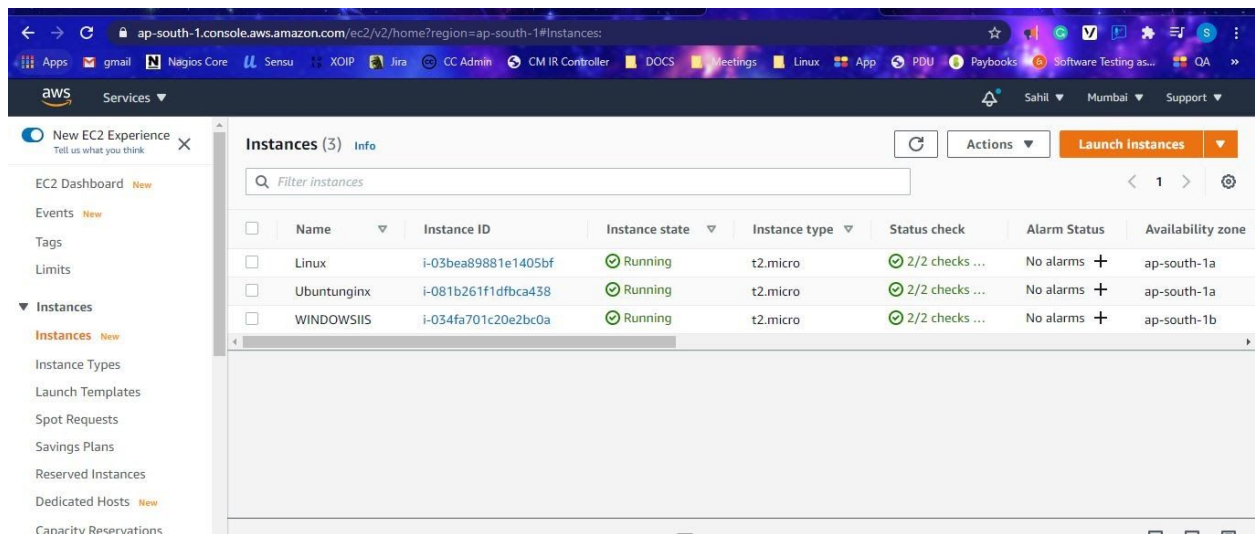


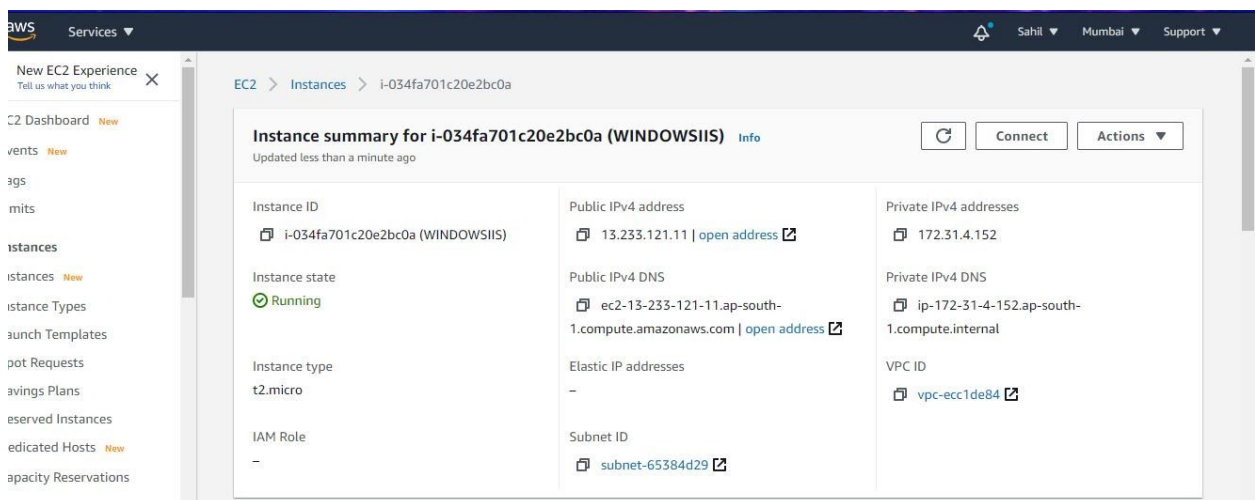
Sahil Chandrakant Mhatre
(sahil.c.mhatre@gmail.com)
Lets Upgrade AWS
Assignment no 1 (Day 3 & 4)

PROJECT 1: Deploying a web server in Windows instance

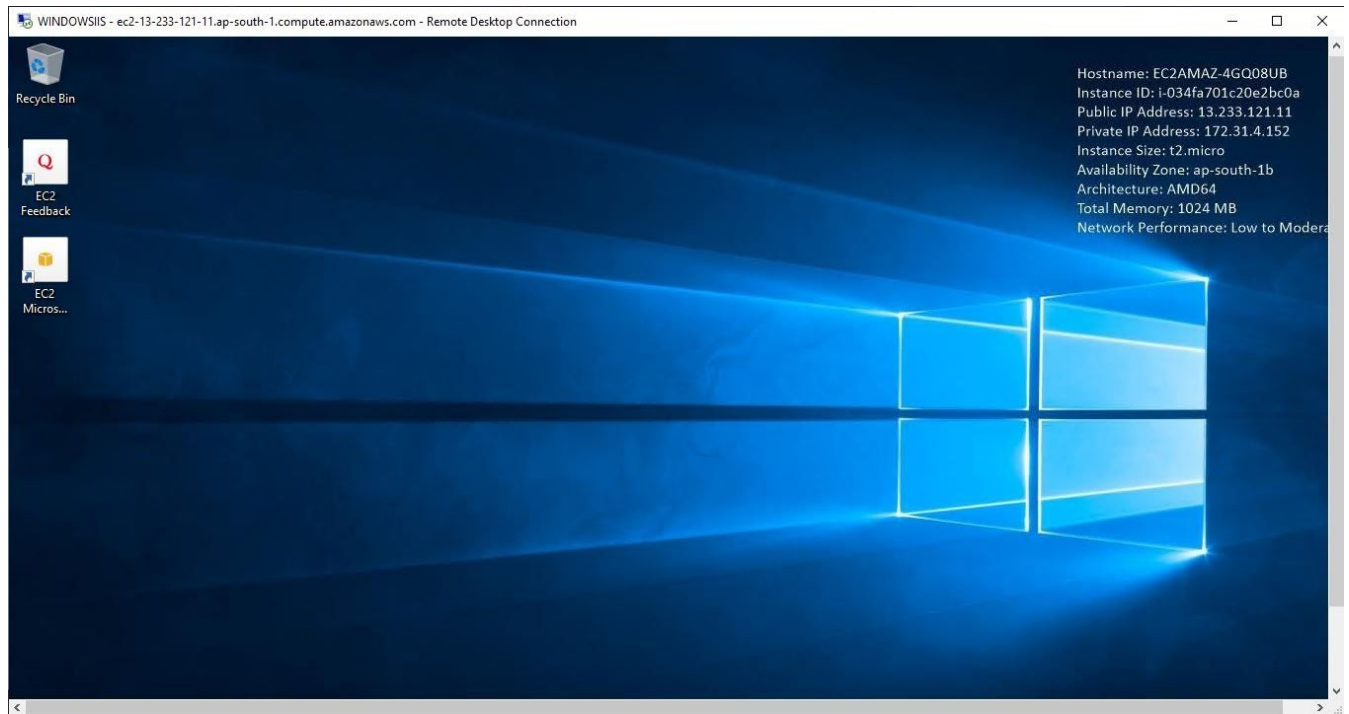
1.Created a Windows EC-2 Instance successfully



2. The details of the Windows Instance

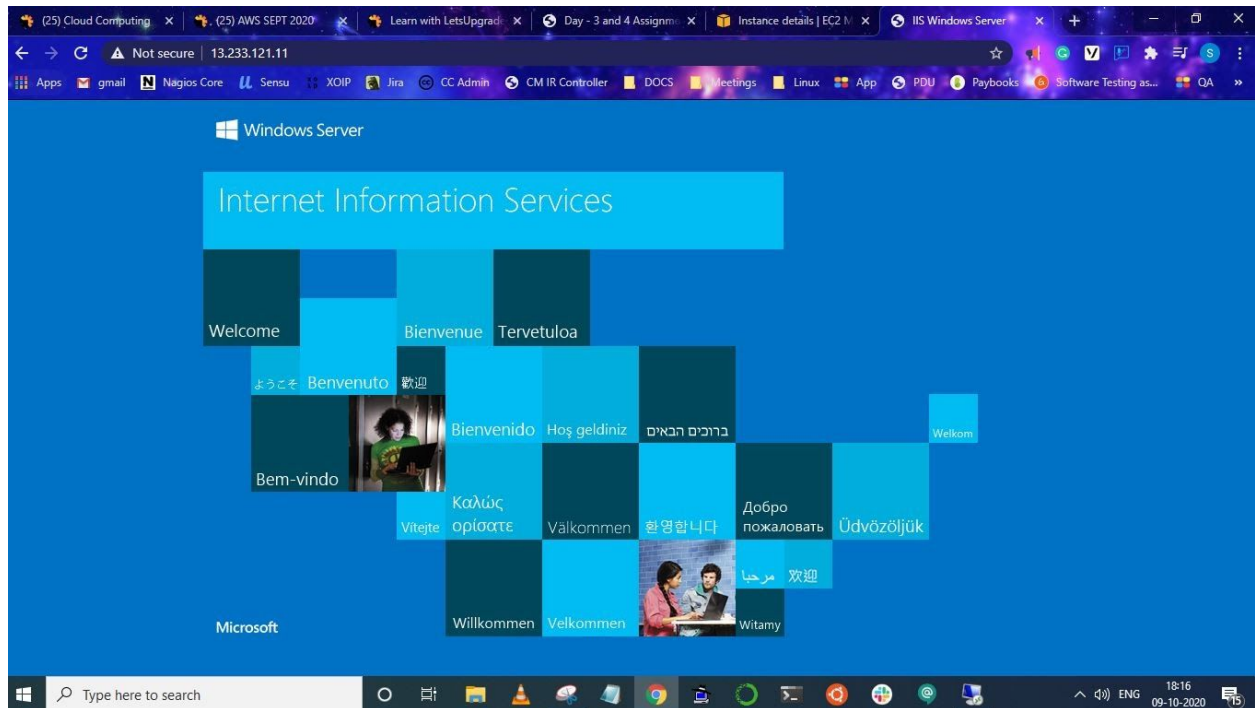


3. Connected to the Windows instance using RDP client



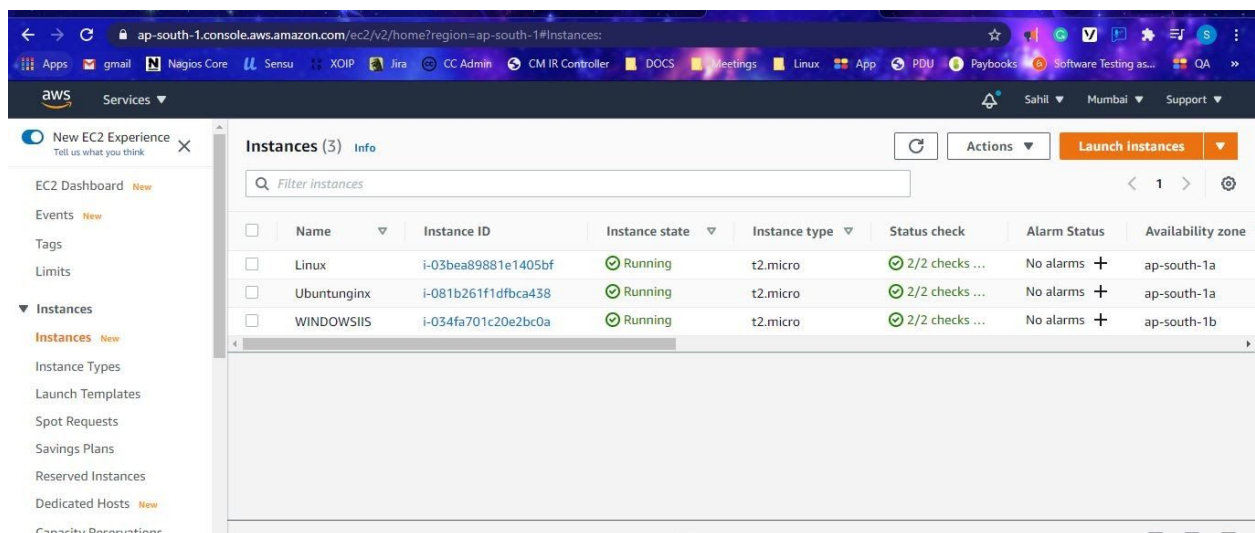
4. Installed the IIS web server on the windows instance using the command ***Install-WindowsFeature -name Web-Server -IncludeManagementTools*** on the powershell

5. Accessed the webserver using the public IP of the Instance 13.233.121.11 <http://13.233.121.11/>

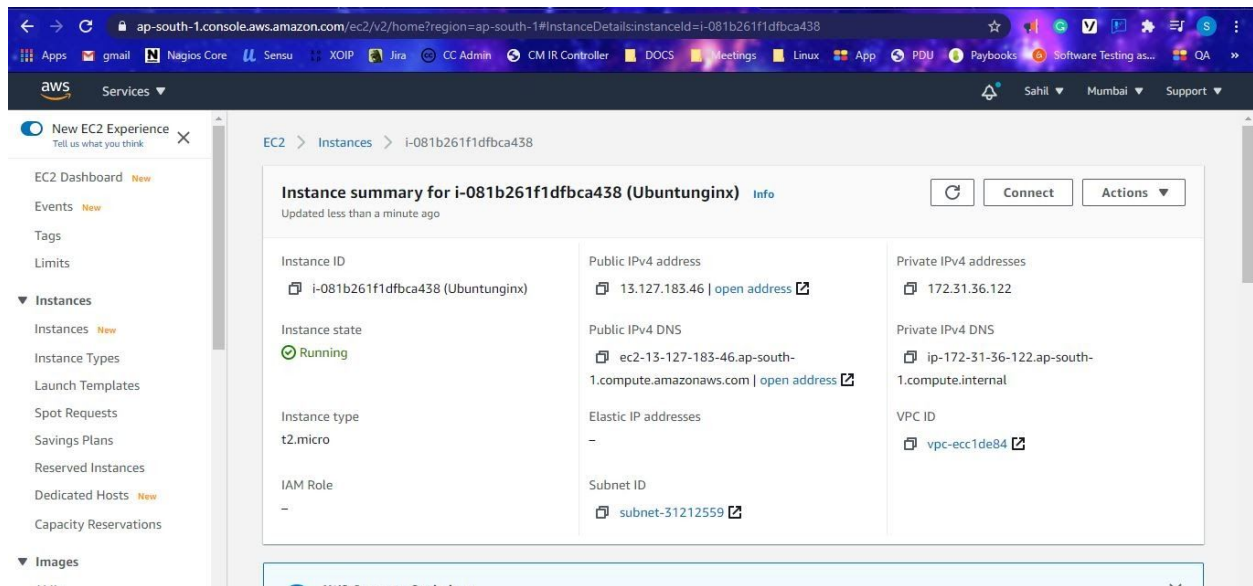


PROJECT 2: Deploying a web server in Windows instance

1. Created an Ubuntu EC-2 instance



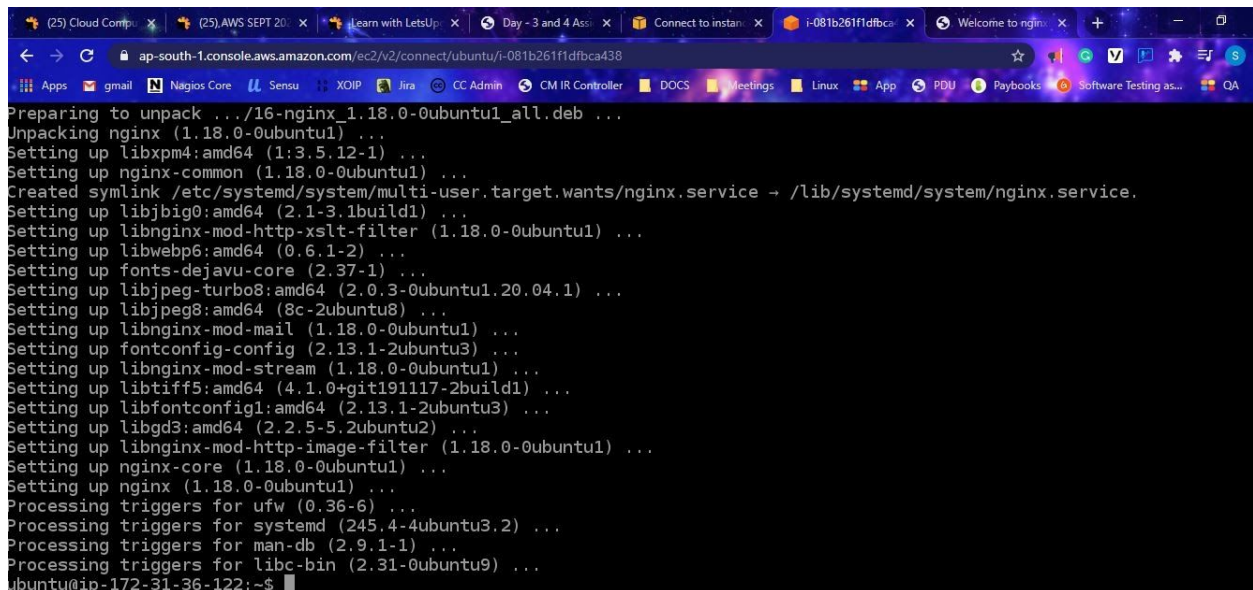
2. Configuration of the Ubuntu Instance



3. Connected to the Instance using EC2 Instance Connect and installed the Nginx web server using the commands:

sudo apt-get -y update

sudo apt-get -y install nginx

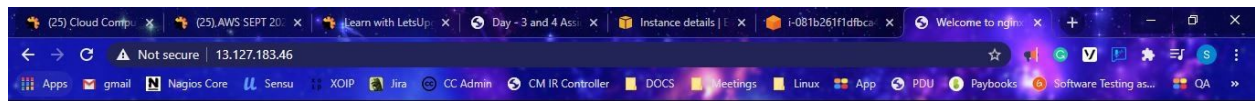


i-081b261f1dfbca438 (Ubuntu16.04)

Public IPs: 13.127.183.46 Private IPs: 172.31.36.122

4. Accessed the webserver using the Instance's Public IP

<http://13.127.183.46/>



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

PROJECT 3: Working with volumes

1. Using the same Windows instance created for Project 1

The screenshot displays the AWS Management Console interface. The top navigation bar shows the URL `ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:`. The left sidebar contains the 'Instances' menu, which is expanded to show 'Instances (3)'. The main content area displays a table of three EC2 instances:

	Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone
<input type="checkbox"/>	Linux	i-03bea89881e1405bf	Running	t2.micro	2/2 checks ...	No alarms +	ap-south-1a
<input type="checkbox"/>	Ubuntunginx	i-081b261f1dfbca438	Running	t2.micro	2/2 checks ...	No alarms +	ap-south-1a
<input type="checkbox"/>	WINDOWSIIIS	i-034fa701c20e2bc0a	Running	t2.micro	2/2 checks ...	No alarms +	ap-south-1b

Below the table, a 'Remote Desktop Connection' window is open, showing the desktop of the 'WINDOWSIIIS' instance. The desktop background is the Windows 10 logo. The taskbar on the left shows icons for 'Recycle Bin', 'EC2 Feedback', and 'EC2 Micros...'. The system information window in the top right corner displays the following details:

- Hostname: EC2AMAZ-4GQ08UB
- Instance ID: i-034fa701c20e2bc0a
- Public IP Address: 13.233.121.11
- Private IP Address: 172.31.4.152
- Instance Size: t2.micro
- Availability Zone: ap-south-1b
- Architecture: AMD64
- Total Memory: 1024 MB
- Network Performance: Low to Moderate

2. Created a new EBS volume

The screenshot shows the AWS Management Console interface. On the left, the navigation menu is visible with categories like Instances, Images, Elastic Block Store, and Network & Security. The 'Elastic Block Store' section is selected, and the 'Volumes' sub-section is active. A table lists the created volume:

Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State
	vol-05fbdbd5e04622c8c	2 GiB	gp2	100		October 9, 2020 at ...	ap-south-1b	available

Below the table, the 'Description' tab is selected for the volume 'vol-05fbdbd5e04622c8c'. It shows details such as Volume ID, Alarm status (None), Outposts ARN, and Size (2 GiB).

3. Attached the EBS volume to an existing Windows Instance

The screenshot shows the AWS Management Console interface for an existing Windows instance. The 'Storage' tab is selected under the 'Details' section. It displays the root device details and a list of attached block devices.

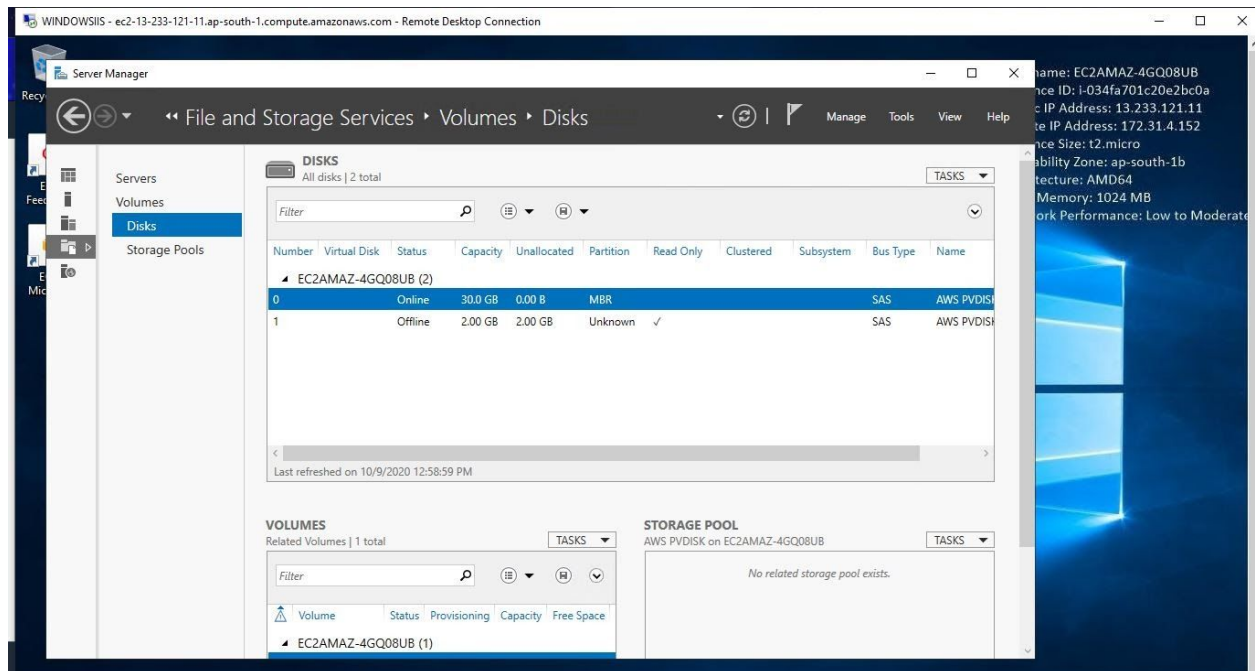
Root device details

Root device name	Root device type	EBS optimization
/dev/sda1	EBS	disabled

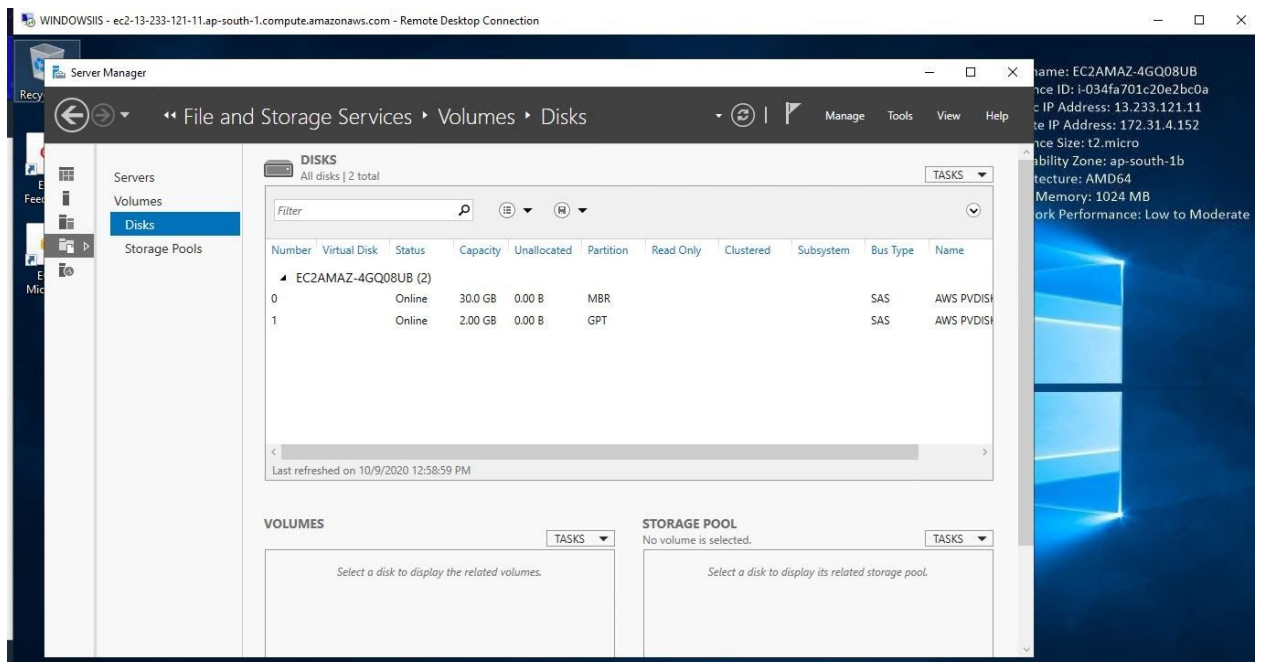
Block devices (2)

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted
vol-0e119fbd96179bd39	/dev/sda1	30	Attached	Fri Oct 09 2020 18:04:03 G...	No
vol-05fbdbd5e04622c8c	xvdf	2	Attached	Fri Oct 09 2020 18:26:31 G...	No

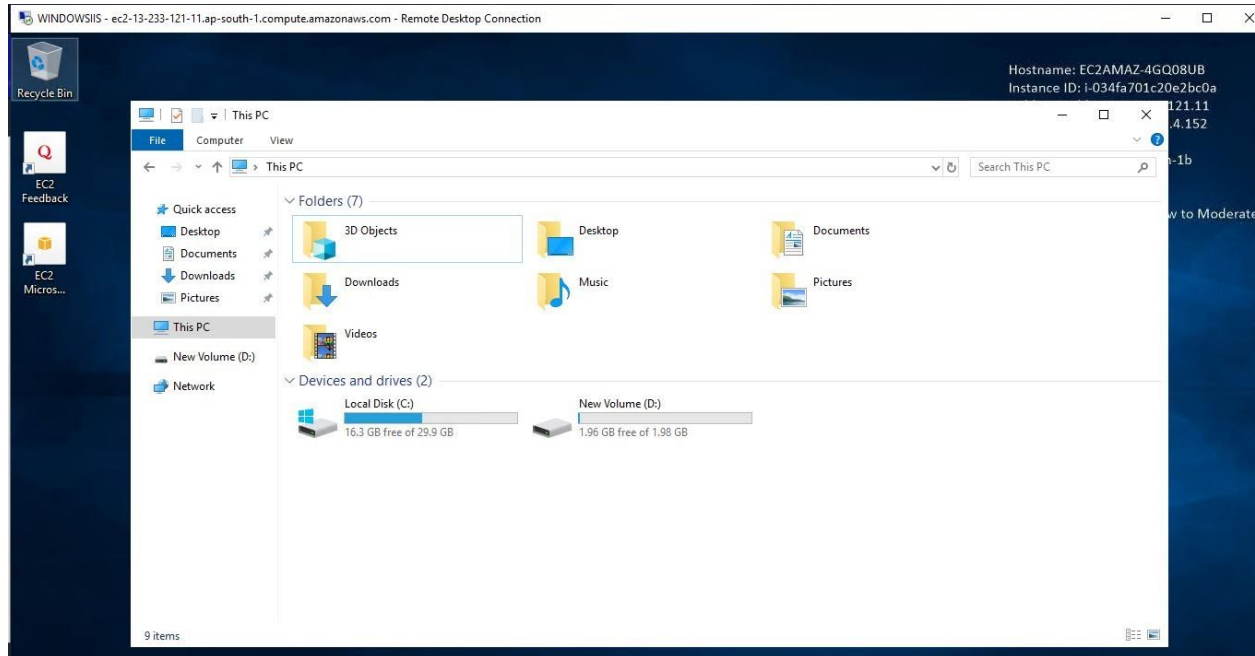
4. Connected to the Windows instance using RDP and was able to see the attached volume through Server Manager



5. Brought that volume online



6. Added that volume ad D partition to the instance and verified using the file explorer



7. Tried Modifying the volume, the request was submitted successfully a message displayed that it will take some time to reflect the modifications.

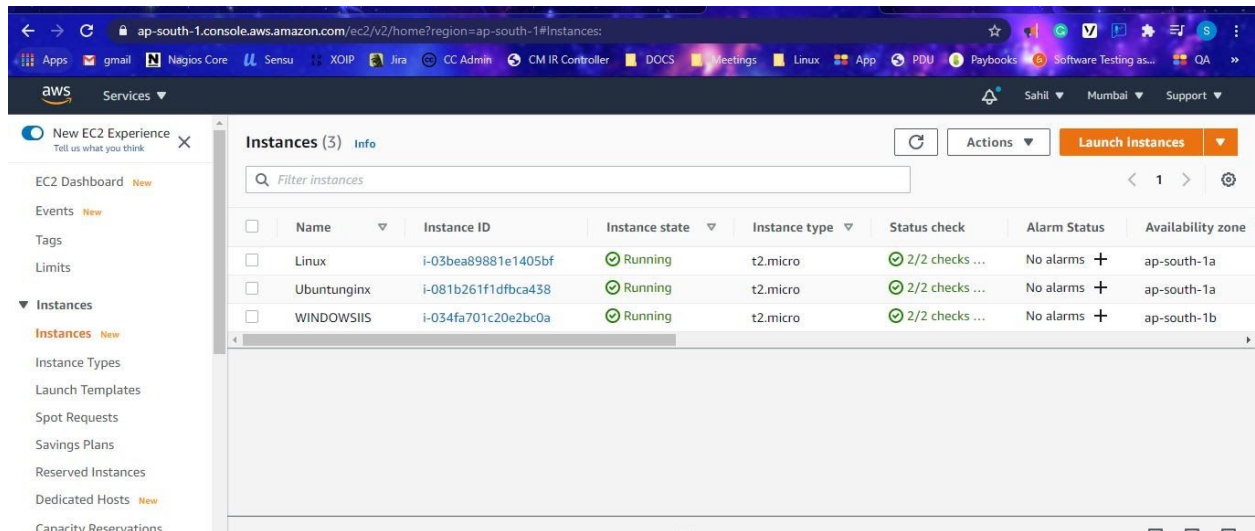
8. To delete the volume needed to detach the volume from the instance and then was able to delete

AWS Management Console screenshot showing the 'Volumes' page. The table lists the following volumes:

Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State	Ala
add	vol-0455573...	3 GiB	gp2	100		October 9, 2020 at ...	ap-south-1b	in-use	Nor
Windowsatta...	vol-05fbd5...	2 GiB	gp2	100		October 9, 2020 at ...	ap-south-1b	deleting	Nor
	vol-0726cb1...	8 GiB	gp2	100	snap-027b63b...	October 9, 2020 at ...	ap-south-1a	in-use	Nor
	vol-0ee1998...	8 GiB	gp2	100	snap-0ebc606...	October 9, 2020 at ...	ap-south-1a	in-use	Nor
	vol-0e119fbd...	30 GiB	gp2	100	snap-04e4b19...	October 9, 2020 at ...	ap-south-1b	in-use	Nor

PROJECT 4: Working with Elastic IP's

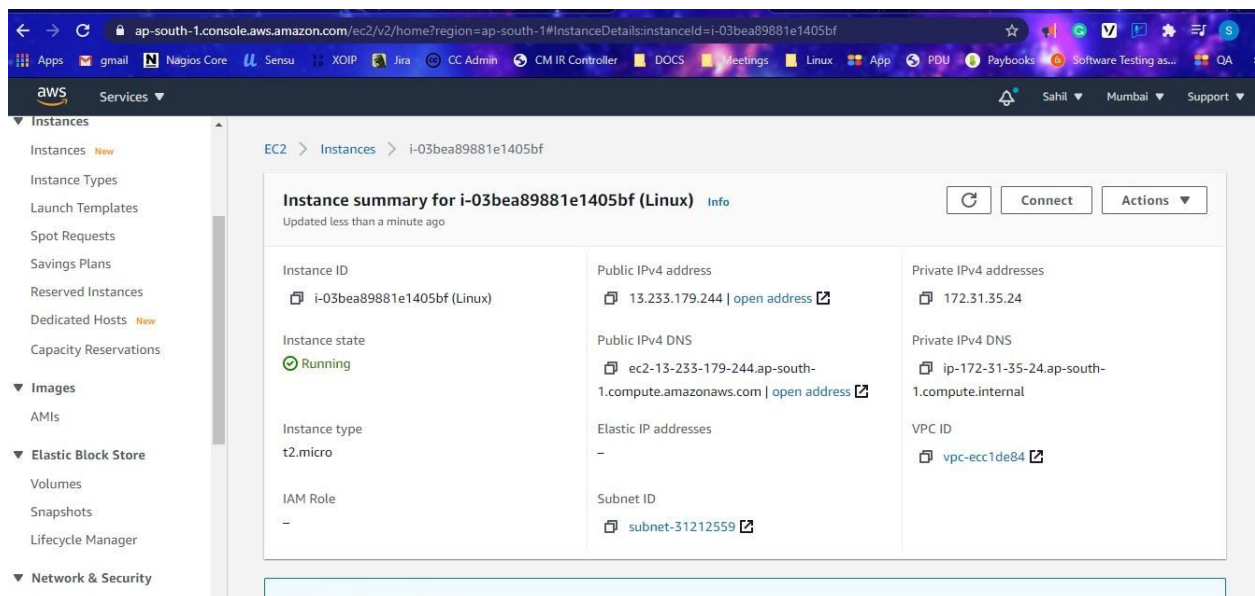
1. Created a Linux Instance



The screenshot shows the AWS Management Console 'Instances' page. The left sidebar contains navigation links for EC2 Dashboard, Events, Tags, Limits, and a dropdown for 'Instances' which includes Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, and Capacity Reservations. The main content area displays a table of three running EC2 instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm Status, and Availability zone. The instances are Linux, UbuntuLinux, and WINDOWSIIIS, all with status checks passing and no alarms.

Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone
Linux	i-03bea89881e1405bf	Running	t2.micro	2/2 checks ...	No alarms	ap-south-1a
UbuntuLinux	i-081b261f1dfbca438	Running	t2.micro	2/2 checks ...	No alarms	ap-south-1a
WINDOWSIIIS	i-034fa701c20e2bc0a	Running	t2.micro	2/2 checks ...	No alarms	ap-south-1b

2. Details of the Linux Instance



The screenshot shows the 'Instance summary' page for the Linux instance i-03bea89881e1405bf. The left sidebar is similar to the previous screenshot but includes 'Images', 'Elastic Block Store', and 'Network & Security' sections. The main content area displays a summary of the instance's configuration, including its ID, state (Running), type (t2.micro), and various network-related details like public and private IP addresses, DNS names, and VPC ID.

Instance ID	Public IPv4 address	Private IPv4 addresses
i-03bea89881e1405bf (Linux)	13.233.179.244 open address	172.31.35.24

Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-13-233-179-244.ap-south-1.compute.amazonaws.com open address	ip-172-31-35-24.ap-south-1.compute.internal

Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-ecc1de84

IAM Role	Subnet ID
-	subnet-31212559

3. Connected to the Linux Instance using EC2 Instance Connect and installed the apache web server using the commands:

Switch to the root user ***sudo su***

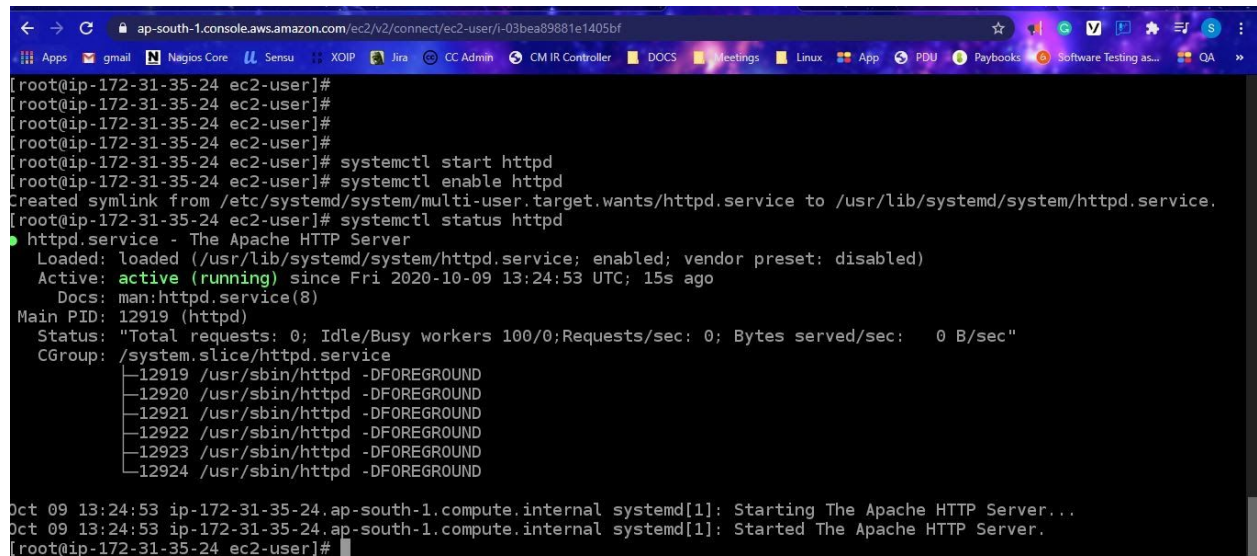
Now run the updates using the following command: ***yum -y update***

Install the Apache webserver: ***yum install httpd*** When prompted, press "Y" to confirm.

Start the webserver ***systemctl start httpd***

Now enable httpd: ***systemctl enable httpd***

Check the web server status ***systemctl status httpd***



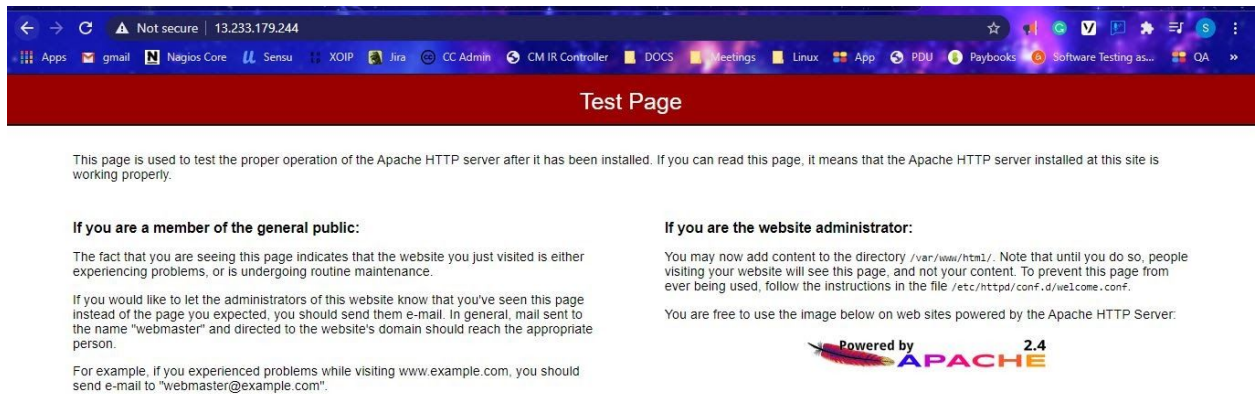
```
[root@ip-172-31-35-24 ec2-user]#
[root@ip-172-31-35-24 ec2-user]#
[root@ip-172-31-35-24 ec2-user]#
[root@ip-172-31-35-24 ec2-user]#
[root@ip-172-31-35-24 ec2-user]# systemctl start httpd
[root@ip-172-31-35-24 ec2-user]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-35-24 ec2-user]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Fri 2020-10-09 13:24:53 UTC; 15s ago
     Docs: man:httpd.service(8)
  Main PID: 12919 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
   CGroup: /system.slice/httpd.service
           └─12919 /usr/sbin/httpd -DFOREGROUND
             └─12920 /usr/sbin/httpd -DFOREGROUND
               └─12921 /usr/sbin/httpd -DFOREGROUND
                 └─12922 /usr/sbin/httpd -DFOREGROUND
                   └─12923 /usr/sbin/httpd -DFOREGROUND
                     └─12924 /usr/sbin/httpd -DFOREGROUND

Oct 09 13:24:53 ip-172-31-35-24.ap-south-1.compute.internal systemd[1]: Starting The Apache HTTP Server...
Oct 09 13:24:53 ip-172-31-35-24.ap-south-1.compute.internal systemd[1]: Started The Apache HTTP Server.
[root@ip-172-31-35-24 ec2-user]#
```

i-03bea89881e1405bf (Linux)

Public IPs: 13.233.179.244 Private IPs: 172.31.35.24

4. Accessed the webserver through the Public IP of the Linux Instance



← → ↻ Not secure | 13.233.179.244

Apps gmail Nagios Core Sensu XOIP Jira CC Admin CM IR Controller DOCS Meetings Linux App PDU Paybooks Software Testing as... QA

Test Page

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.


If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting `www.example.com`, you should send e-mail to "webmaster@example.com".

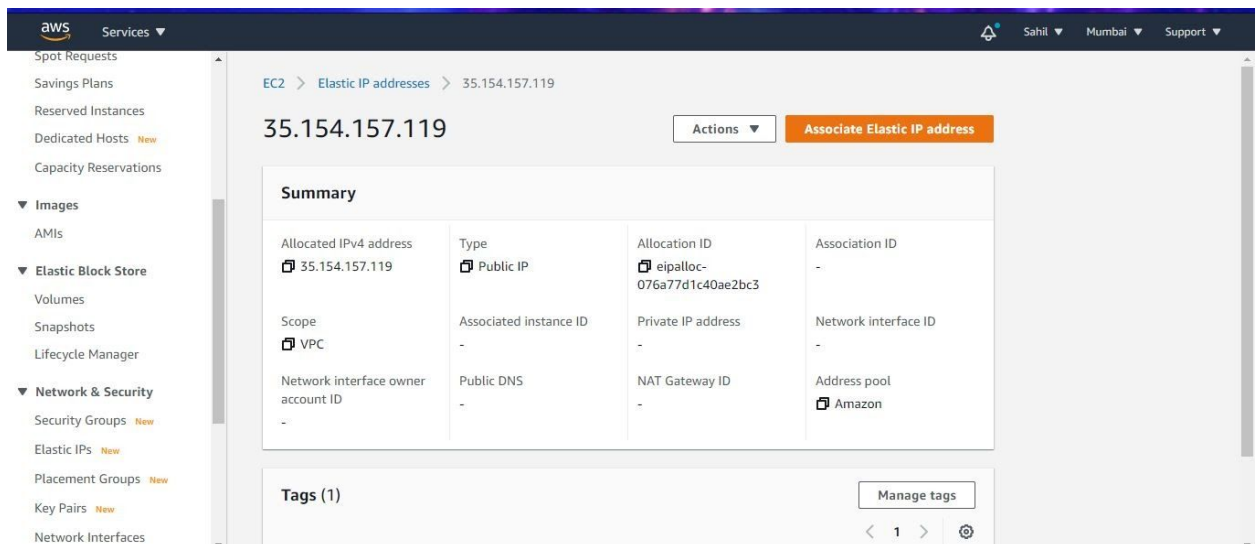
If you are the website administrator:

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

You are free to use the image below on web sites powered by the Apache HTTP Server:



5. Allocated an Elastic IP address for my account



aws Services ▾

Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts **New**
Capacity Reservations

▼ Images
AMIs

▼ Elastic Block Store
Volumes
Snapshots
Lifecycle Manager

▼ Network & Security
Security Groups **New**
Elastic IPs **New**
Placement Groups **New**
Key Pairs **New**
Network Interfaces

EC2 > Elastic IP addresses > 35.154.157.119

35.154.157.119

Actions ▾ Associate Elastic IP address

Summary

Allocated IPv4 address 35.154.157.119	Type Public IP	Allocation ID eipalloc-076a77d1c40ae2bc3	Association ID -
Scope VPC	Associated instance ID -	Private IP address -	Network interface ID -
Network interface owner account ID -	Public DNS -	NAT Gateway ID -	Address pool Amazon

Tags (1)

Manage tags

< 1 > ⚙

6. Associated that Elastic IP to and existing above Linux Instance

The screenshot shows the AWS Management Console interface. A green notification banner at the top states: "Elastic IP address associated successfully. Elastic IP address 35.154.157.119 has been associated with instance i-03bea89881e1405bf". The breadcrumb navigation is "EC2 > Elastic IP addresses > 35.154.157.119". The page title is "35.154.157.119". There is an "Actions" dropdown menu and an "Associate Elastic IP address" button. Below this is a "Summary" section with a table of details.

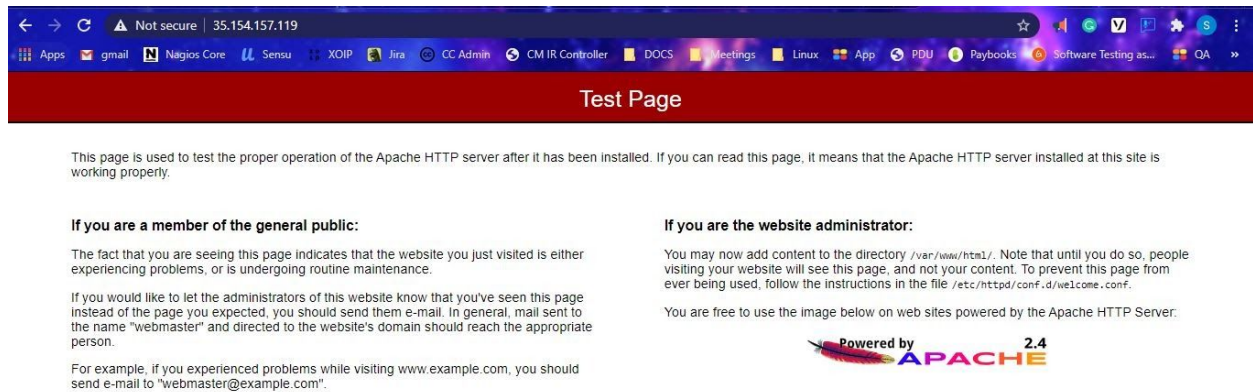
Summary			
Allocated IPv4 address 35.154.157.119	Type Public IP	Allocation ID eipalloc-076a77d1c40ae2bc3	Association ID eipassoc-098e02c57eab5a411
Scope VPC	Associated instance ID i-03bea89881e1405bf	Private IP address 172.31.35.24	Network interface ID eni-0374c723a0f9bf05f
Network interface owner account ID 307271657231	Public DNS ec2-35-154-157-119.ap-south-1.compute.amazonaws.com	NAT Gateway ID -	Address pool Amazon

7. Verified the Elastic IP being allocated to the Instance

The screenshot shows the AWS Management Console interface for the instance "i-03bea89881e1405bf (Linux)". The breadcrumb navigation is "EC2 > Instances > i-03bea89881e1405bf". The page title is "Instance summary for i-03bea89881e1405bf (Linux)". There is a "Connect" button and an "Actions" dropdown menu. Below this is a table of instance details.

Instance summary for i-03bea89881e1405bf (Linux)		
Instance ID i-03bea89881e1405bf (Linux)	Public IPv4 address 35.154.157.119 (apache) open address	Private IPv4 addresses 172.31.35.24
Instance state Running	Public IPv4 DNS ec2-35-154-157-119.ap-south-1.compute.amazonaws.com open address	Private IPv4 DNS ip-172-31-35-24.ap-south-1.compute.internal
Instance type t2.micro	Elastic IP addresses 35.154.157.119 (Public IP)	VPC ID vpc-ecc1de84
IAM Role -	Subnet ID subnet-31212559	

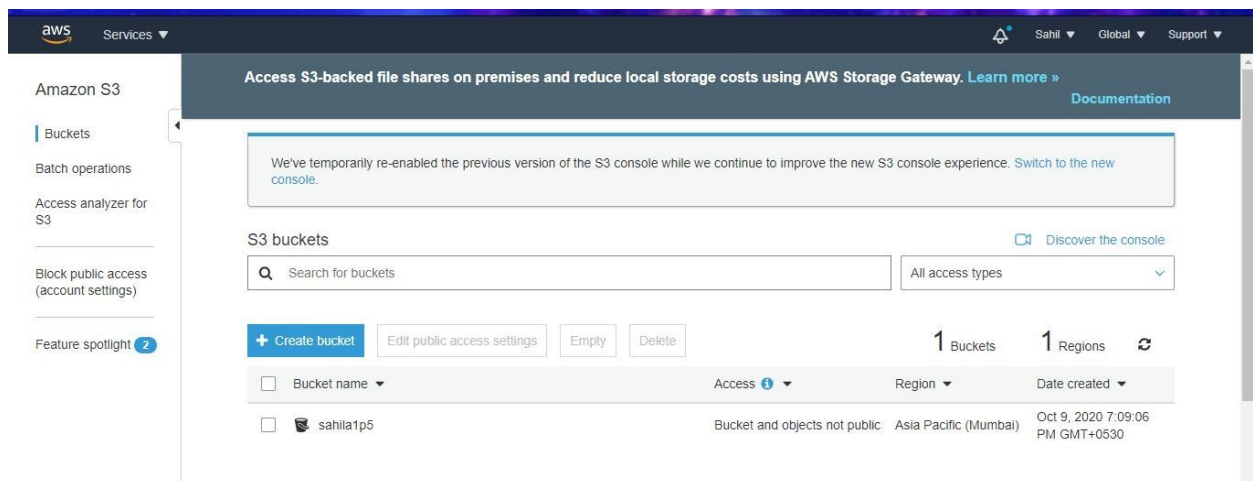
8. Accessed the Apache webserver using the new Associated Elastic IP <http://35.154.157.119/>



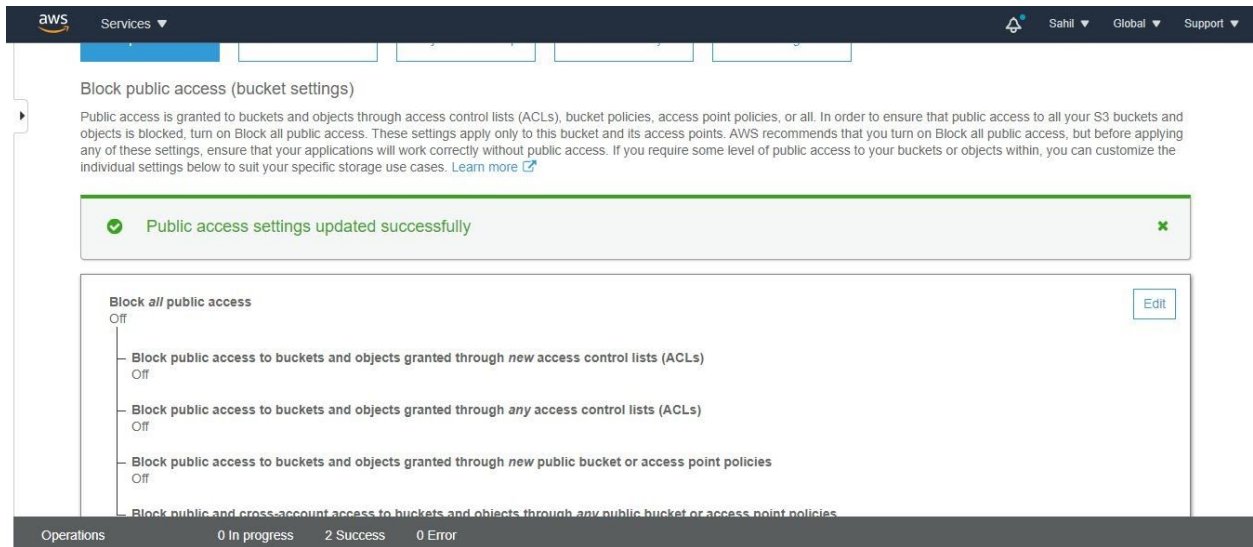
PROJECT 5: Working with S3

A.working with S3-.jpg

1. Created an S3 bucket



2. Made the S3 bucket public



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](#)

Public access settings updated successfully

Block all public access

Off

Block public access to buckets and objects granted through new access control lists (ACLs)

Off

Block public access to buckets and objects granted through any access control lists (ACLs)

Off

Block public access to buckets and objects granted through new public bucket or access point policies

Off

Block public and cross-account access to buckets and objects through any public bucket or access point policies

Off

Operations 0 In progress 2 Success 0 Error

3. Added a jpg file to the S3 bucket but was not able to view it

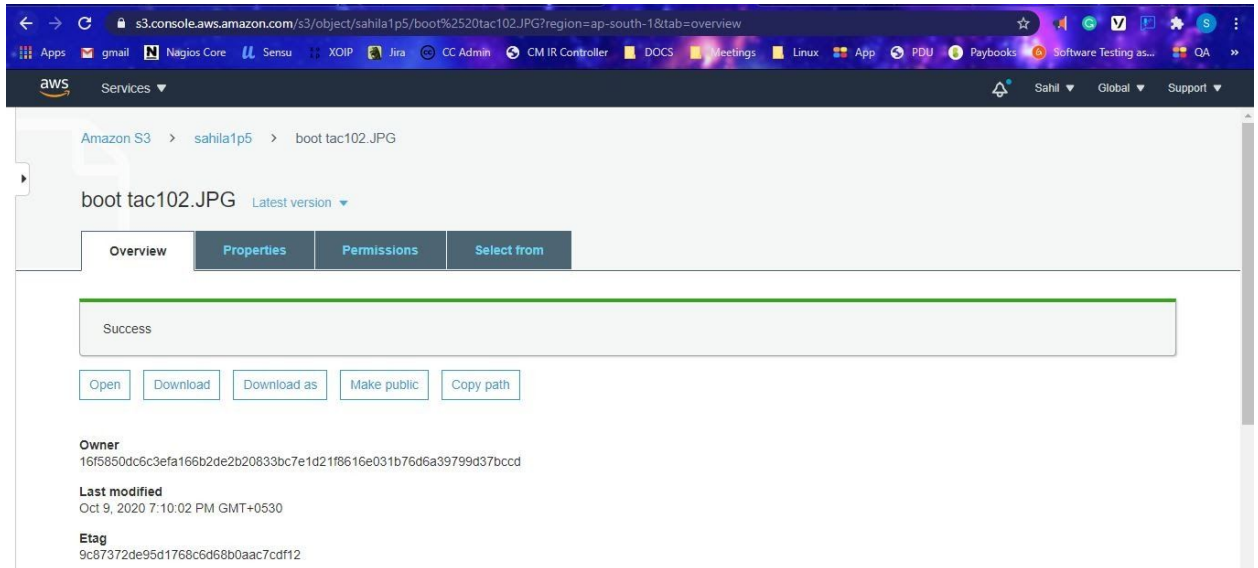


sahila1p5s3ap-south-1.amazonaws.com/boot+tacl02.JPG

This XML file does not appear to have any style information associated with it. The document tree is shown below.

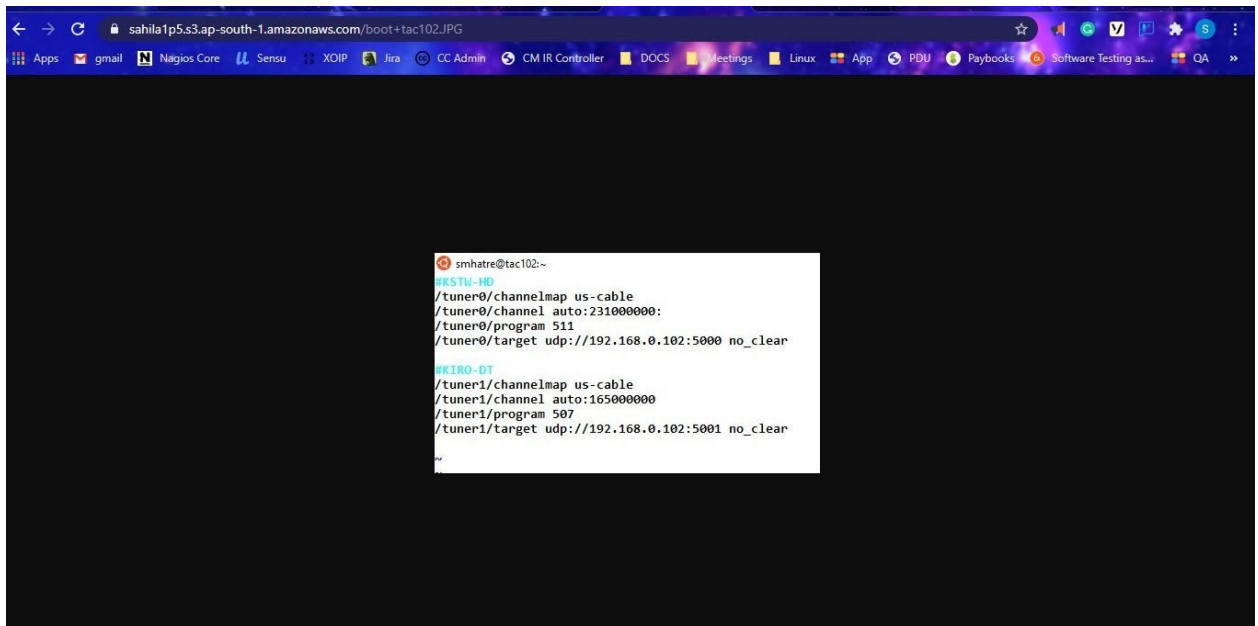
```
<?xml version="1.0" encoding="UTF-8" ?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>B7E8693B92A59AB8</RequestId>
  <HostId>fhG0s80x30EBc4qbP7HFR8euCAST6xXBPetUyDhK47A1xiGU1r3v18fxrkFSEnT63Oeg80bYE=</HostId>
</Error>
```

4. Changed the file to the public since it was private by default.



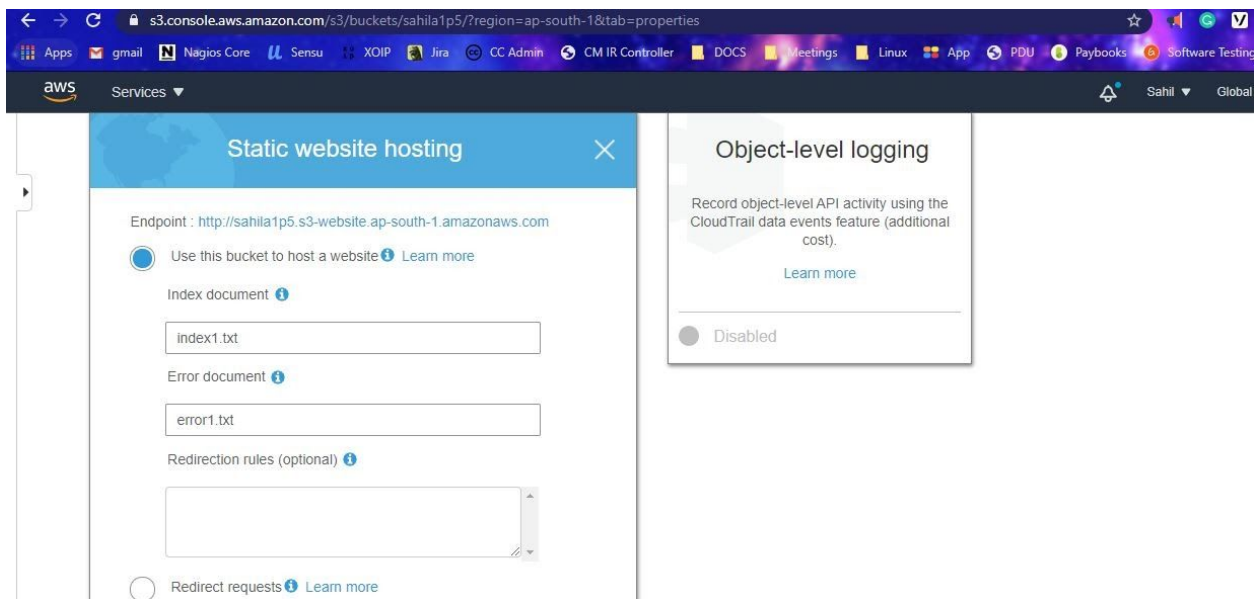
5. Was able to access the file now

<https://sahila1p5.s3.ap-south-1.amazonaws.com/boot+tac102.JPG>

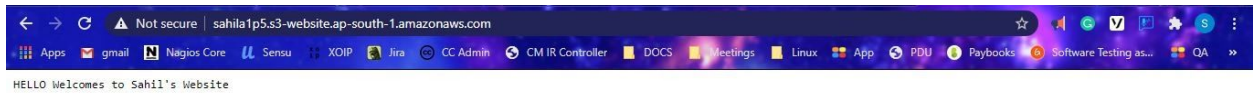


b.static web hosting

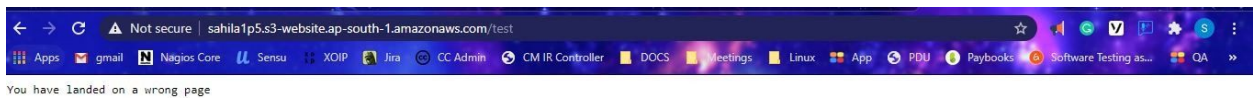
1. Went to the S3 Bucket > Properties and added the index and error files to the bucket and also added in the fields.
Made sure that these two files are made public.



2. Was able to access the static website using
<http://sahila1p5.s3-website.ap-south-1.amazonaws.com/>



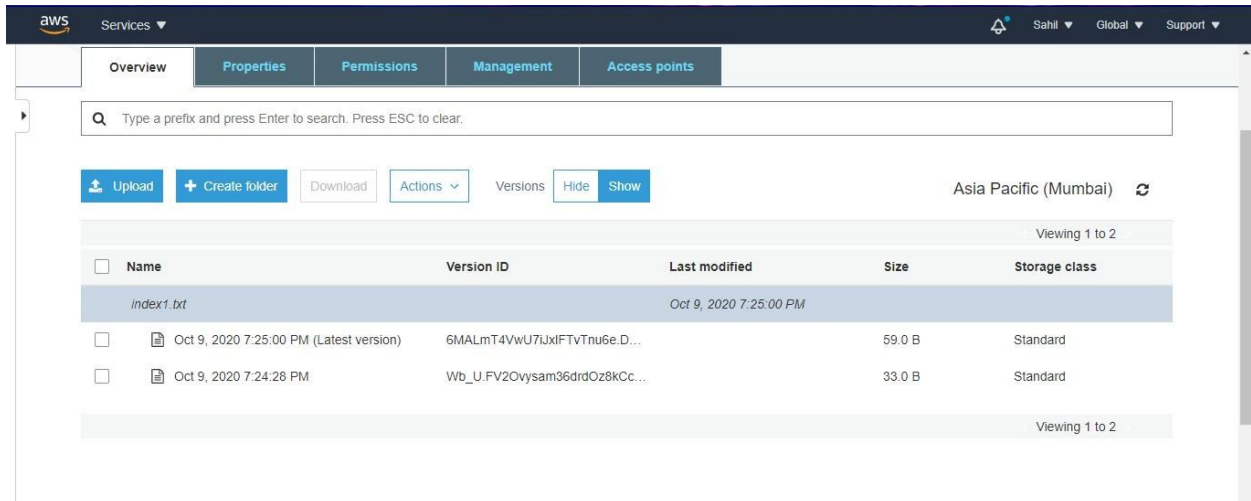
3. Was able to access the error using
<http://sahila1p5.s3-website.ap-south-1.amazonaws.com/error>



c.Versioning

1. Created a new S3 bucket and enabled Versioning

Added multiple files of the same name and could see the versions.



QUESTION 1: Explain life cycle effects on instances: Stop, start, reboot, terminate- public IP, Private Ip, Applications installed.

	Public IP	Private IP	Application Installed
Stopped and Start	Changed	Retained	Retained
Reboot	Retained	Retained	Retained
Terminate	Lost	Lost	Lost