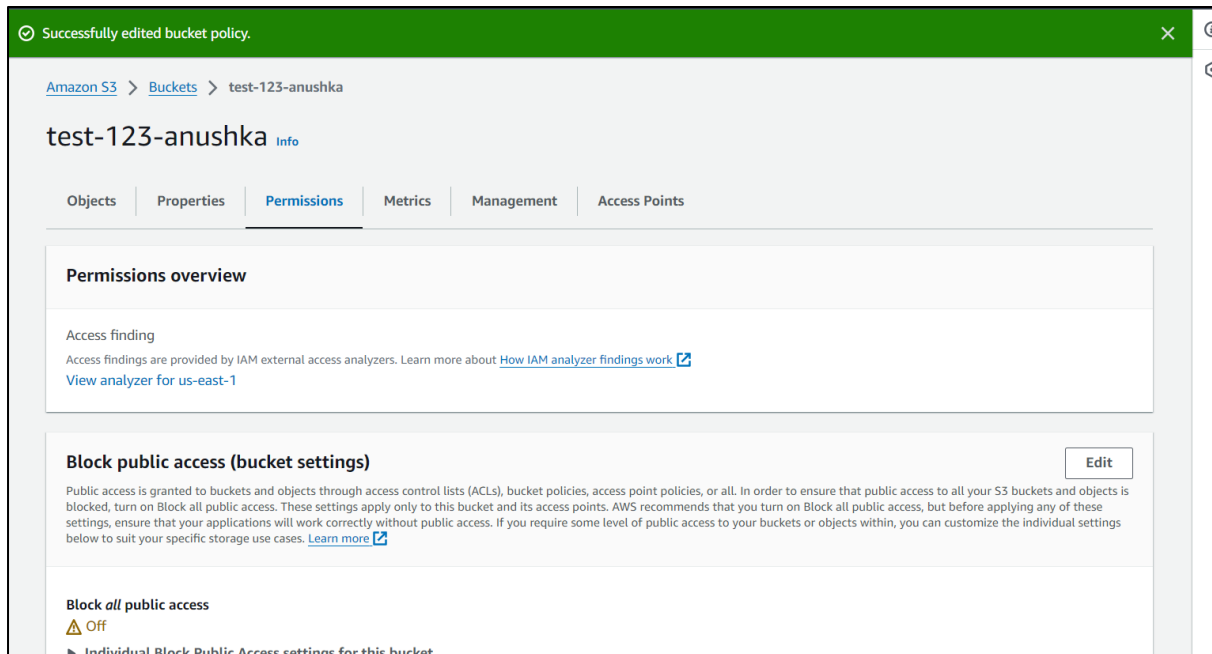
arn:aws:s3:::test-123-anushka/Test.txt

Entity tag (Etag)

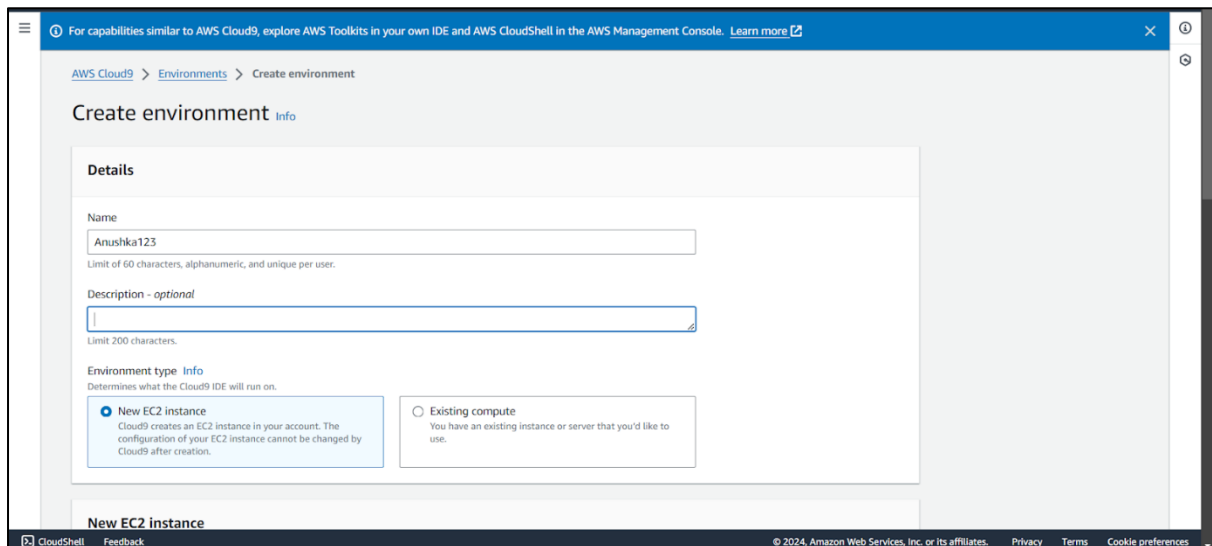
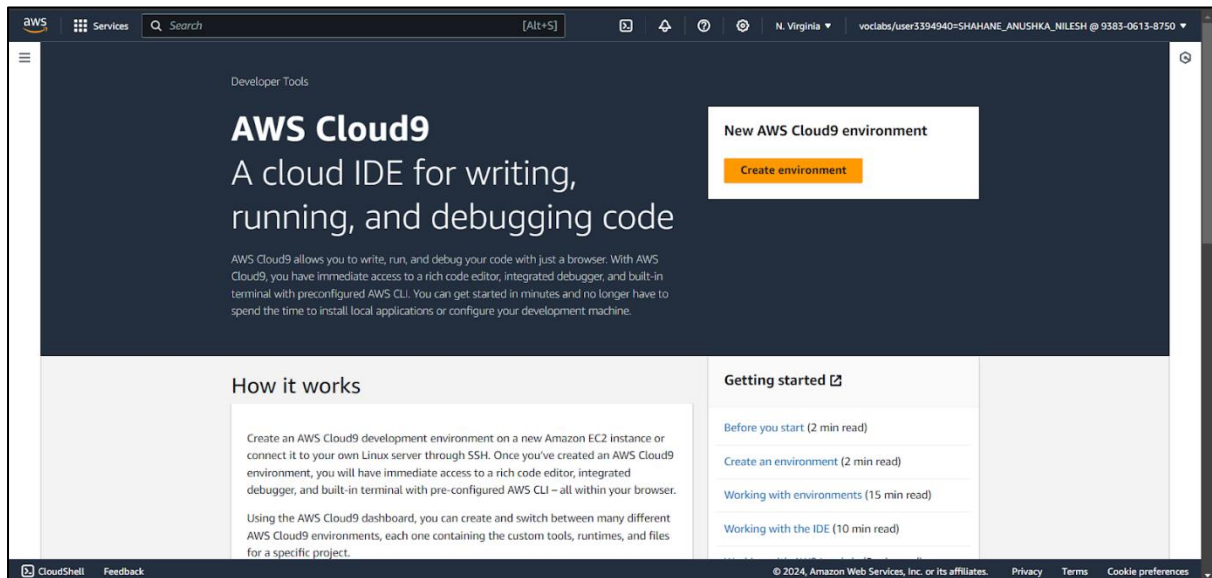
d41d8cd98f00b204e9800998ecf8427e

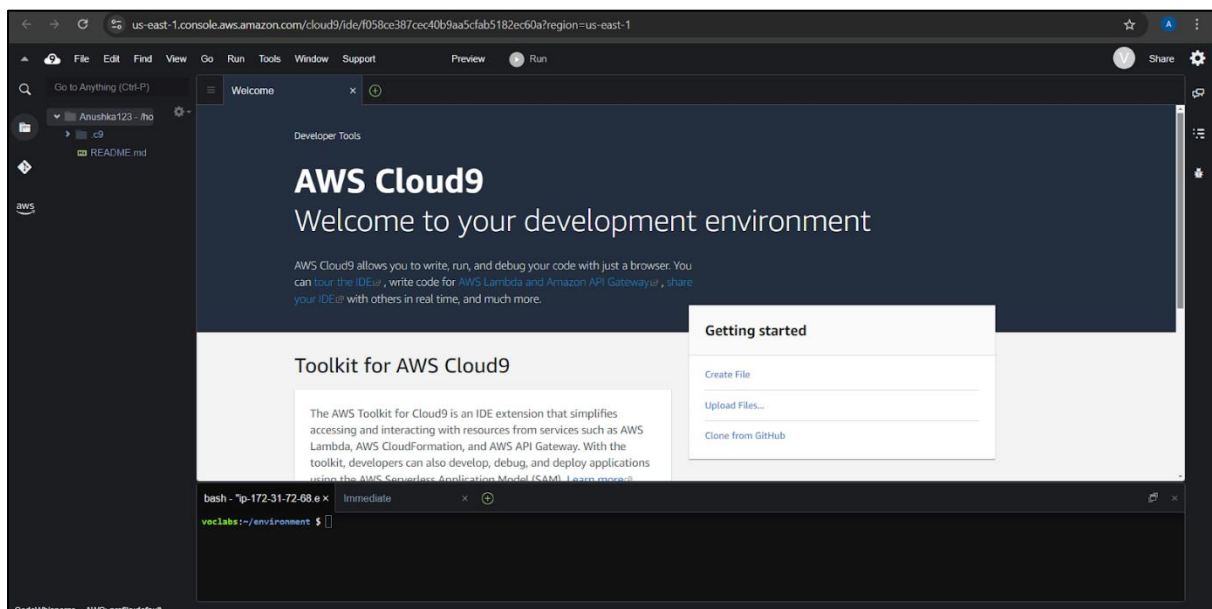
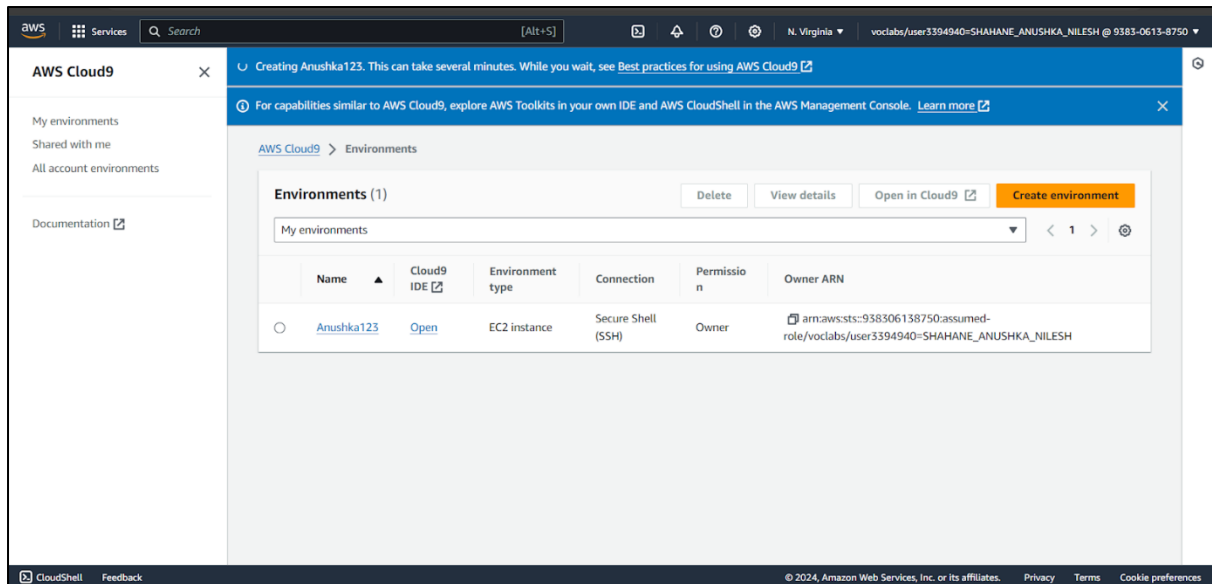
Object URL

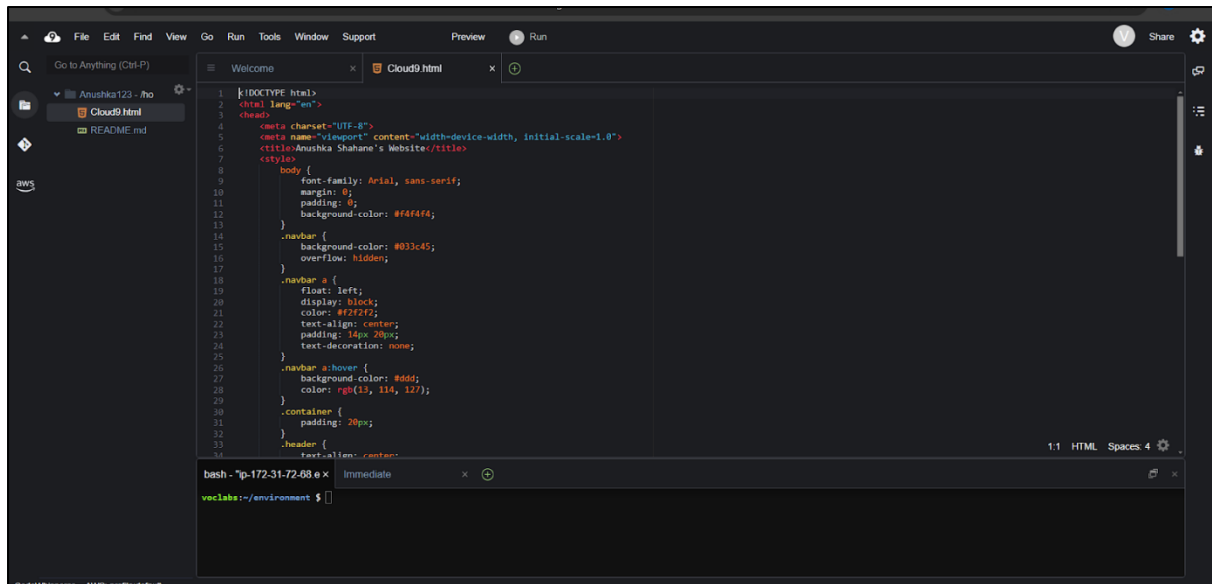
https://test-123-anushka.s3.amazonaws.com/Test.txt



Hosting using Cloud 9 :



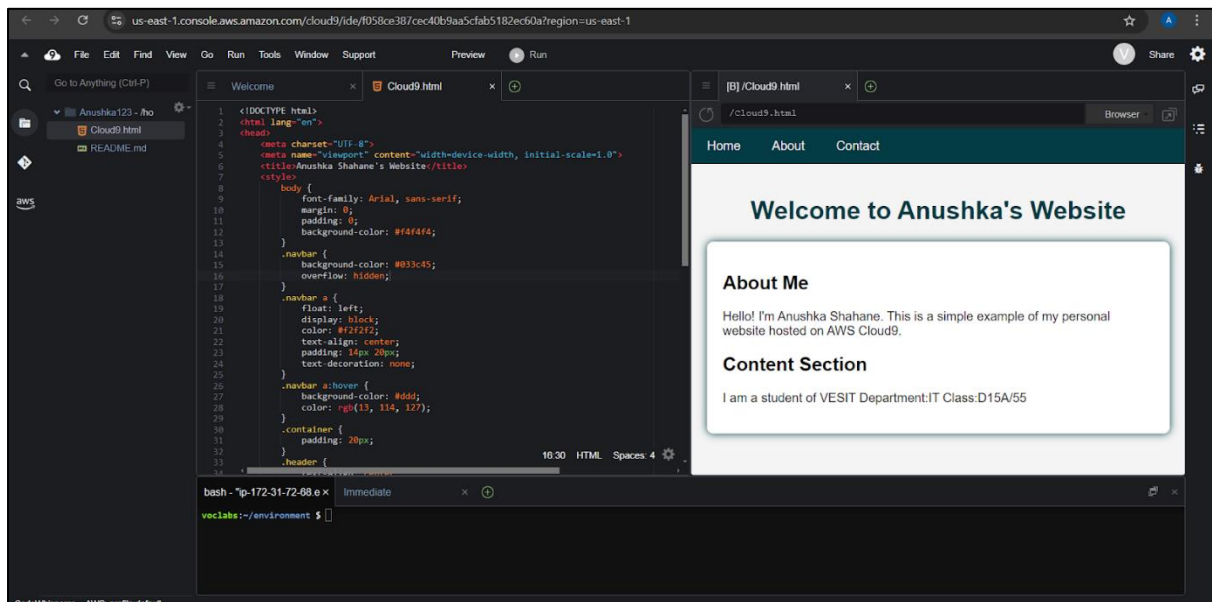




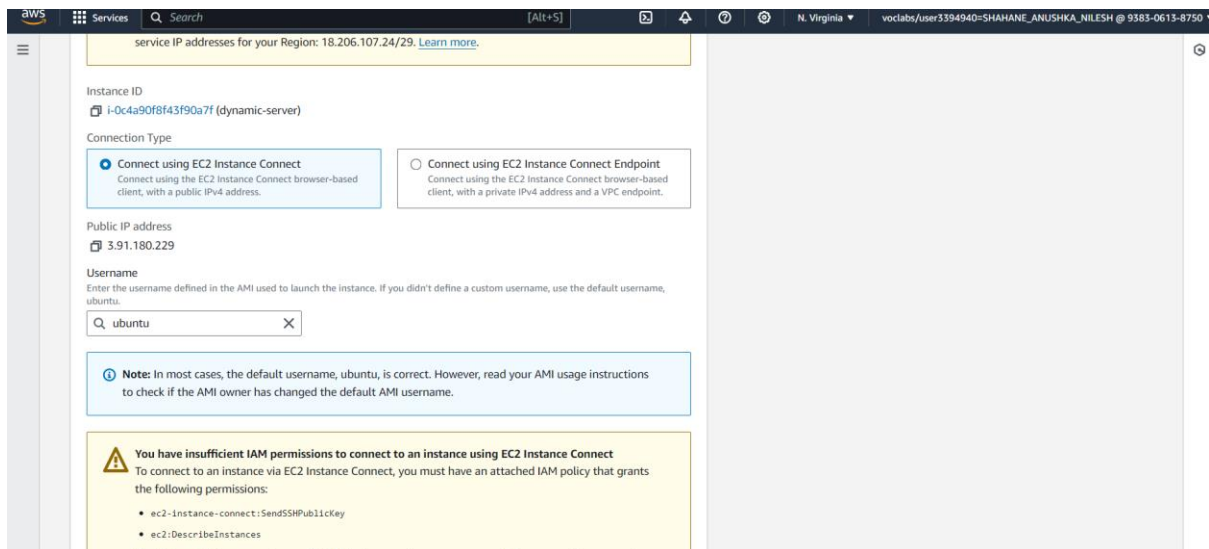
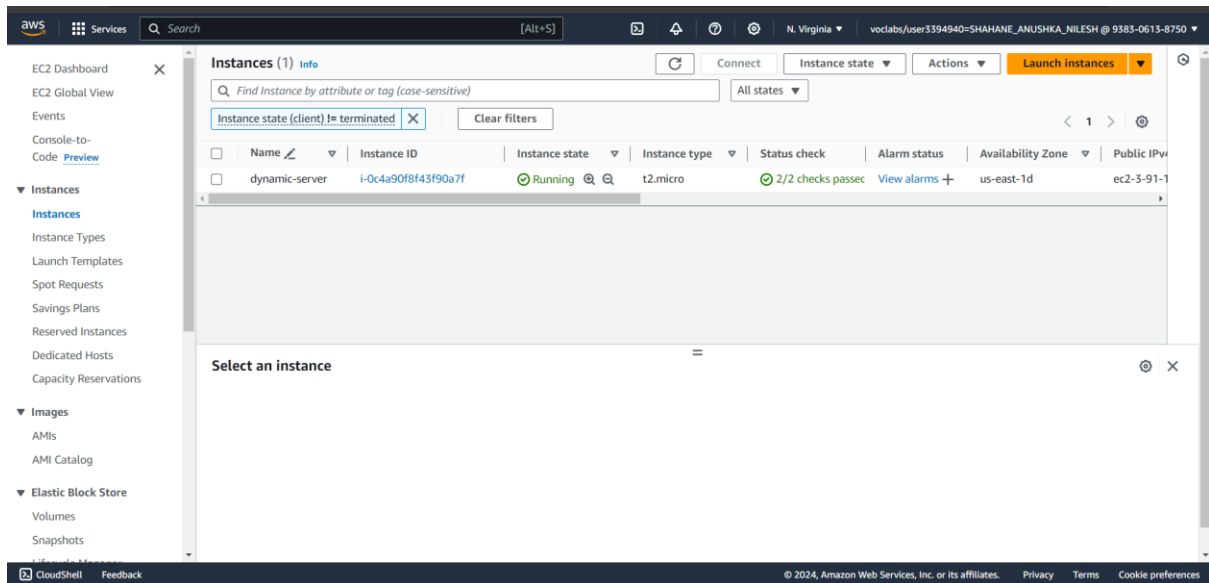
The screenshot shows the AWS Cloud9 IDE interface. The main editor displays the `Cloud9.html` file with the following HTML and CSS code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta name="viewport" content="width=device-width, initial-scale=1.0">
6 <title>Anushka Shahane's Website</title>
7 <style>
8     body {
9         font-family: Arial, sans-serif;
10        margin: 0;
11        padding: 0;
12        background-color: #f4f4f4;
13    }
14    .navbar {
15        background-color: #03c45c;
16        overflow: hidden;
17    }
18    .navbar a {
19        float: left;
20        display: block;
21        color: #f2f2f2;
22        text-align: center;
23        padding: 14px 20px;
24        text-decoration: none;
25    }
26    .navbar a:hover {
27        background-color: #ddd;
28        color: rgb(13, 114, 127);
29    }
30    .container {
31        padding: 20px;
32    }
33    .header {
34        text-align: center;
```

The terminal at the bottom shows the command `bash - "p-172-31-72-68" x` and the prompt `voelabs:~/environment $`.



Dynamic Hosting using EC2 instance :



```
ubuntu@ip-172-31-83-228:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-83-228:~$ mkdir Anushka
ubuntu@ip-172-31-83-228:~$ cd Anushka
ubuntu@ip-172-31-83-228:~/Anushka$ git clone https://github.com/Anushka3204/Dynamic_hosting_EC2.git
Cloning into 'Dynamic_hosting_EC2'...
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (5/5), 8.39 KiB | 1.68 MiB/s, done.
ubuntu@ip-172-31-83-228:~/Anushka$ ls
Dynamic_hosting_EC2
ubuntu@ip-172-31-83-228:~/Anushka$ cd ^C
ubuntu@ip-172-31-83-228:~/Anushka$ cd Dynamic_hosting_EC2
ubuntu@ip-172-31-83-228:~/Anushka/Dynamic_hosting_EC2$ ls
index.js  package-lock.json  package.json
```

```
no VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-83-228:~/Anushka/Dynamic_hosting_EC2/Dynamic_hosting_EC2$ npm i
added 64 packages, and audited 65 packages in 3s

12 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
ubuntu@ip-172-31-83-228:~/Anushka/Dynamic_hosting_EC2/Dynamic_hosting_EC2$
```

```
Dynamic_hosting_EC2 Dynamic_hosting_ec2 Hosting_dynamic_ec2 package-lock.json
ubuntu@ip-172-31-83-228:~/Anushka$ cd Hosting_dynamic_ec2
ubuntu@ip-172-31-83-228:~/Anushka/Hosting_dynamic_ec2$ ls
index.js package-lock.json package.json
ubuntu@ip-172-31-83-228:~/Anushka/Hosting_dynamic_ec2$ npm i
added 64 packages, and audited 65 packages in 1s

12 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
ubuntu@ip-172-31-83-228:~/Anushka/Hosting_dynamic_ec2$ npm start
> server@1.0.0 start
> node index.js

Server is running on port 3000
```

The screenshot displays the AWS Management Console interface. On the left, the navigation menu shows 'Instances' and 'Images' expanded. The main content area is titled 'Security Groups (1/6) Info'. Below this, a table lists security groups, with 'sg-0e9c7347eda0b5a19' selected. The 'Inbound rules' tab is active, showing a table of rules. The first rule is for HTTP on port 80, and the second is for SSH on port 22. The console also shows the 'CloudShell' terminal at the bottom.

Name	Security group rule...	IP version	Type	Protocol	Port
-	sgr-0719276f3e5dc89d2	IPv4	HTTP	TCP	80
-	sgr-02b44d0276b699...	IPv4	SSH	TCP	22

