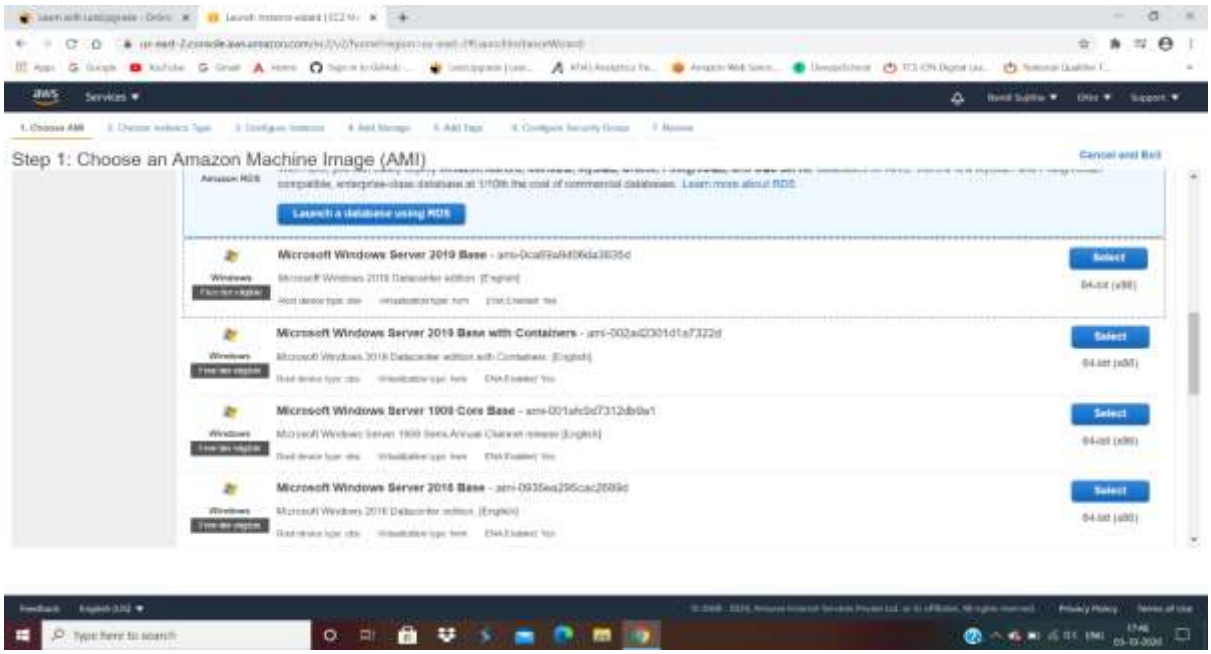
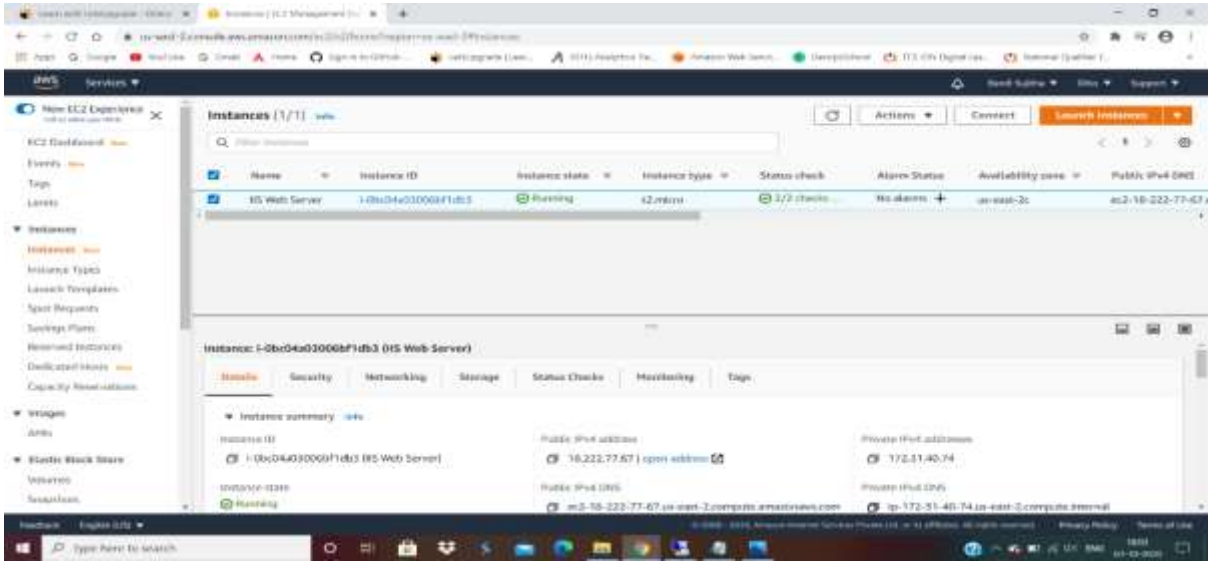
LetsUpgrade AWS Advance Projects

PROJECT 1: Deploying a web server in Windows instance:

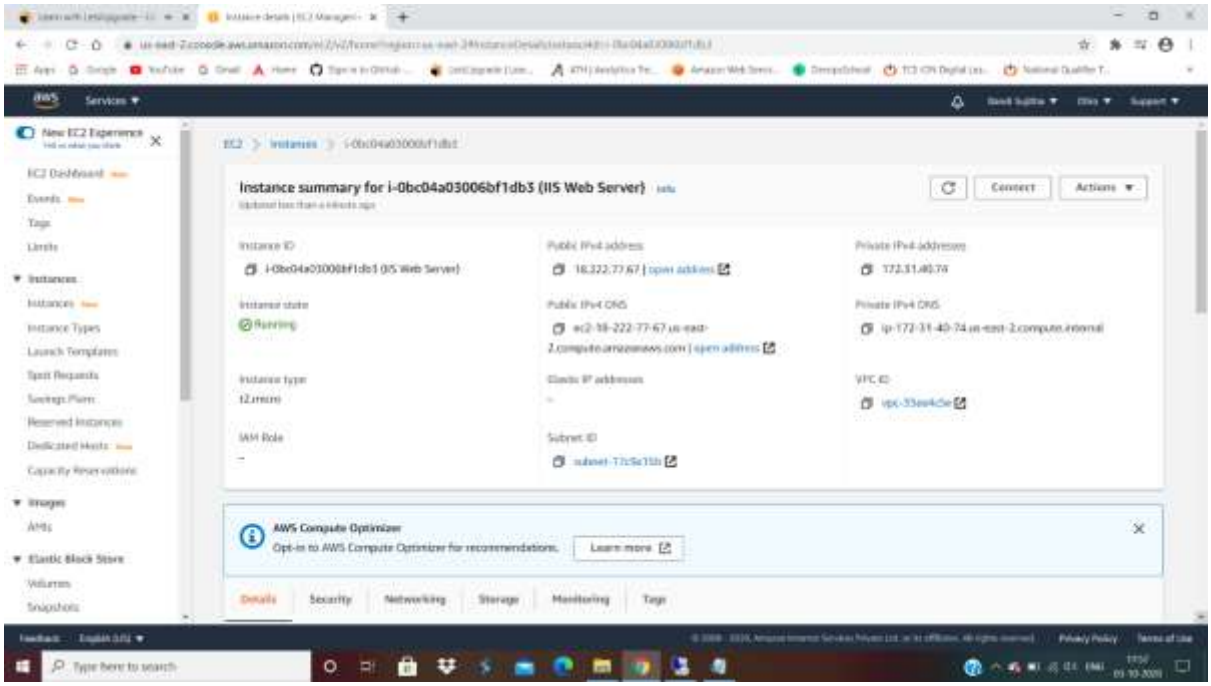
Task 1: Create a windows instance using AMI: Windows Server 2019 base:



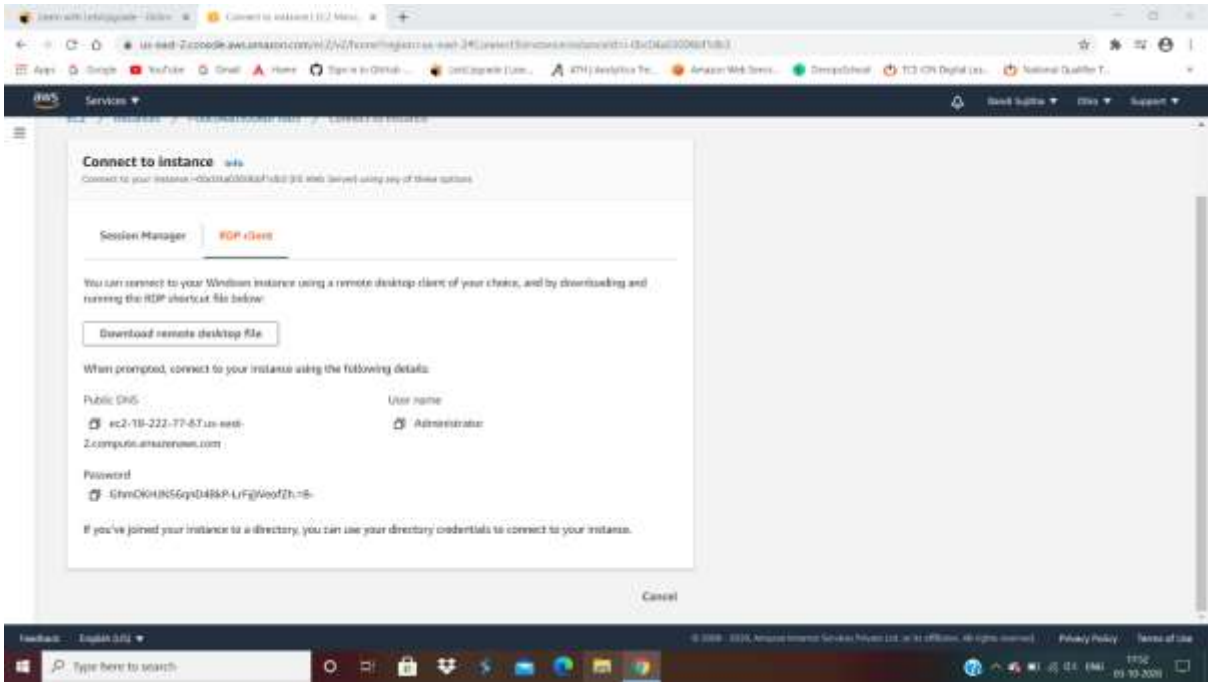
Task 2: Launch the Windows instance using RDP



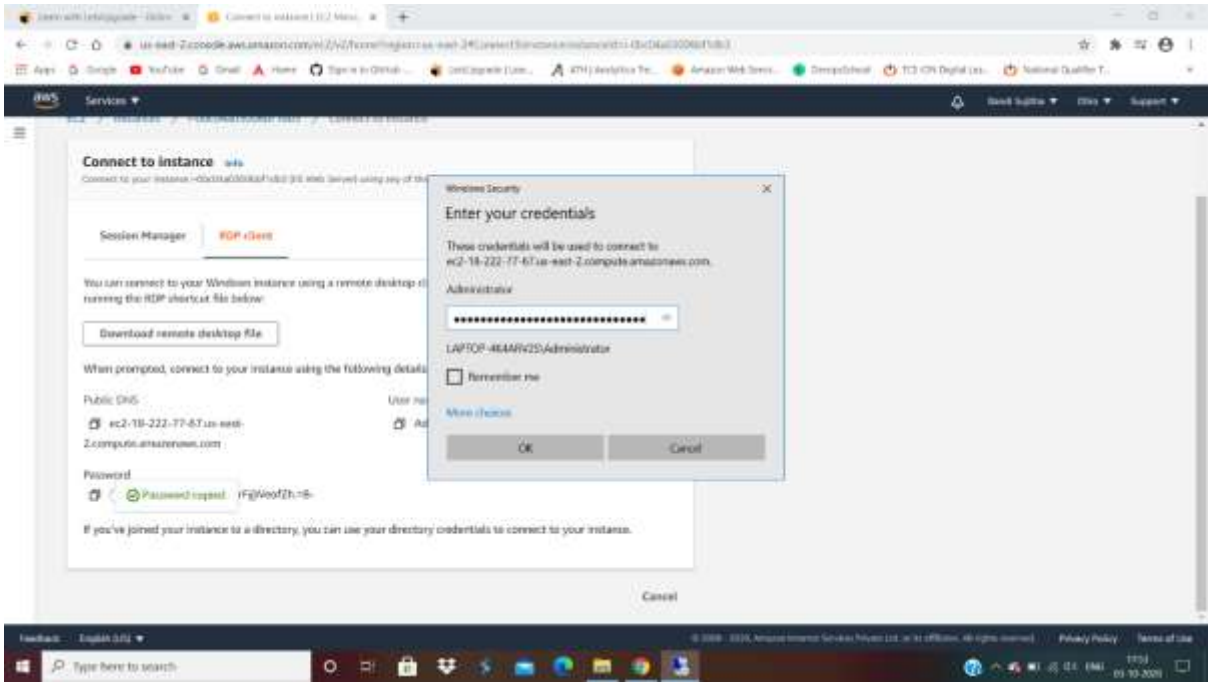
IP Address of the Instance:



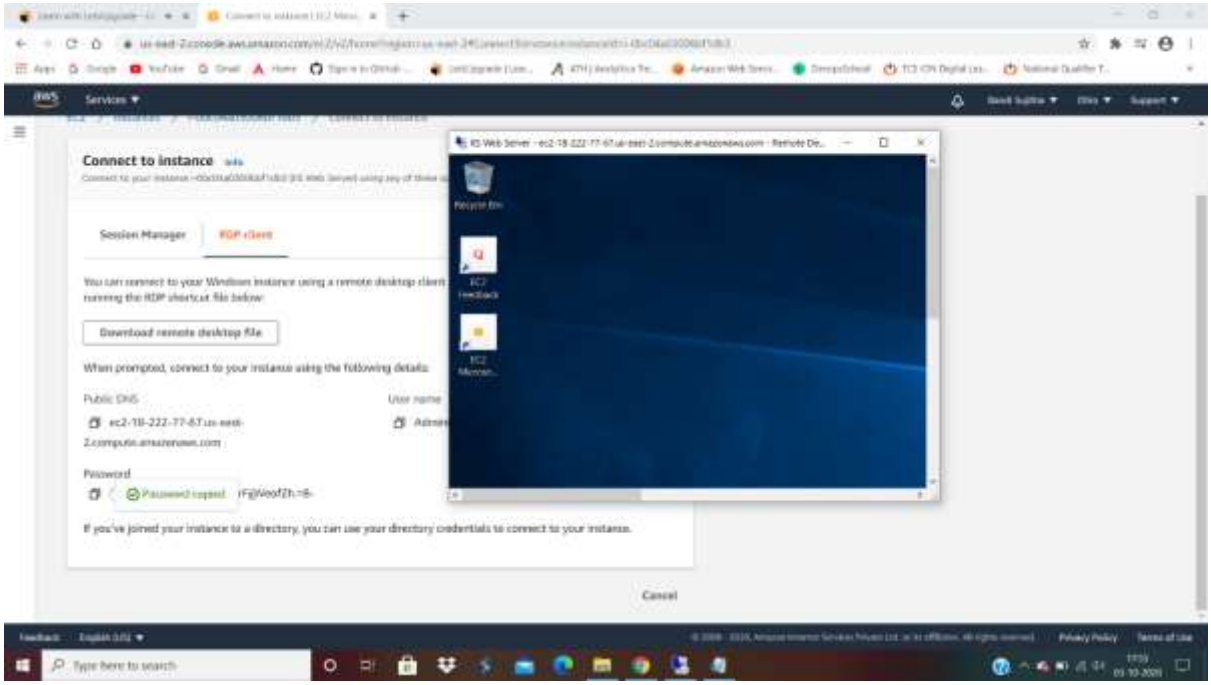
Download RDP file and Get password:



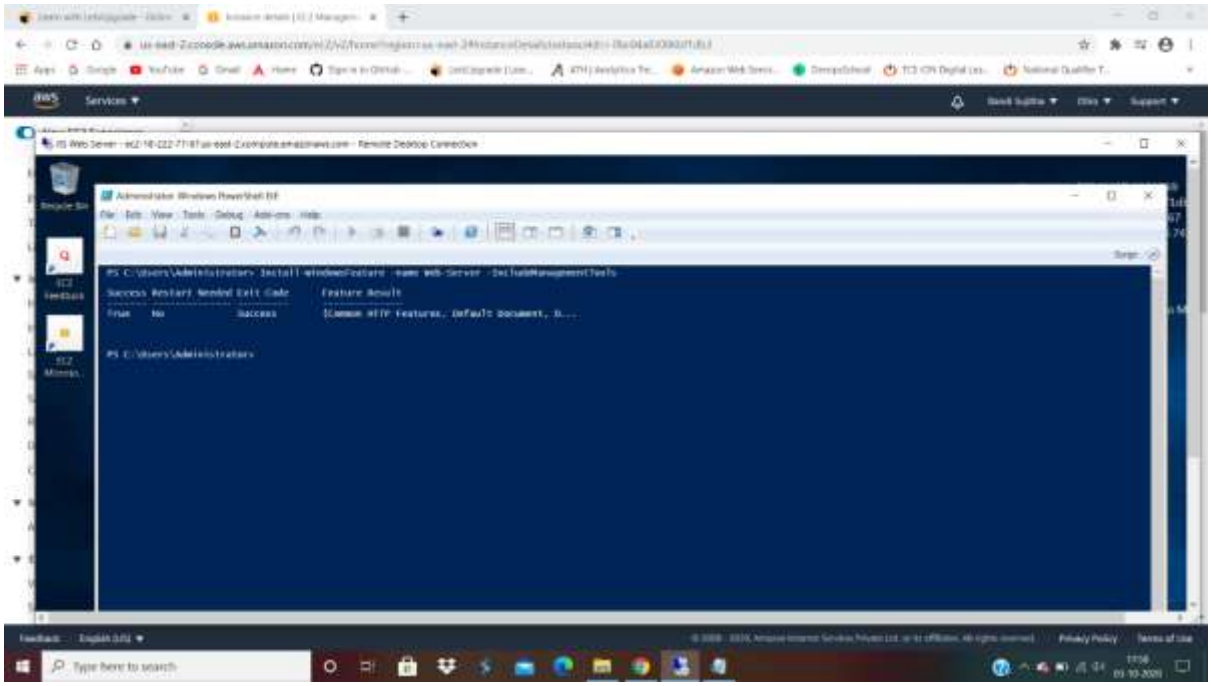
Connect RDP File:



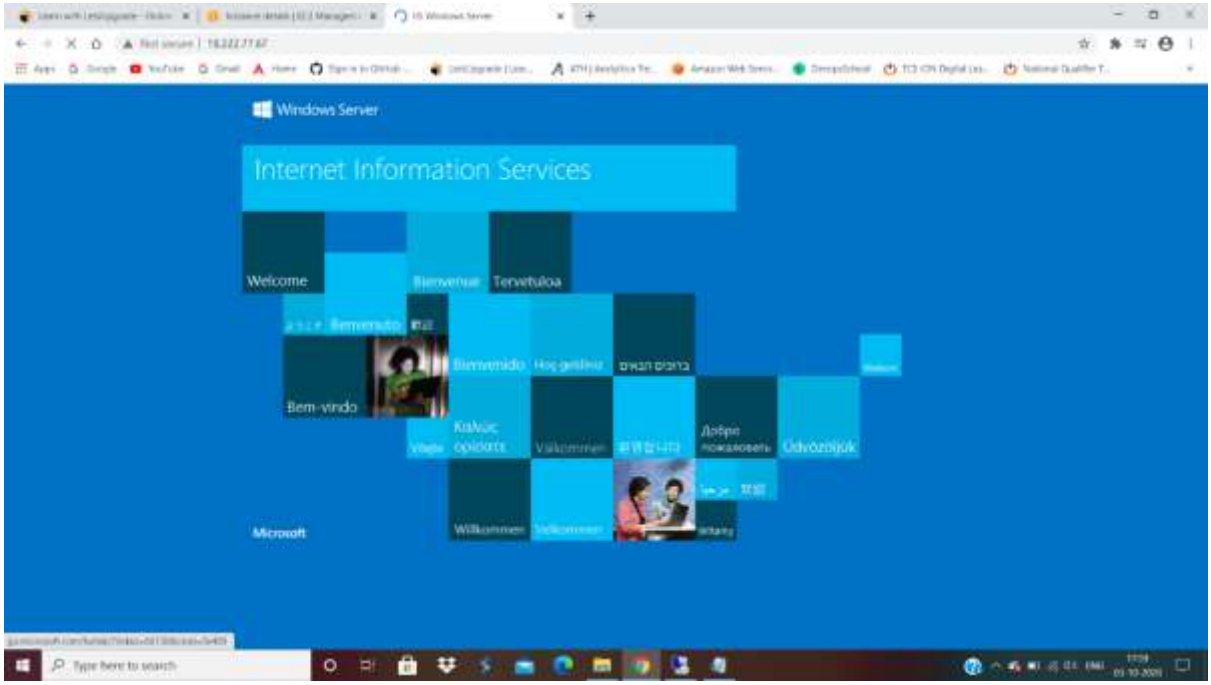
IIS Web Server:



Task 3: Install IIS web server using Powershell ISE:

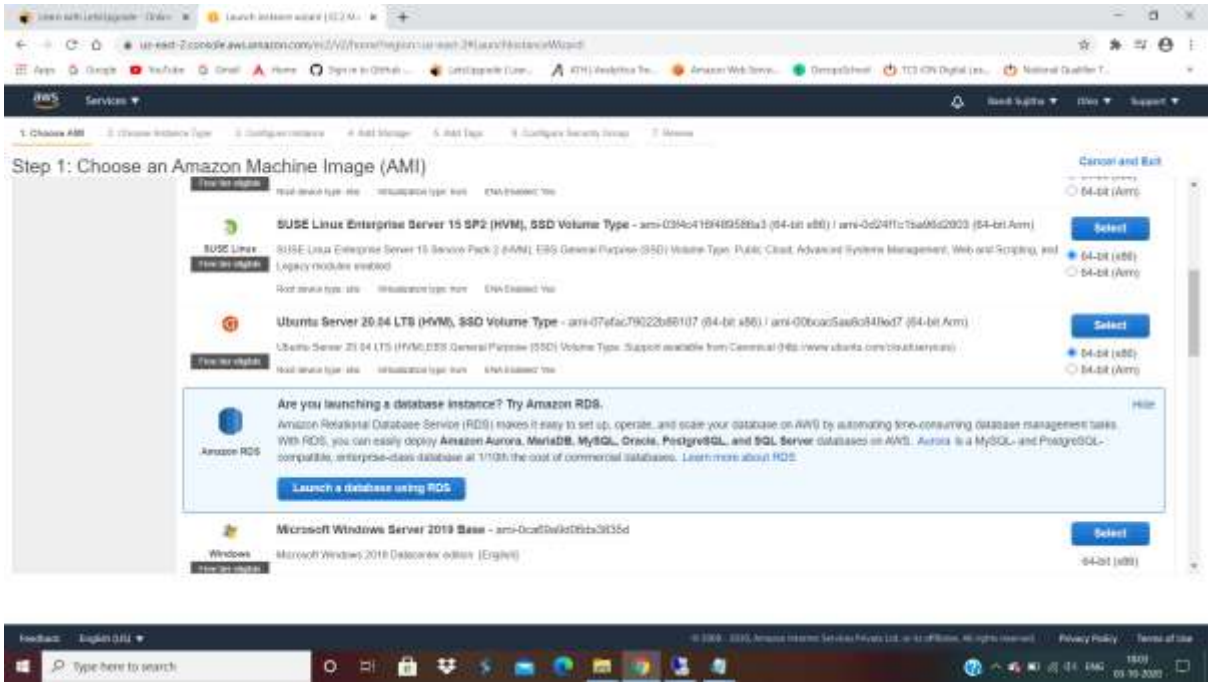


Task 4: Verify successful installation of IIS Web Server:

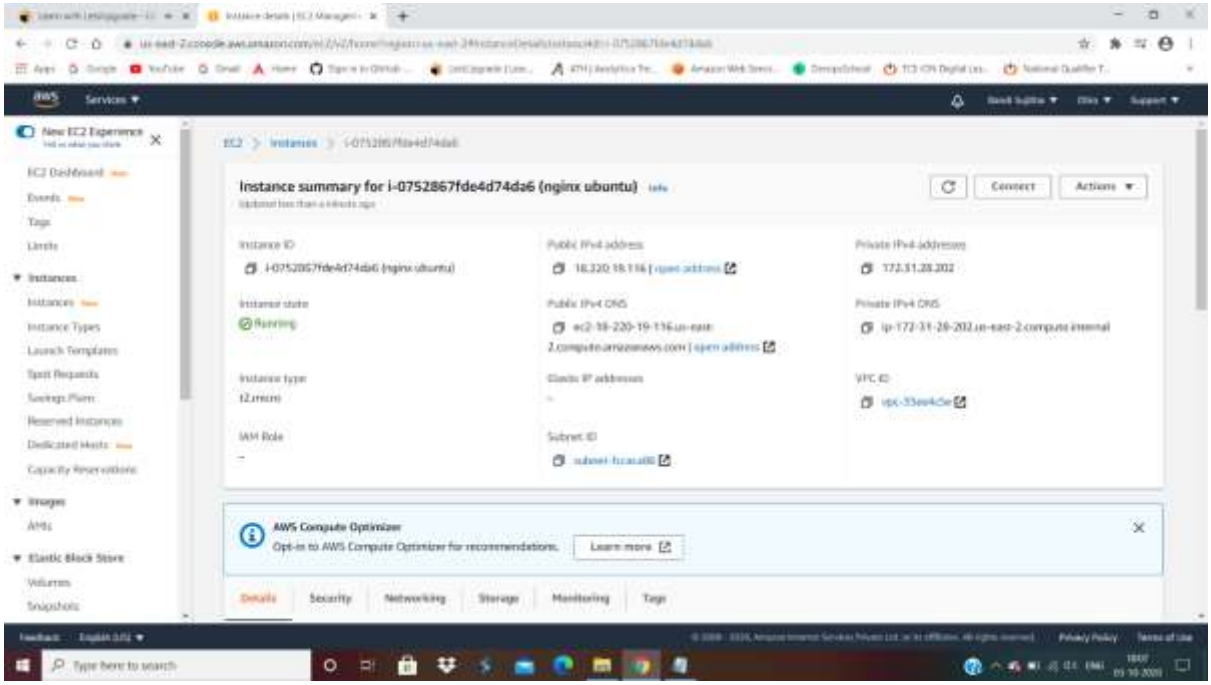


PROJECT 2: Deploying a web server in Windows instance

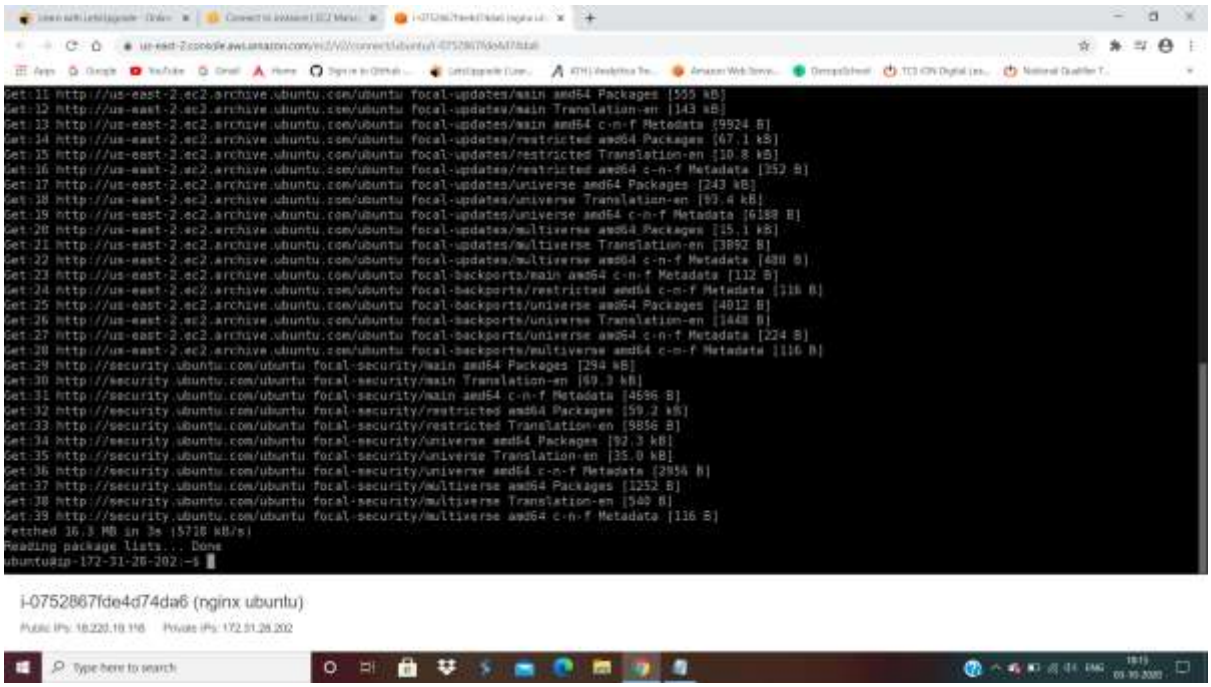
Ubuntu Server 20.04 LTS (HVM)



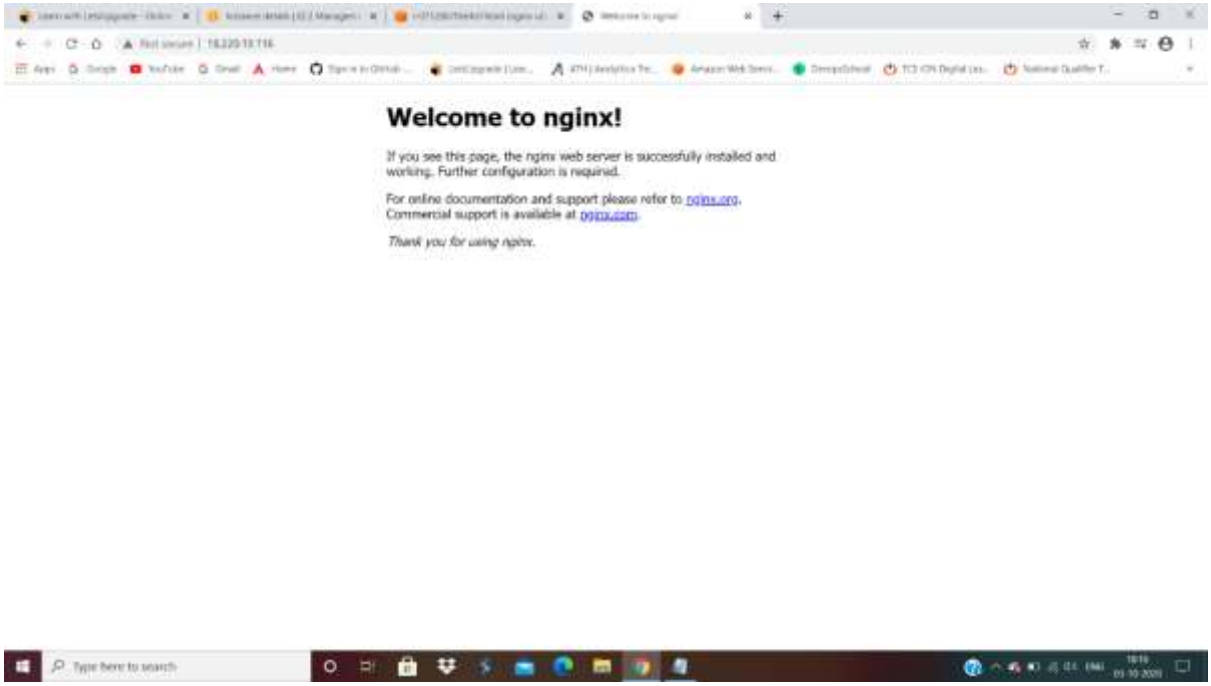
Task 2: Launch the Ubuntu instance



Task 3: Install ngnix web server using bash:

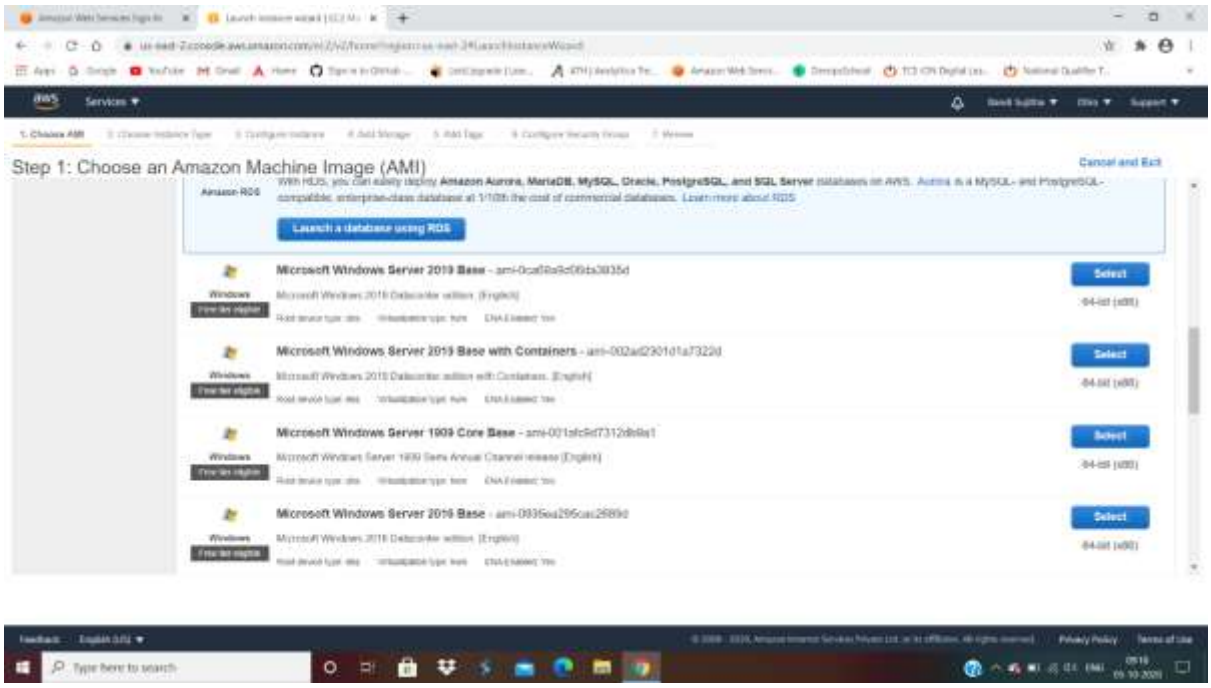


Task 4: Verify successful installation of ngnix:

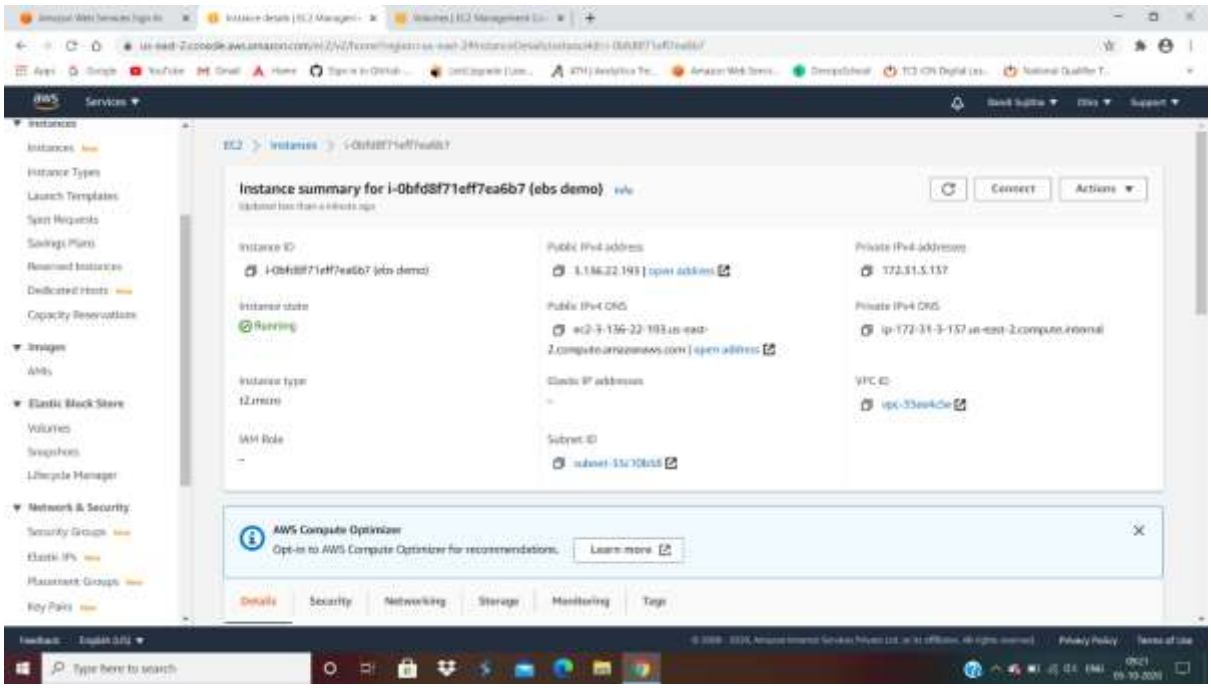


PROJECT 3: Working with volumes

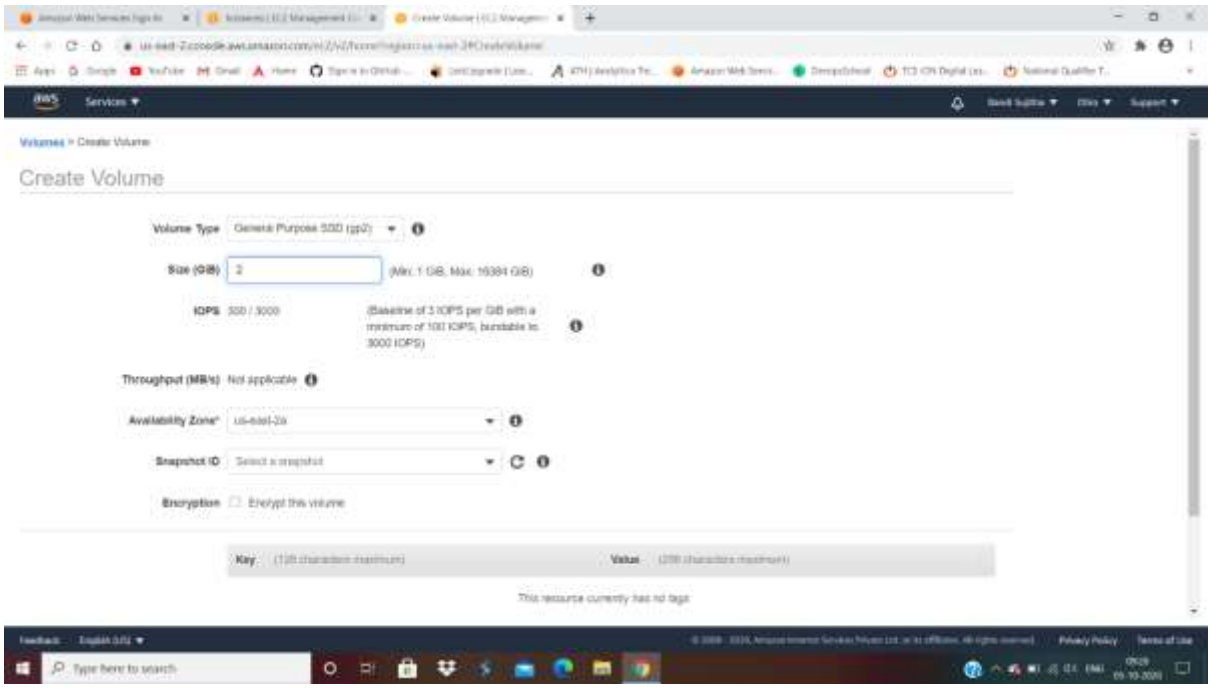
1: Create a windows machine

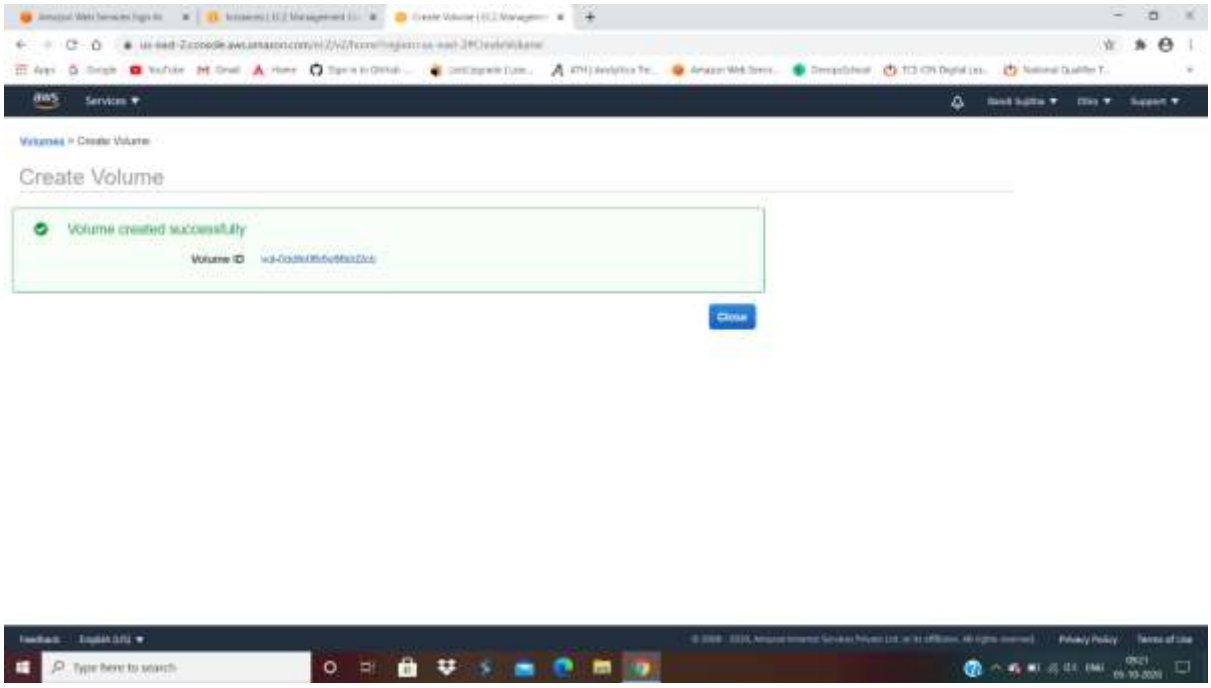


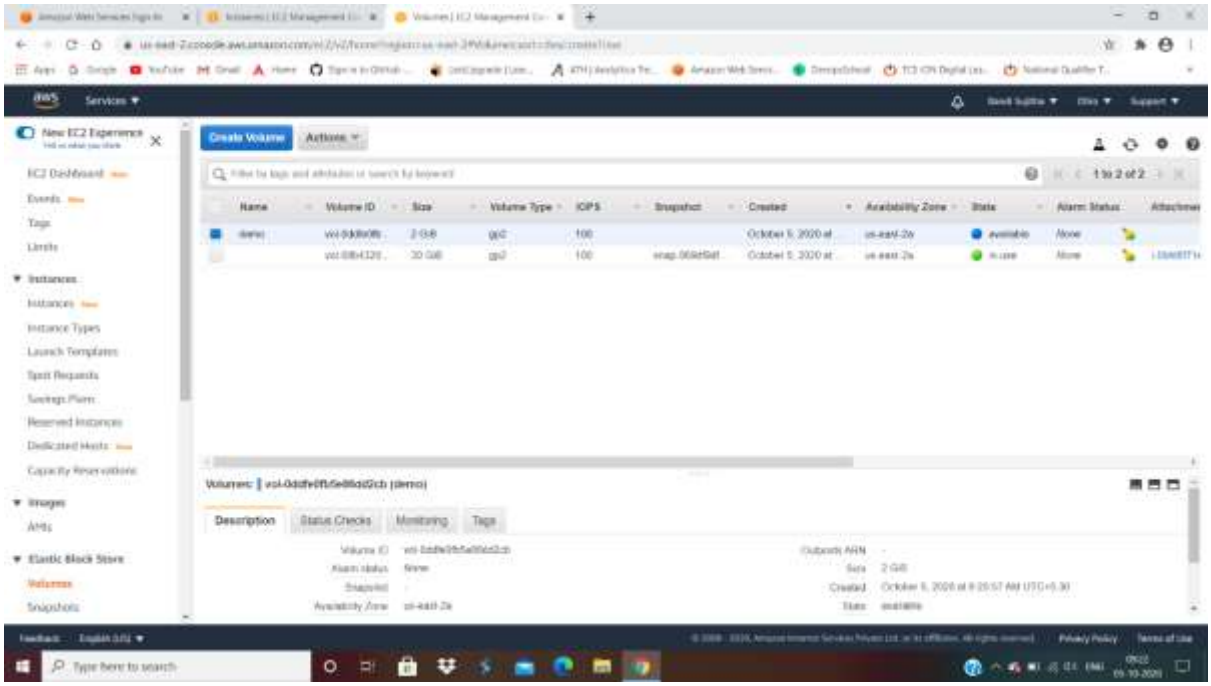
IP Address of the Instance:



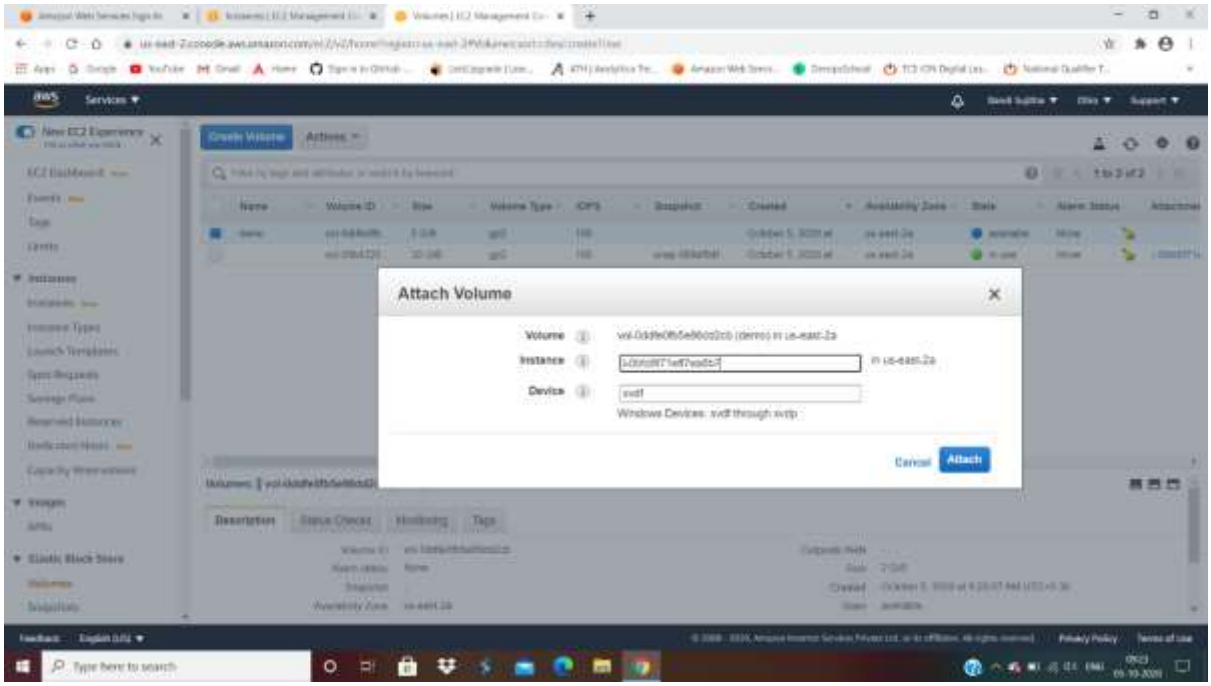
2: Create a volume in the same region as the windows machine



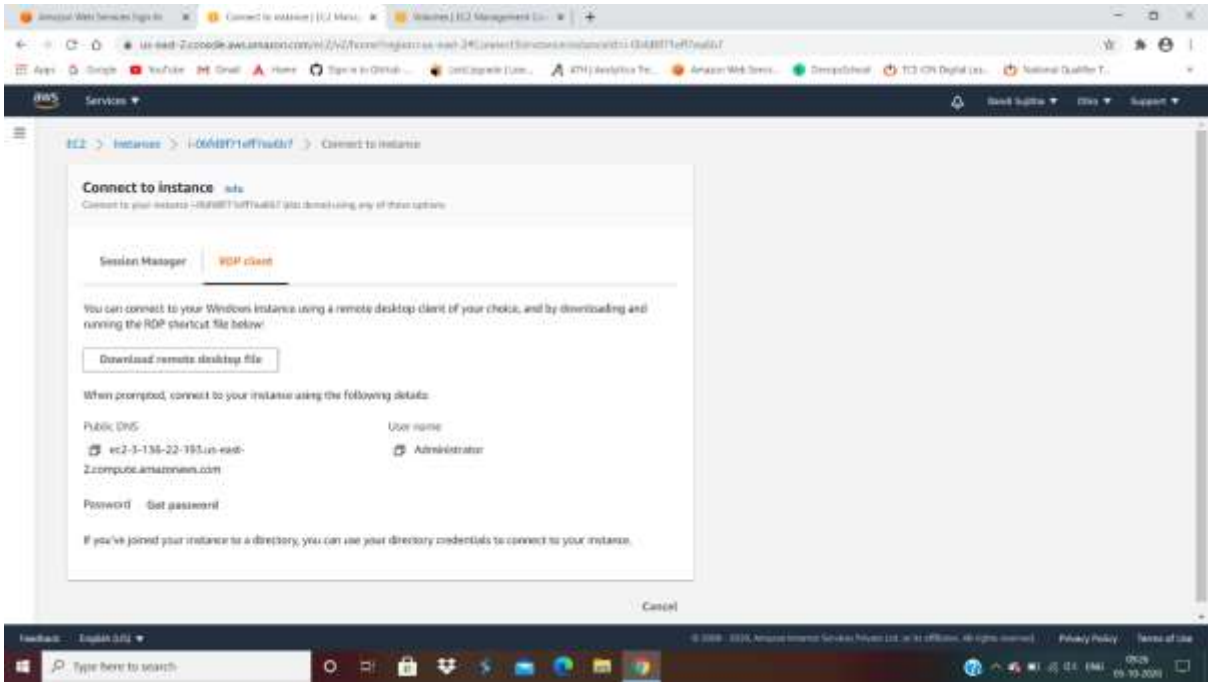




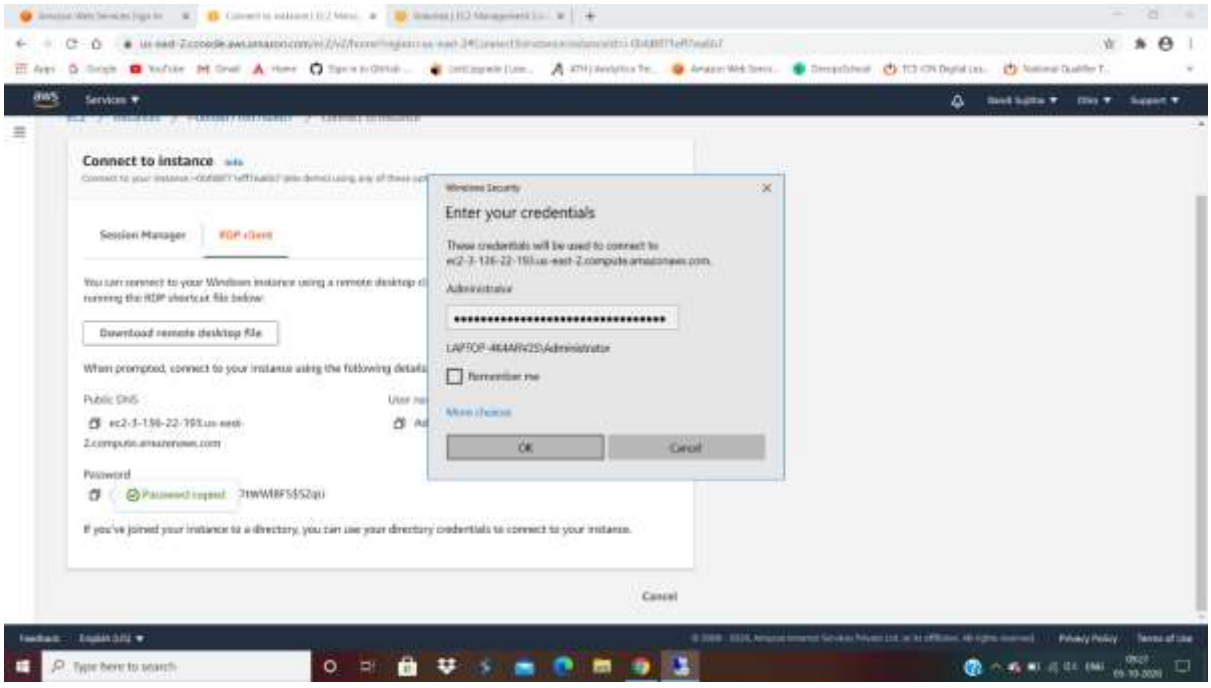
3: Attach the volume to the windows machine



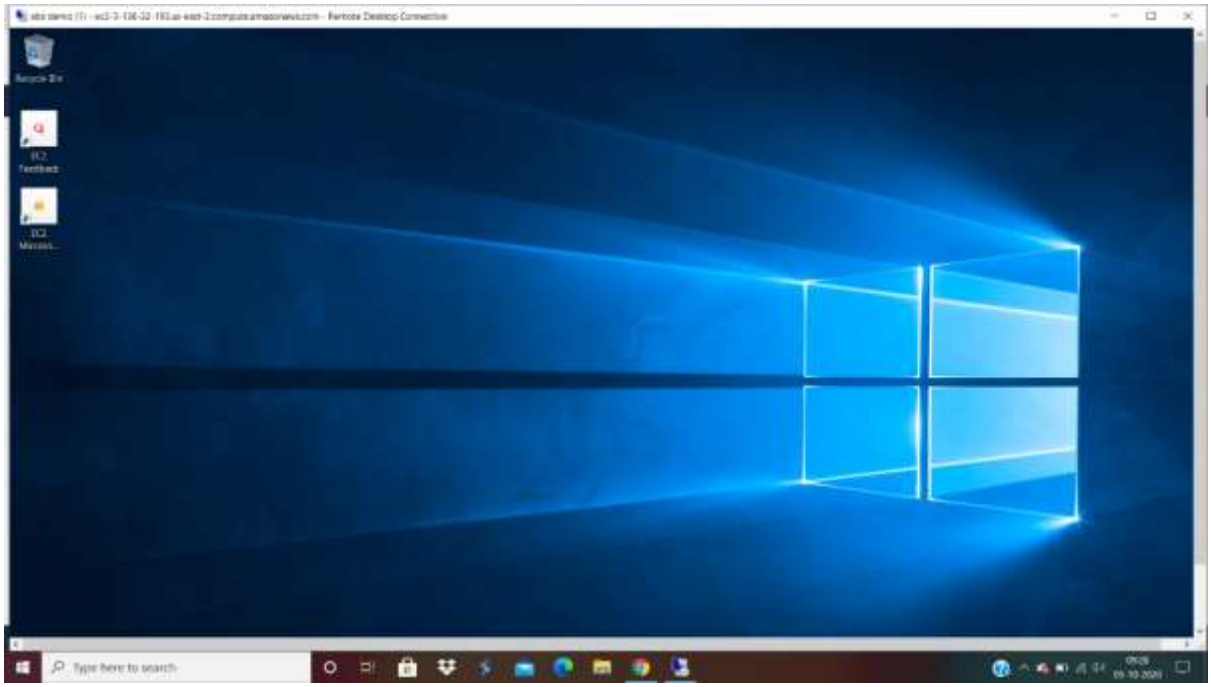
Download RDP file and Get password:



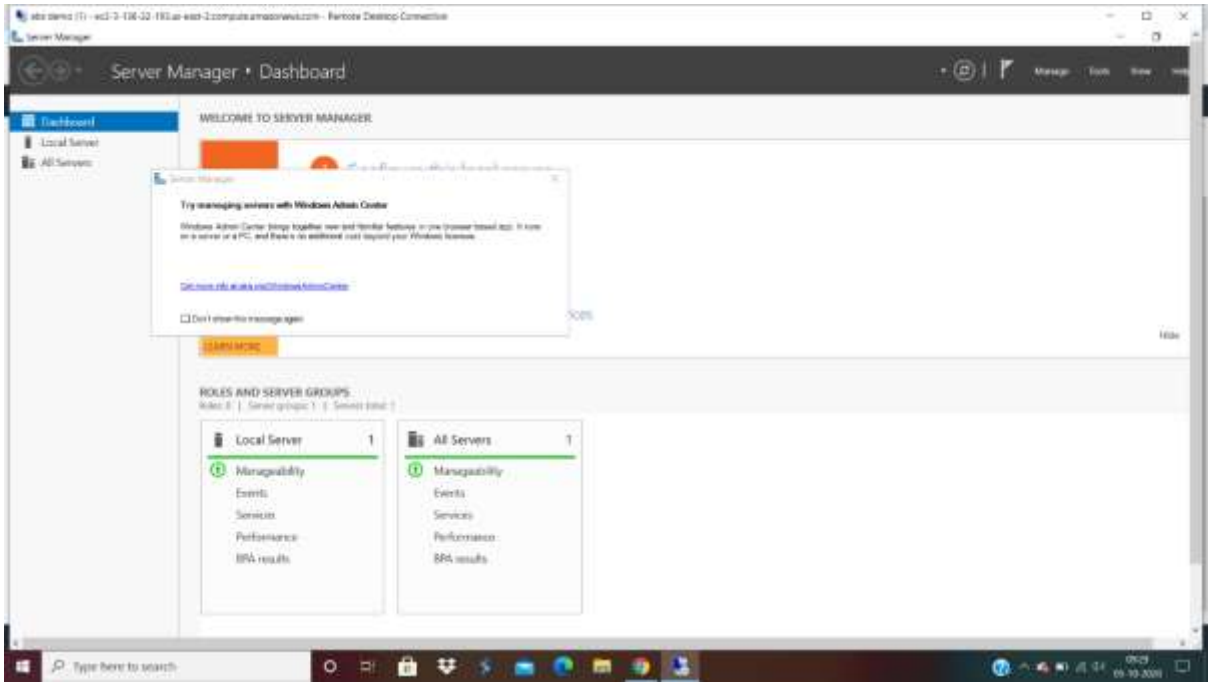
Connect RDP File:

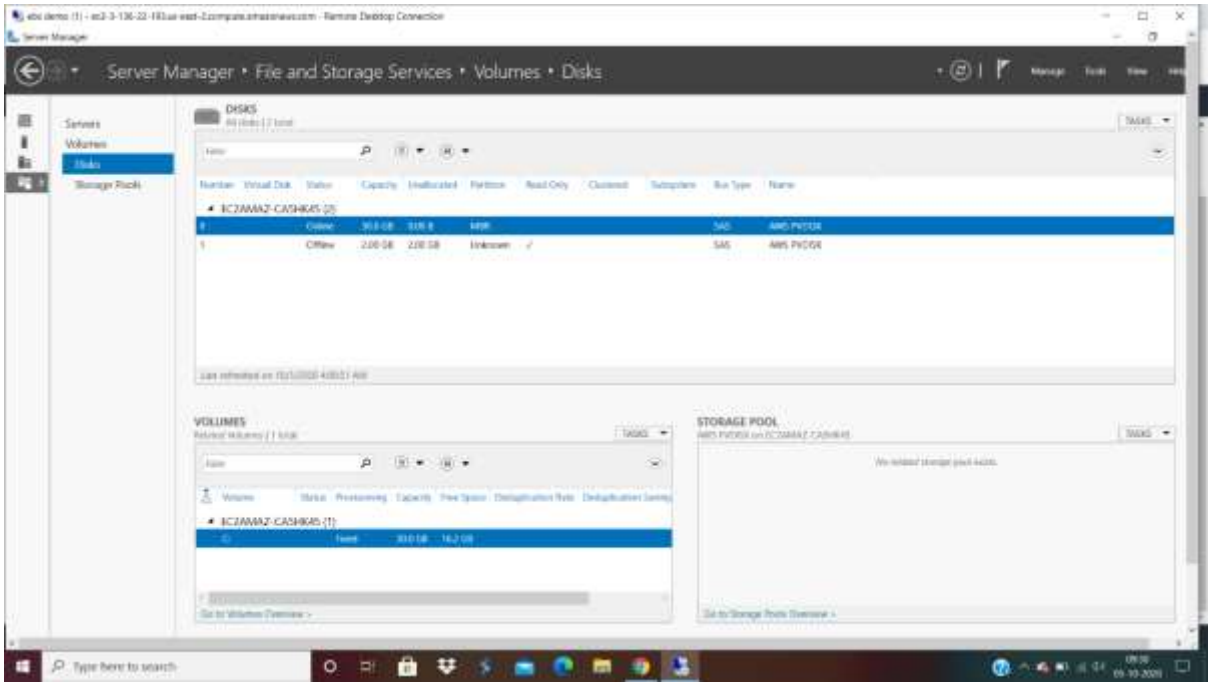


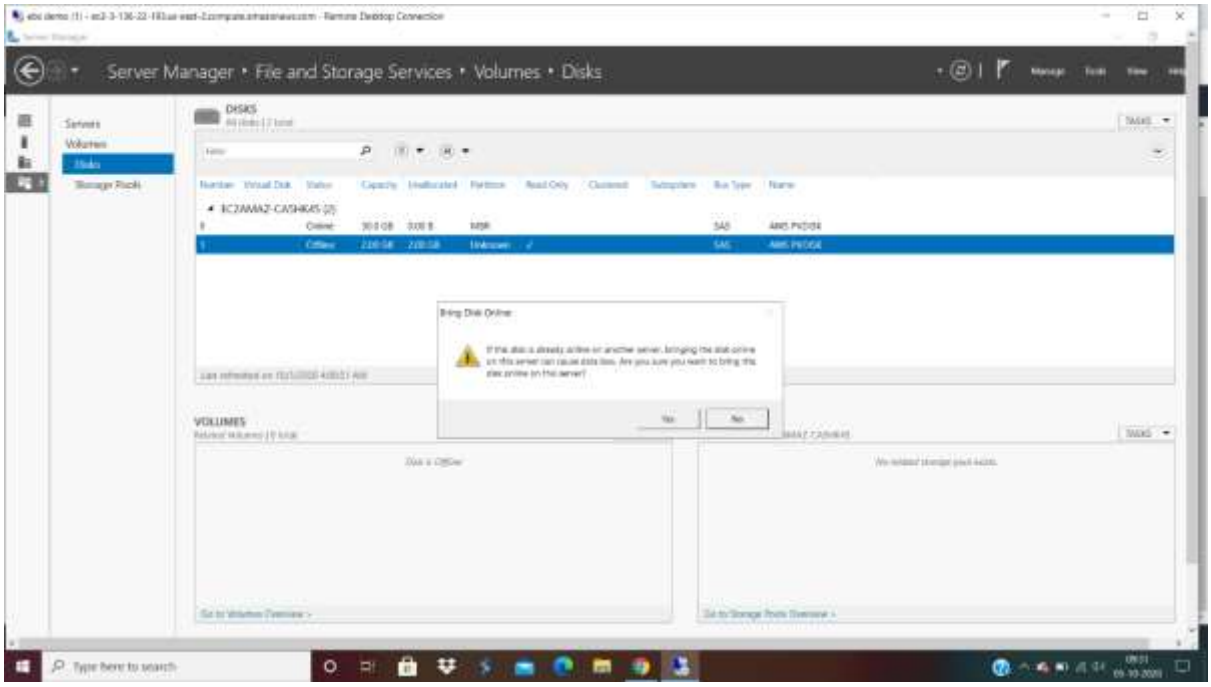
Remote Desktop Connection:

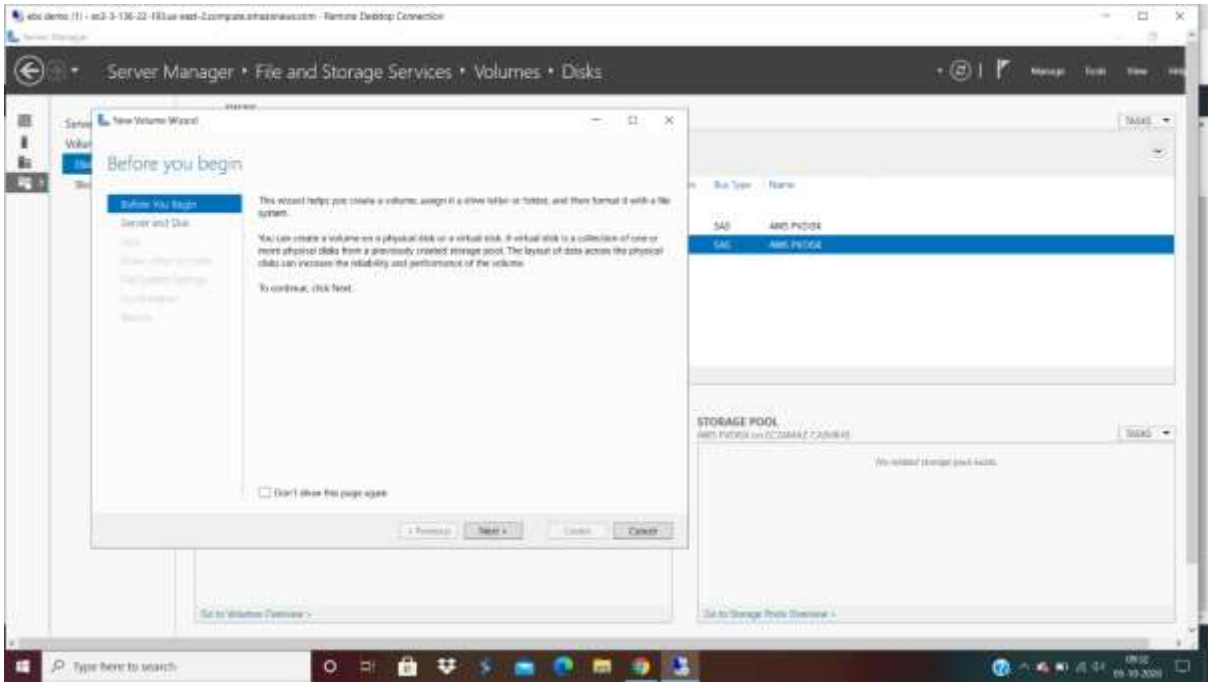


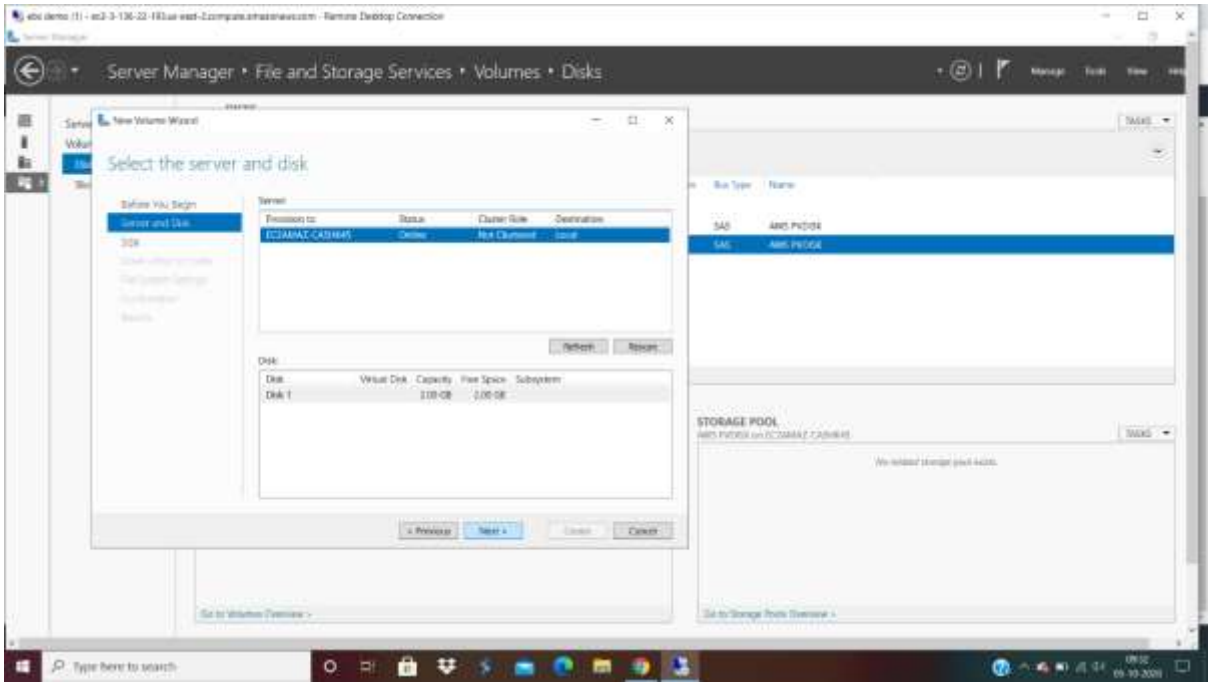
Open Server Manager:

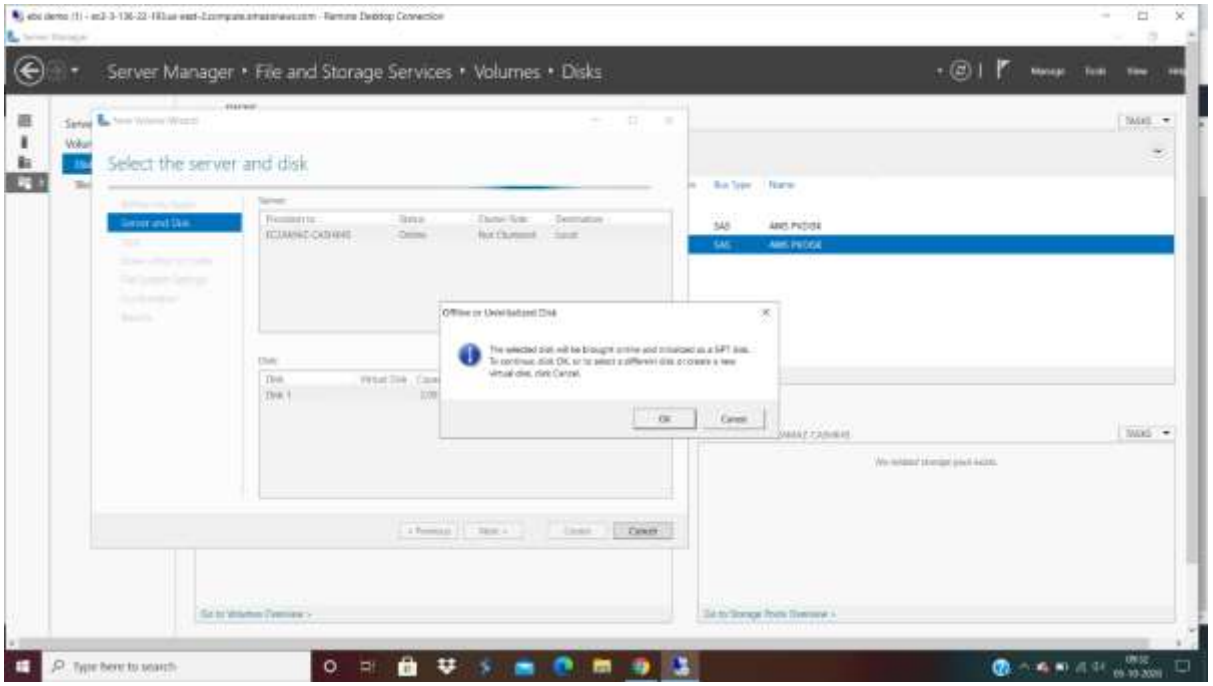


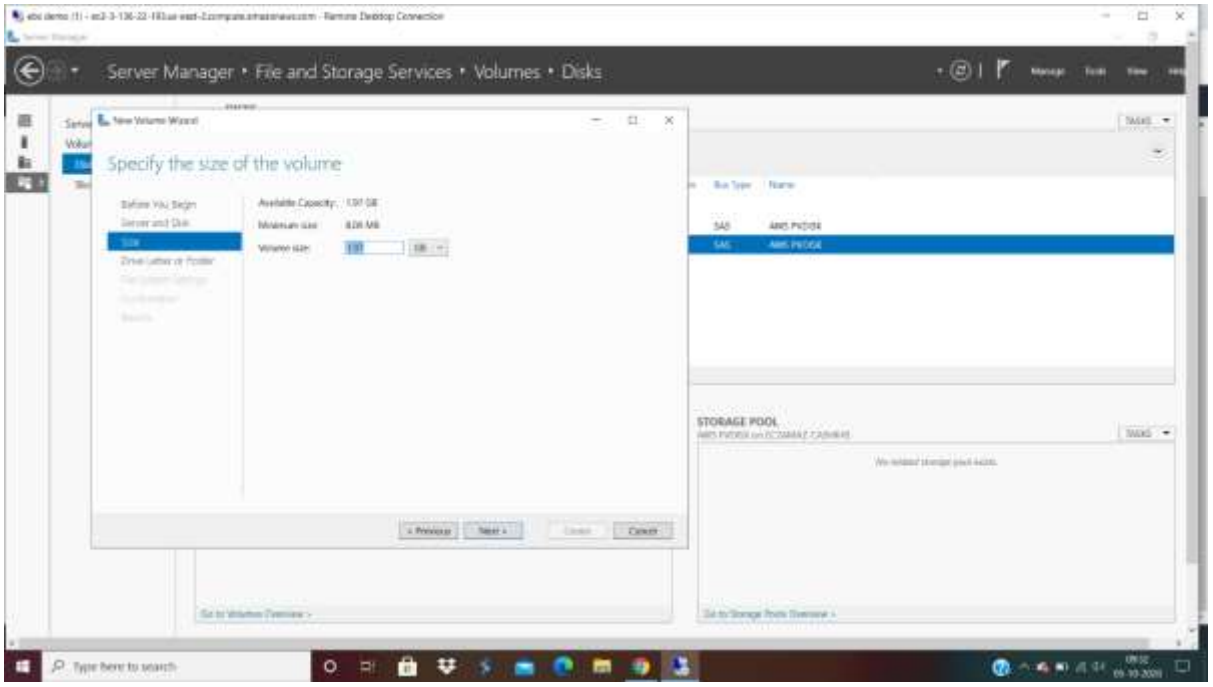

Server Manager • File and Storage Services • Volumes • Disks
DISKS
VOLUMES
STORAGE POOL

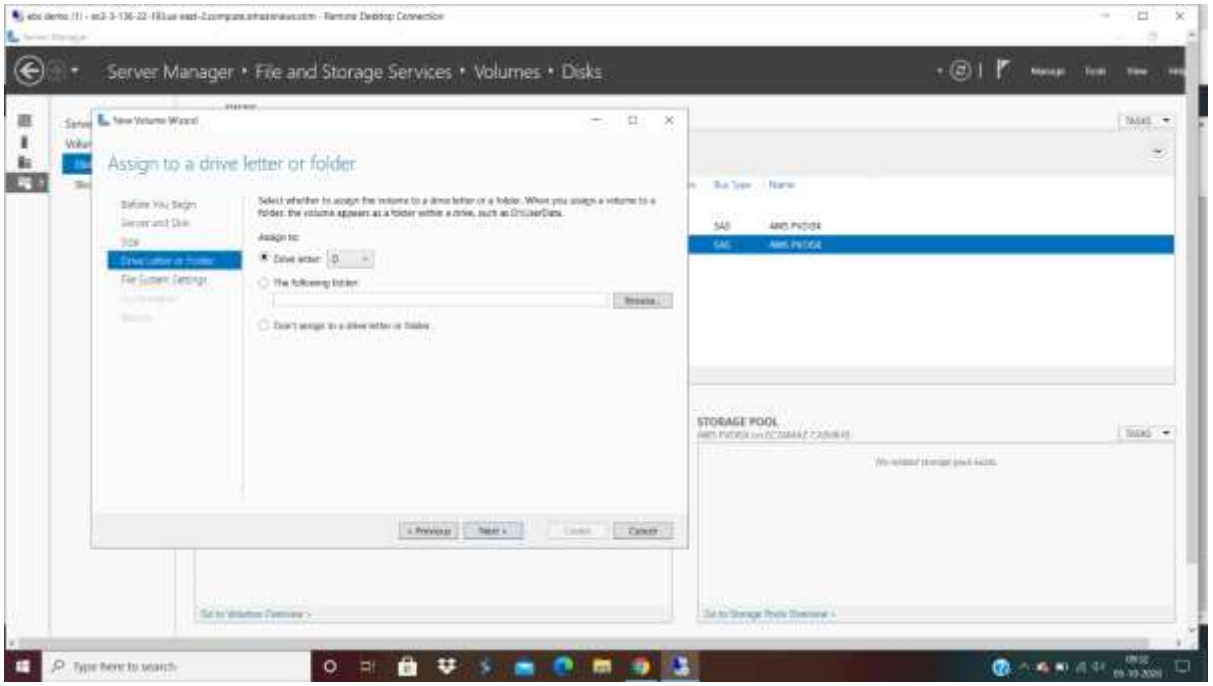

Server Manager • File and Storage Services • Volumes • Disks
DISKS
VOLUMES

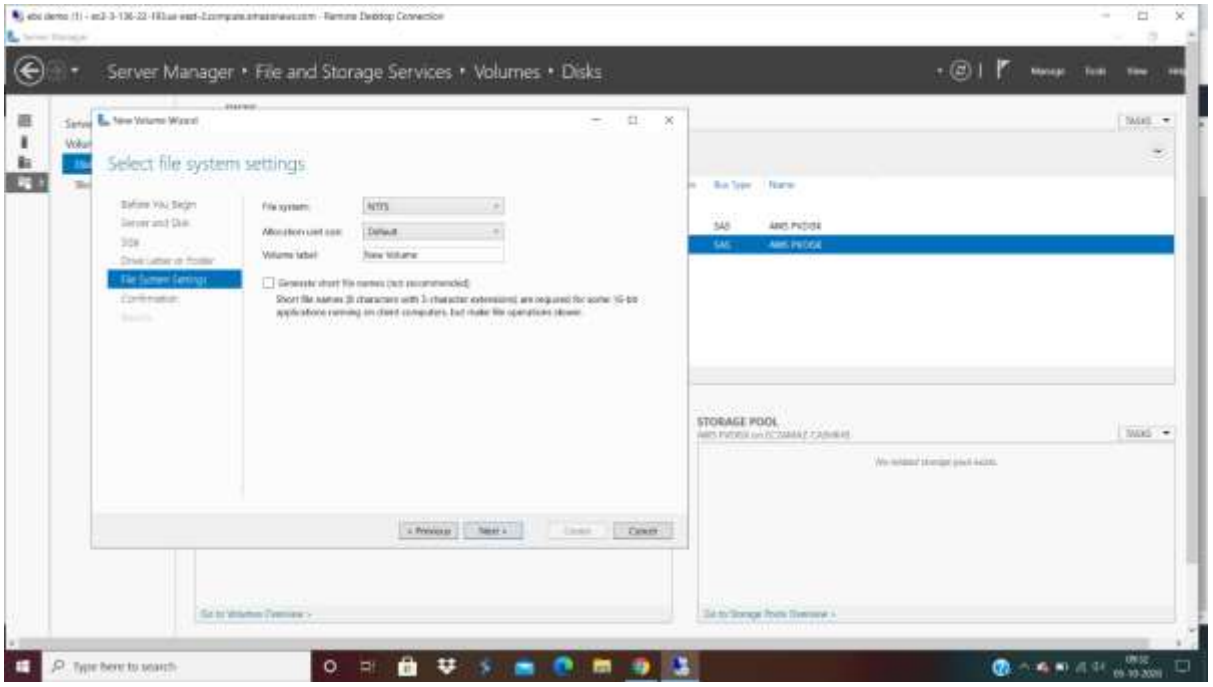

Server Manager • File and Storage Services • Volumes • Disks
Before you begin
STORAGE POOL

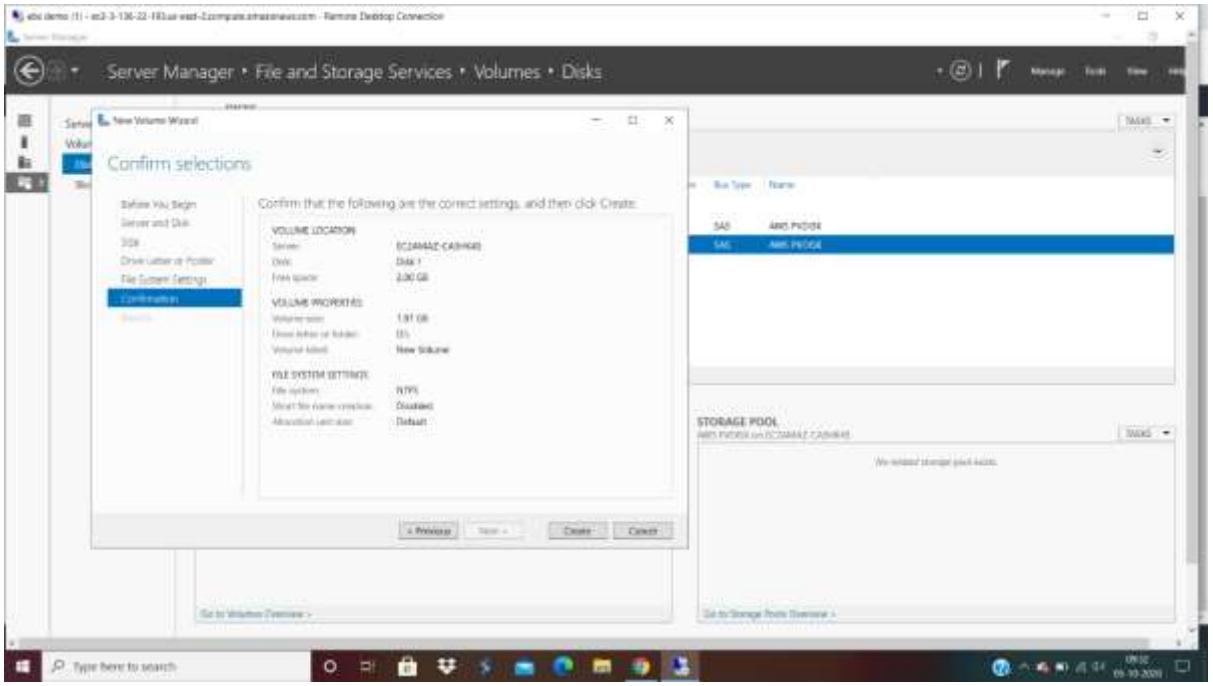

Server Manager • File and Storage Services • Volumes • Disks
Select the server and disk
STORAGE POOL

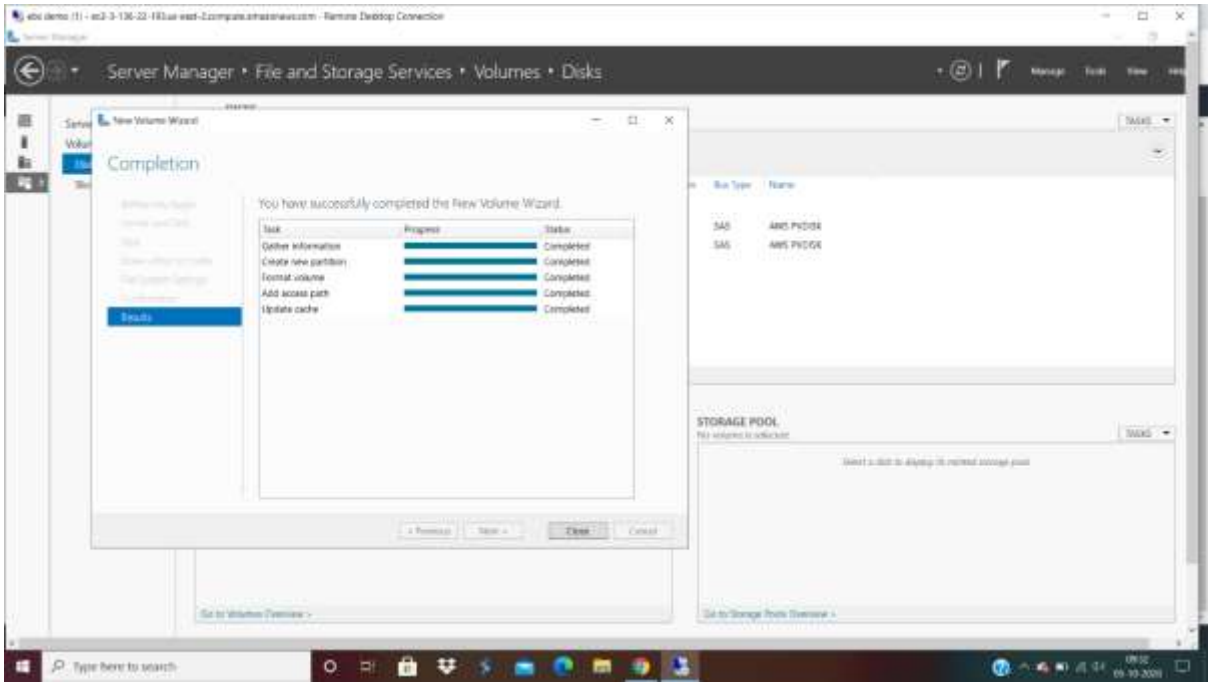

Server Manager • File and Storage Services • Volumes • Disks
Select the server and disk
Offline or Uninitialized Disk
OK
Cancel
Type here to search

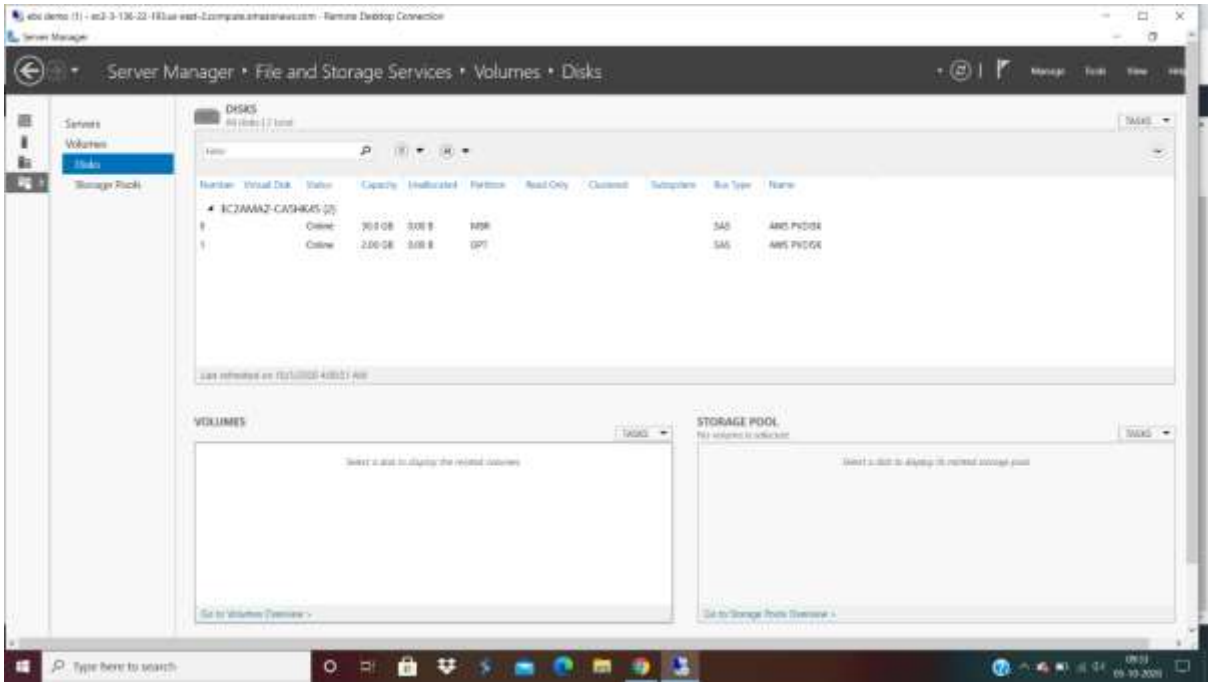

Server Manager • File and Storage Services • Volumes • Disks
Specify the size of the volume
STORAGE POOL
Type here to search


Server Manager • File and Storage Services • Volumes • Disks
Assign to a drive letter or folder
STORAGE POOL

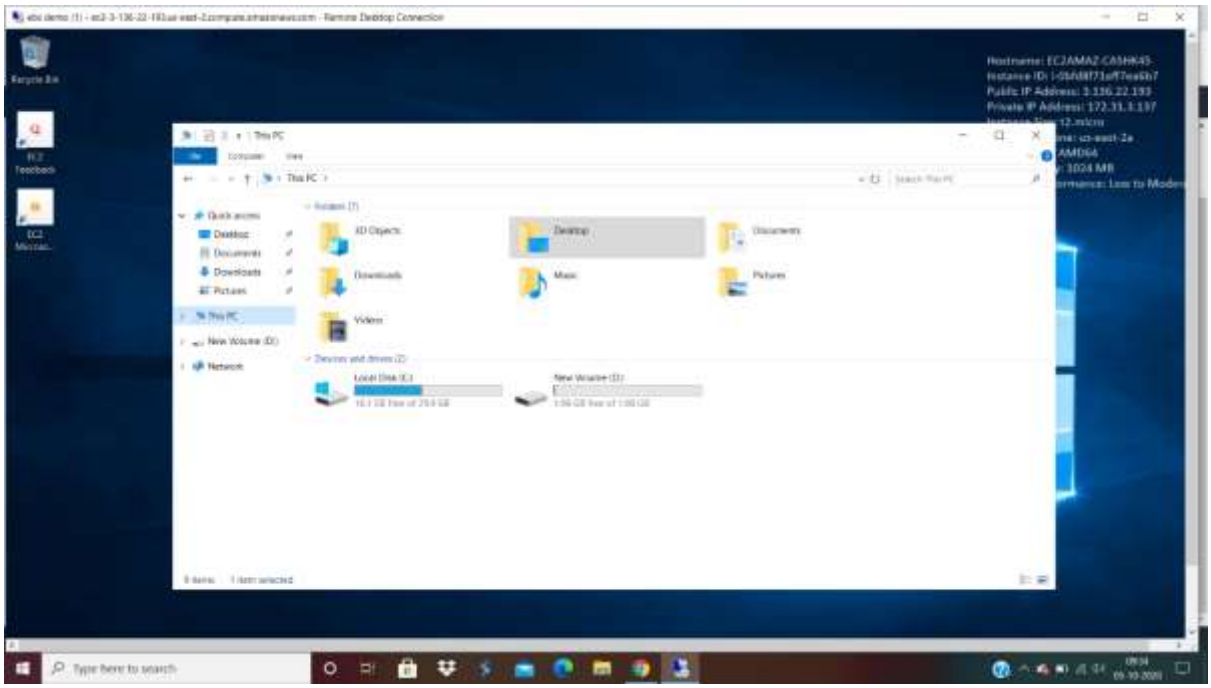

Server Manager • File and Storage Services • Volumes • Disks
Select file system settings
STORAGE POOL


Server Manager • File and Storage Services • Volumes • Disks
New Volume Wizard
Confirm selections
Confirm that the following are the correct settings, and then click Create.
VOLUME LOCATION
VOLUME PROPERTIES
FILE SYSTEM SETTINGS
New Volume
NTFS
Disabled
Default
Previous
Create
Cancel
STORAGE POOL
Type here to search


Server Manager • File and Storage Services • Volumes • Disks
New Volume Wizard
Completion
You have successfully completed the New Volume Wizard.
Task
Progress
Status
Gather information
Create new partition
Format volume
Add access path
Update cache
Completed
Results
Previous
Close
Cancel
STORAGE POOL
Type here to search

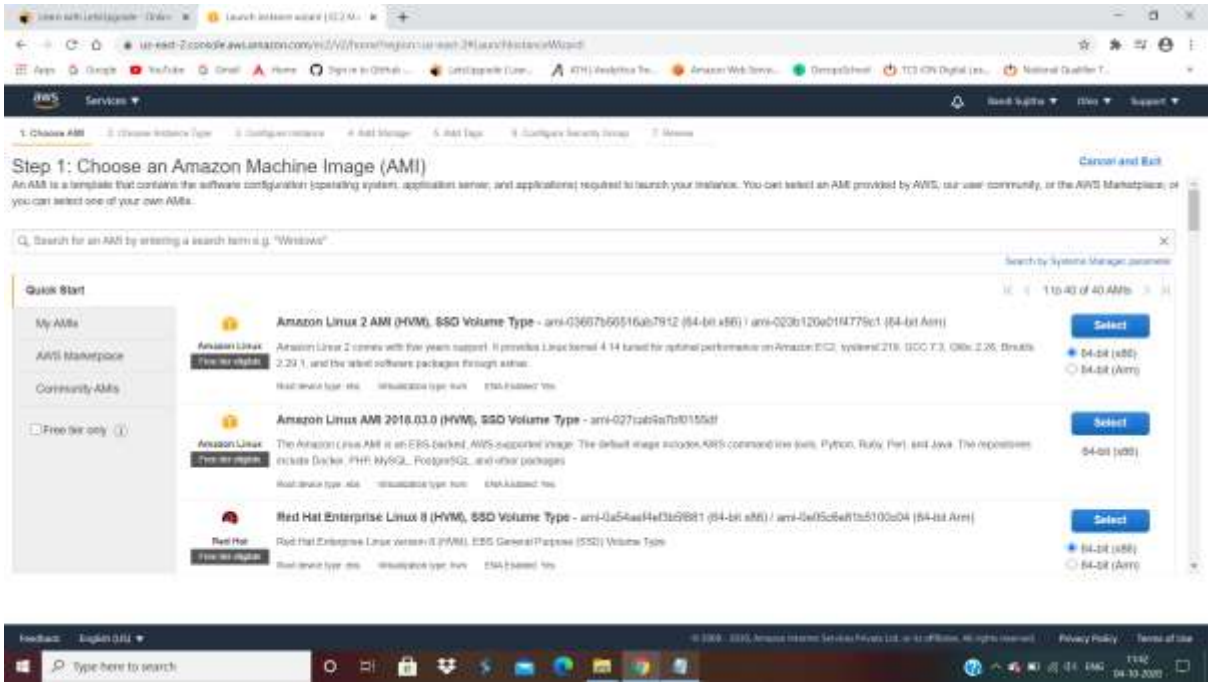

Server Manager • File and Storage Services • Volumes • Disks
Servers
Volumes
Disks
Storage Pools
DISKS
VOLUMES
STORAGE POOL
Type here to search

New Volume:

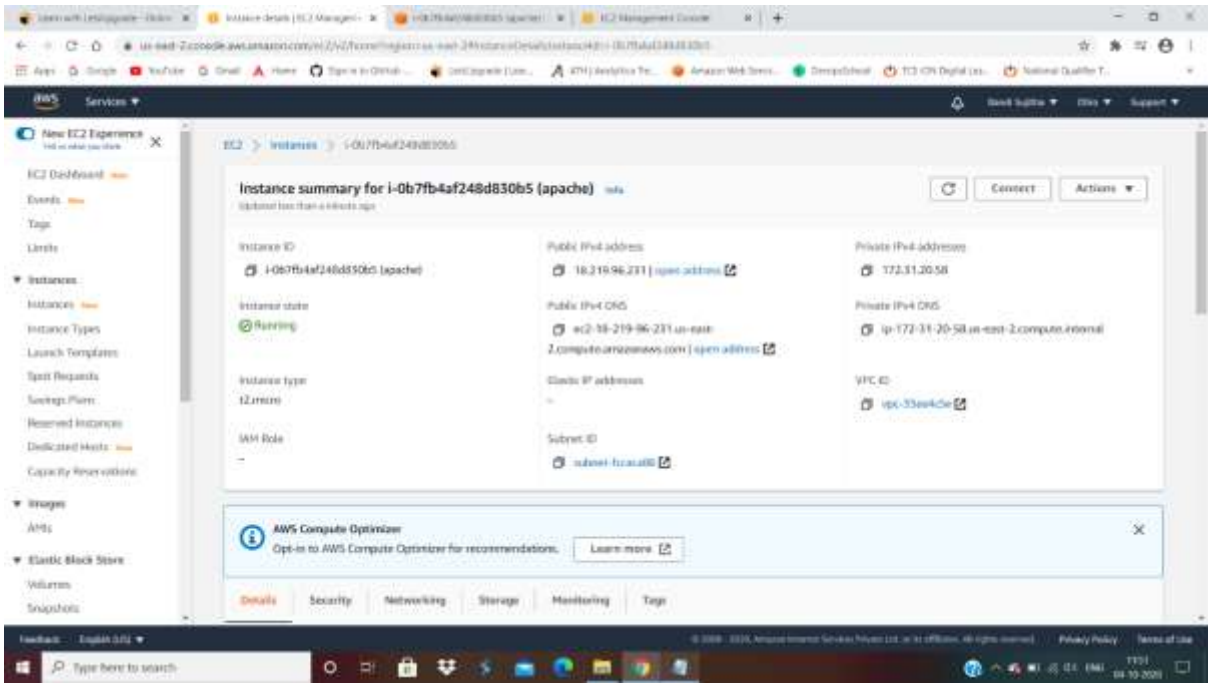

This PC
Quick access
Desktop
Documents
Downloads
Pictures
Videos
Network
Type here to search

PROJECT 4: Working with Elastic IP's

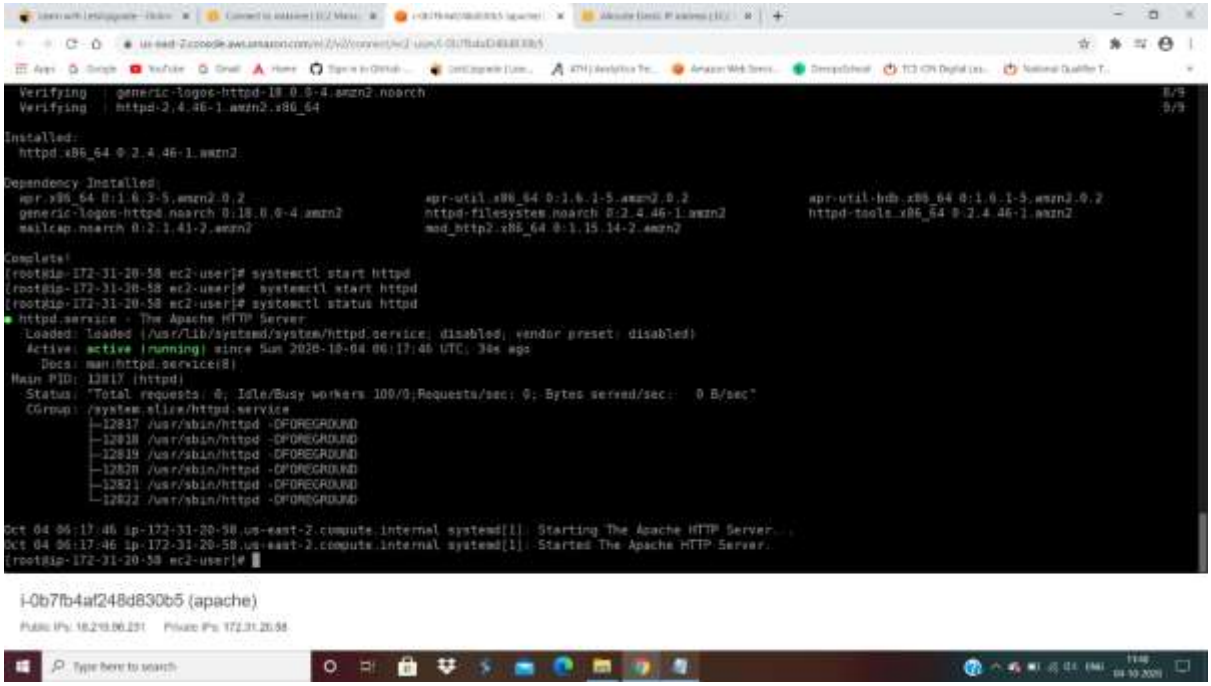
Step1: Install an Apache Server



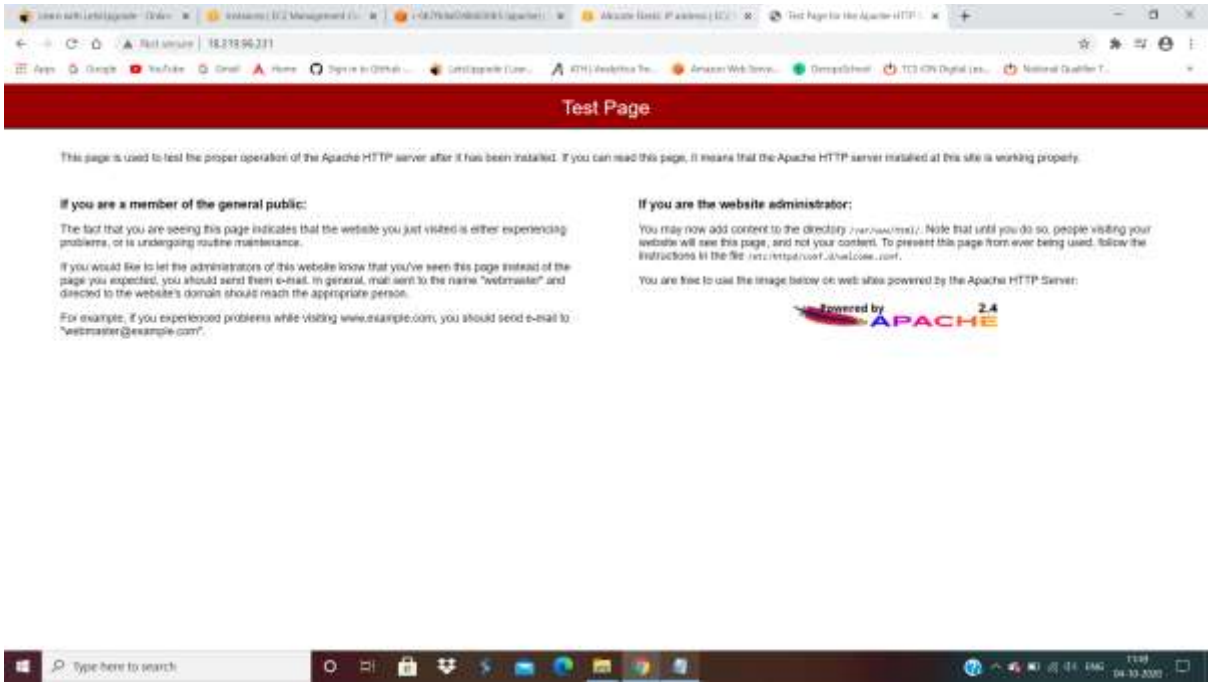
IP Address of the Instance:



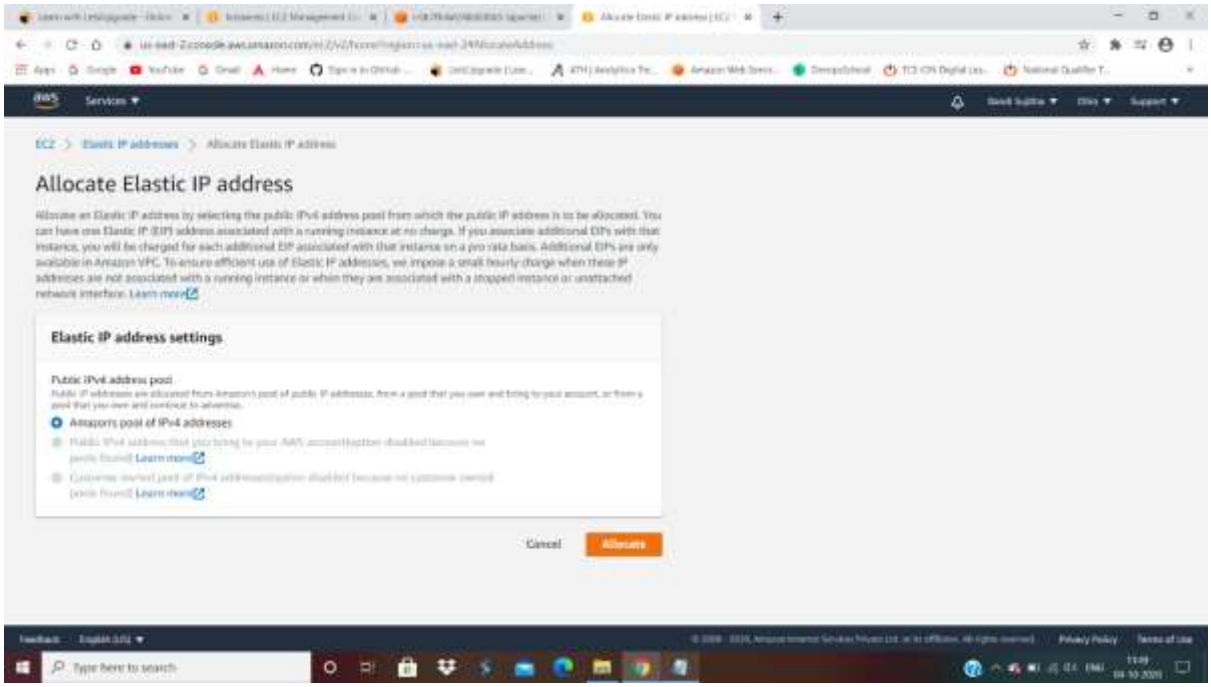
Step2: Check the web server status

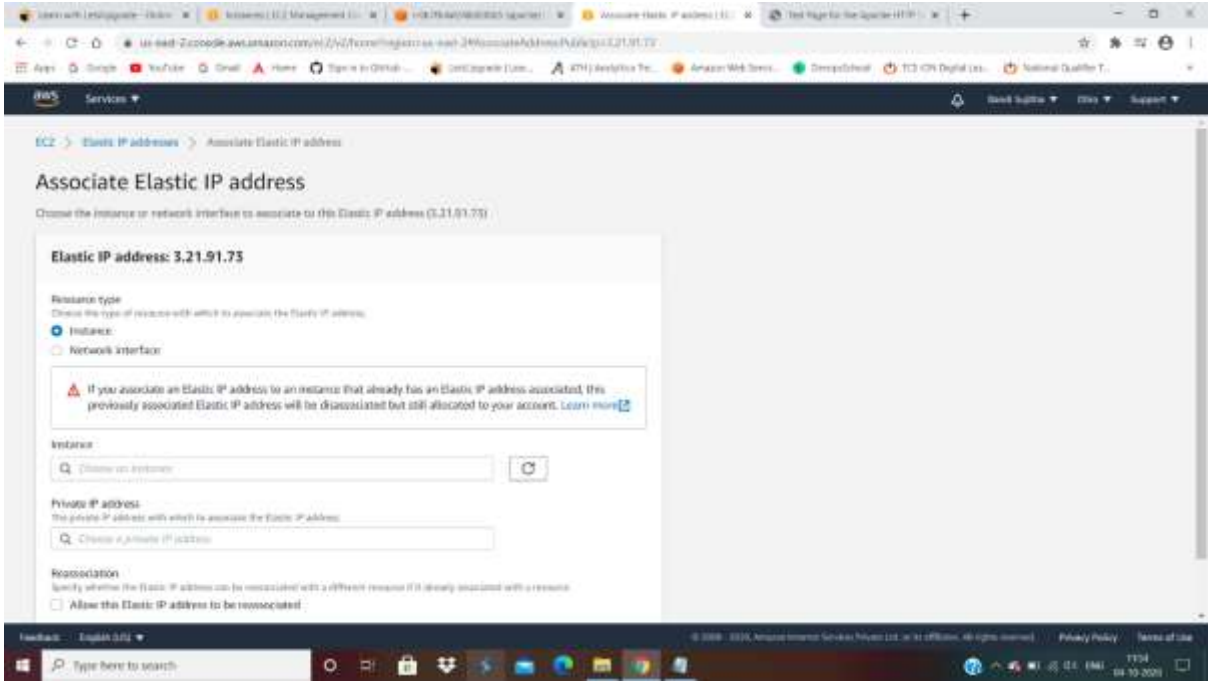


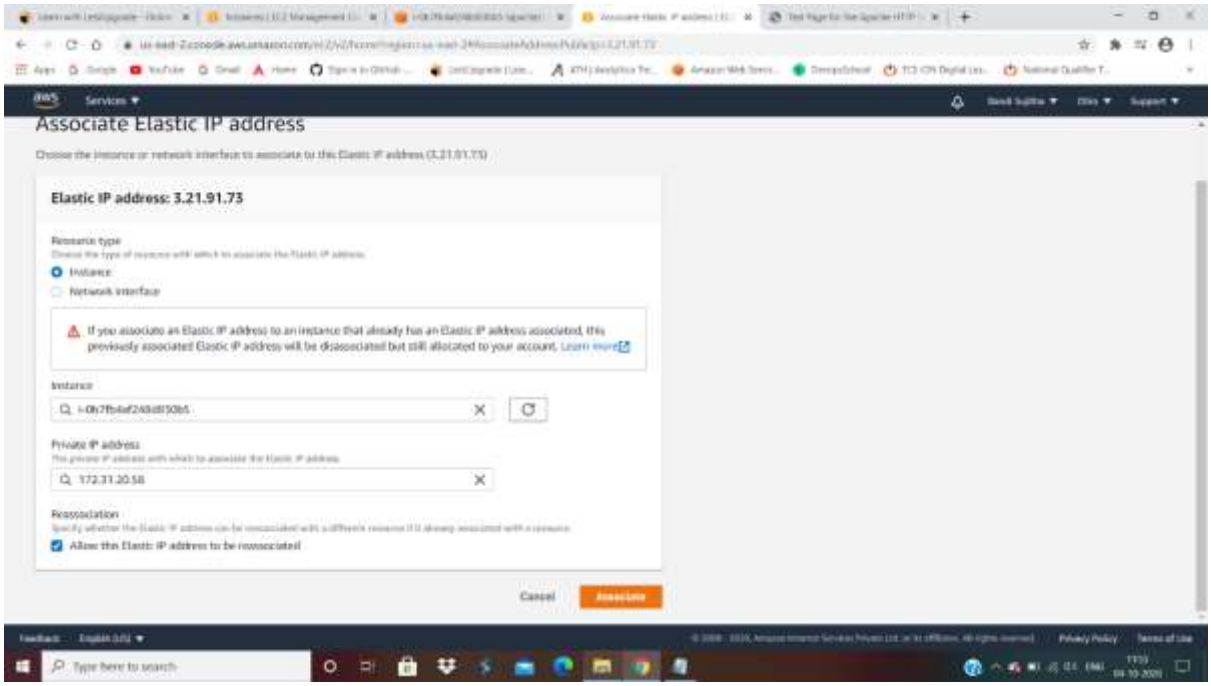
Step3: Once completed, let’s install and run an apache server

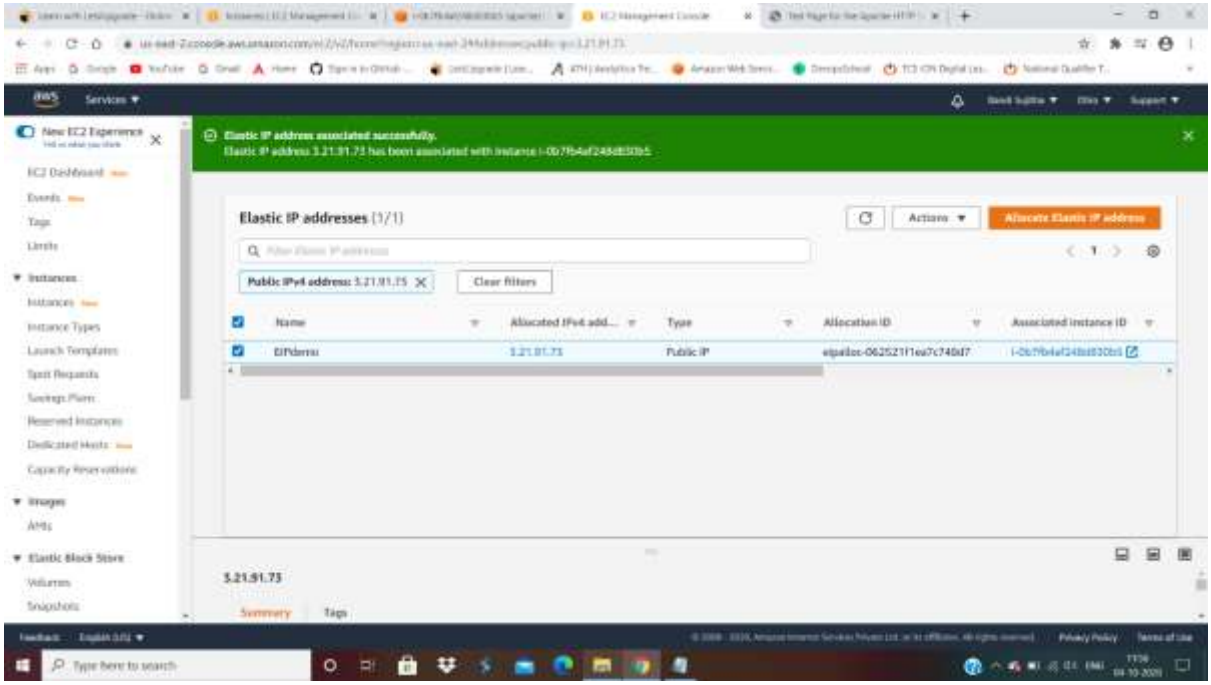


Allocate Elastic IP Address:

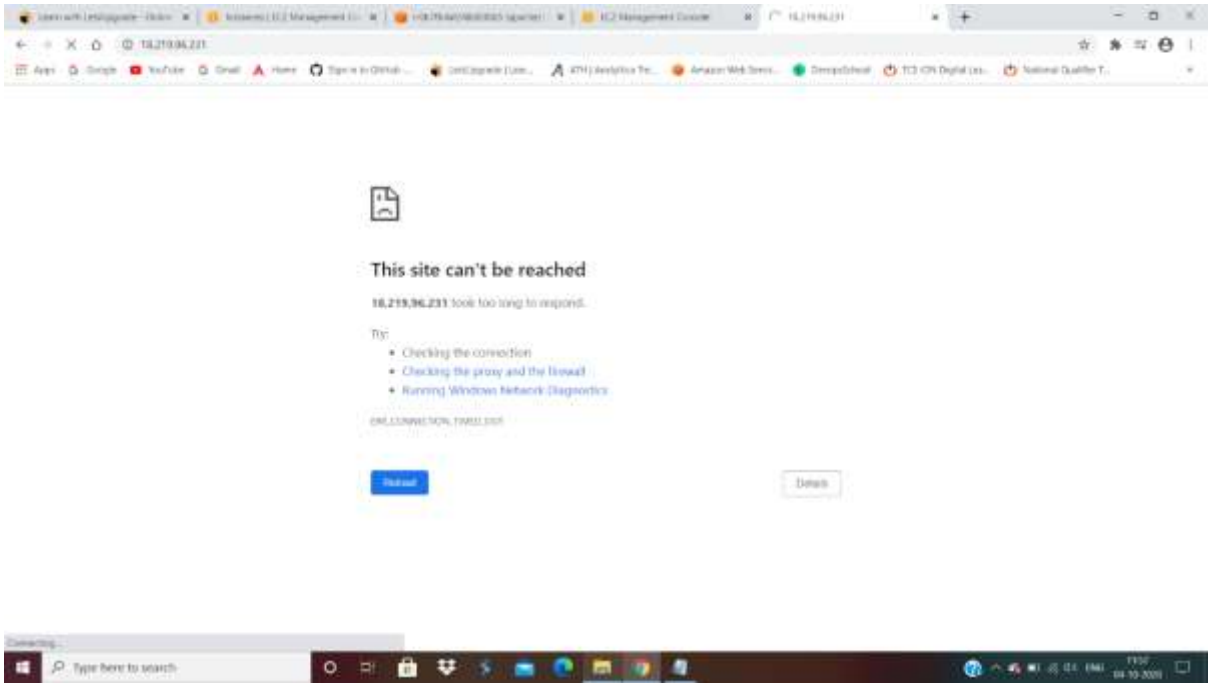




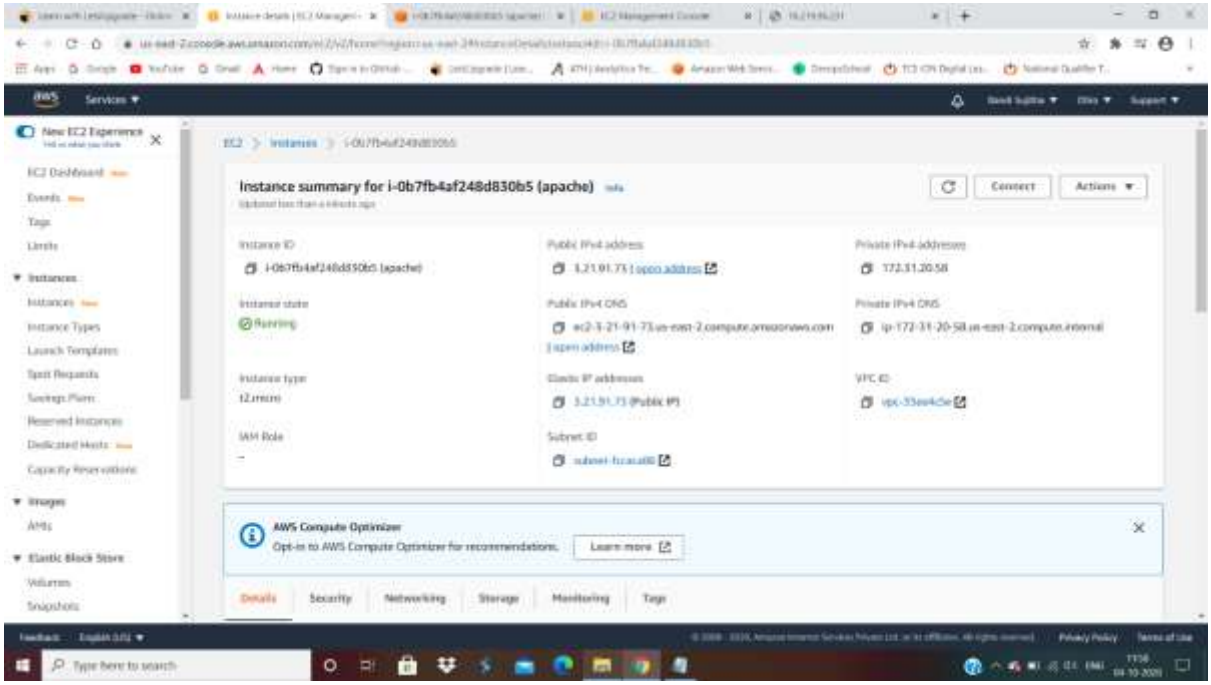

Associate Elastic IP address
Elastic IP address: 3.21.91.73
Resource type
Instance
Network interface
If you associate an Elastic IP address to an instance that already has an Elastic IP address associated, this previously associated Elastic IP address will be disassociated but still allocated to your account. Learn more
Instance
Private IP address
172.31.20.58
Reassociation
Allow this Elastic IP address to be reassociated
Cancel
Associate

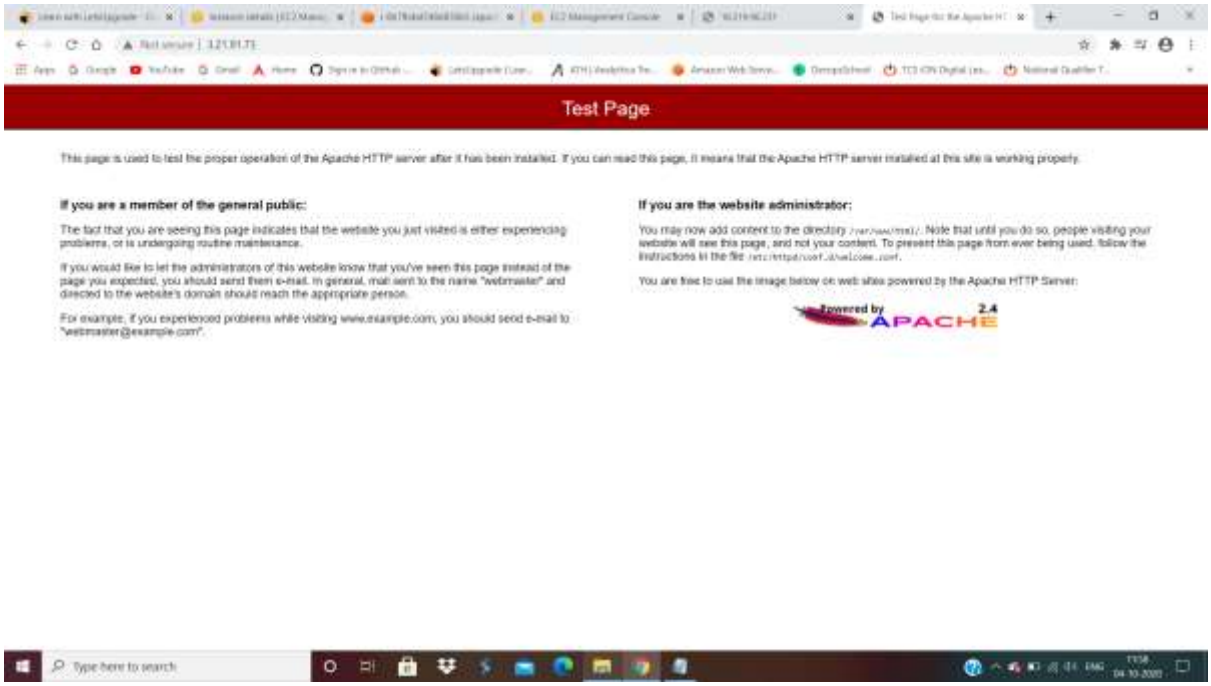

Elastic IP address associated successfully.
Elastic IP address 3.21.91.73 has been associated with instance i-0b7fb4af248d830b5
Elastic IP addresses (1/1)
Actions
Allocate Elastic IP address
Public IPv4 address: 3.21.91.73
Clear filters
Name
Allocated IPv4 add...
Type
Allocation ID
Associated instance ID
DIPdemo
3.21.91.73
Public IP
eipalloc-062521f1ea7c740d7
3.21.91.73
Summary
Tags

After Allocation Elastic IP:

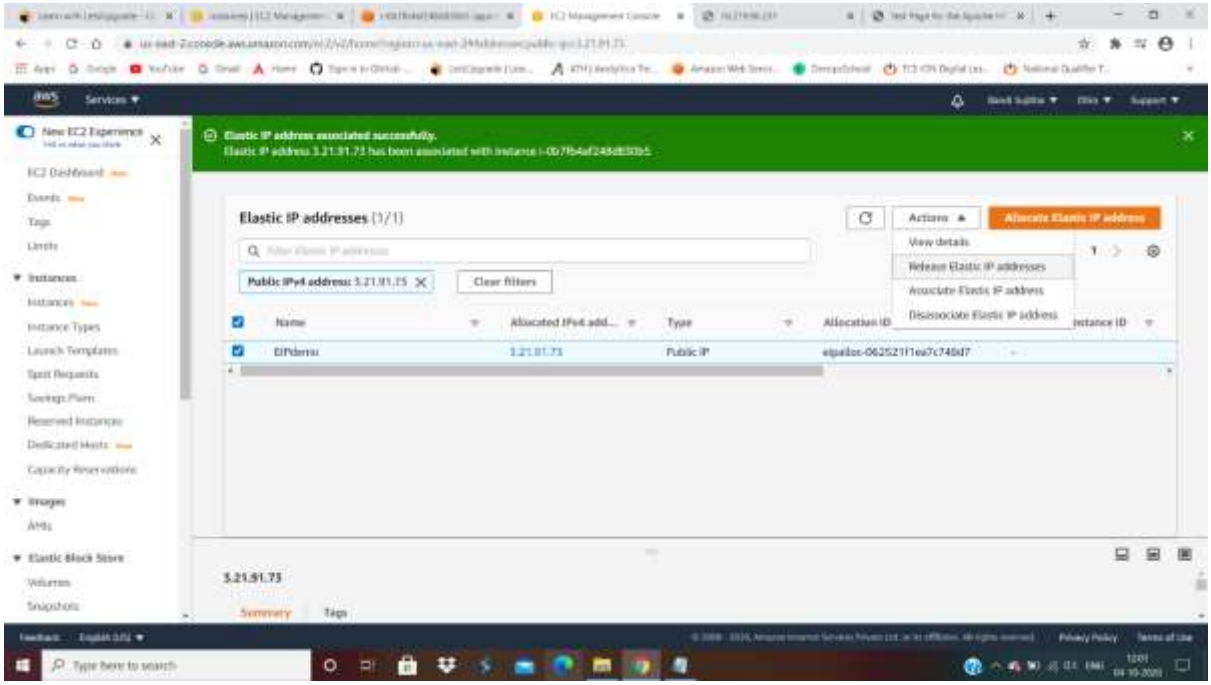


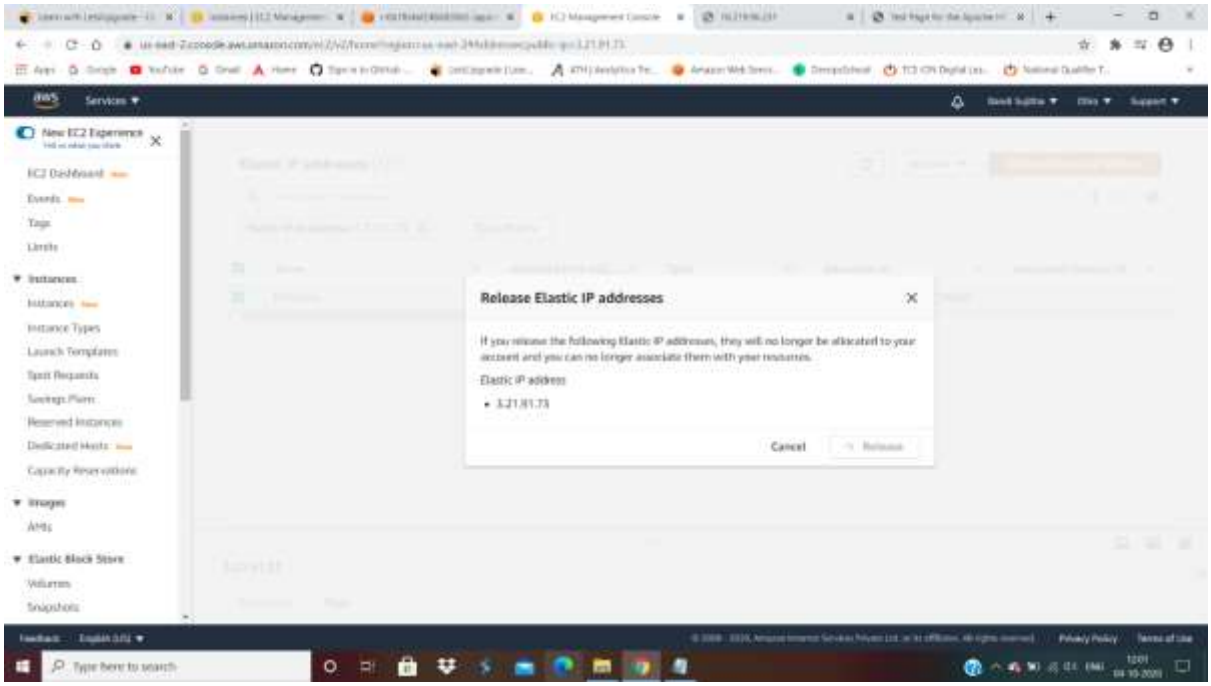
Changing IP Address:



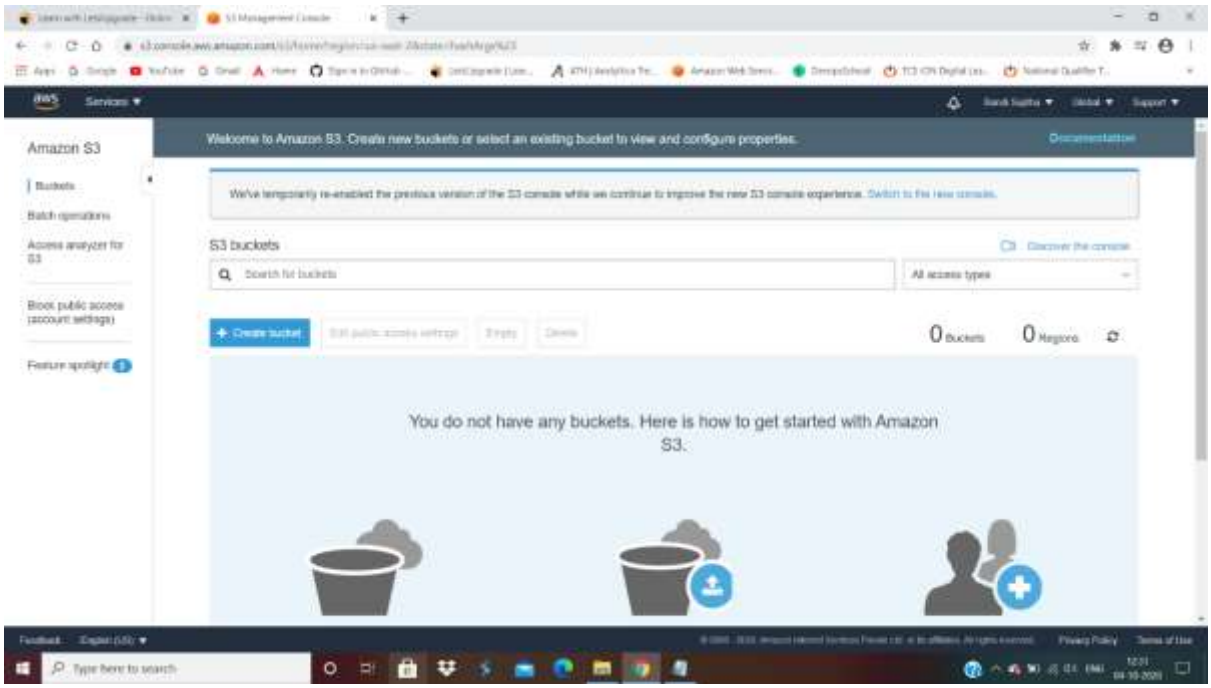


Releasing Elastic IP Address:

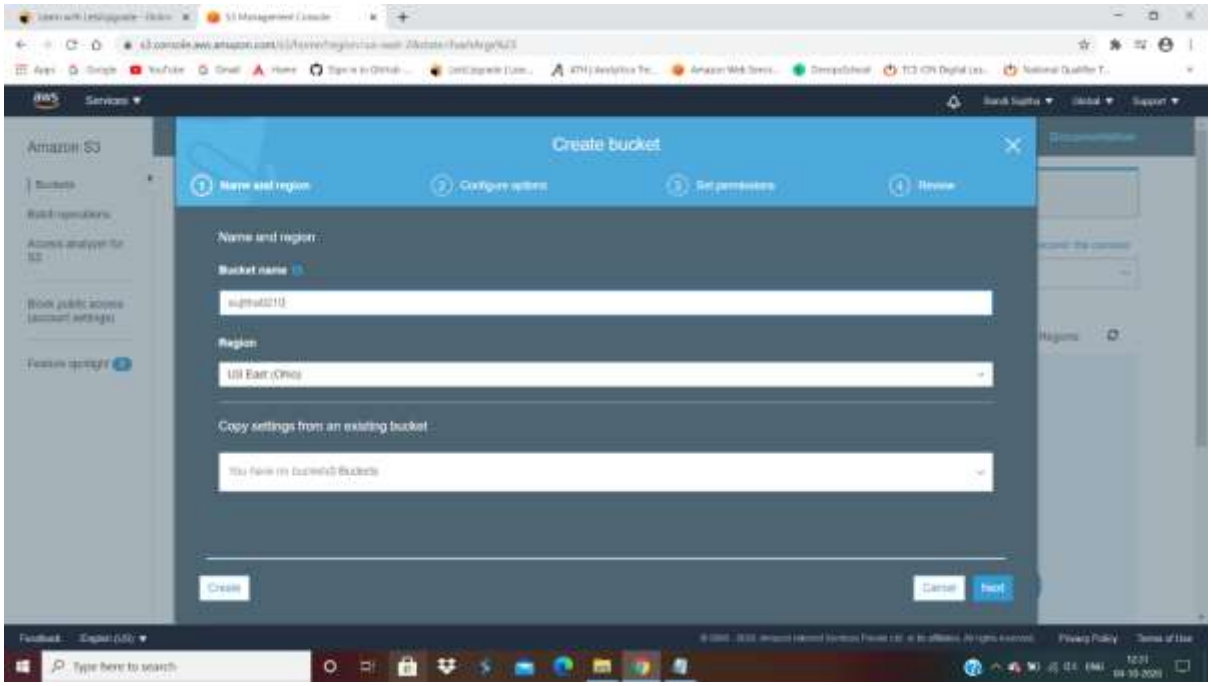


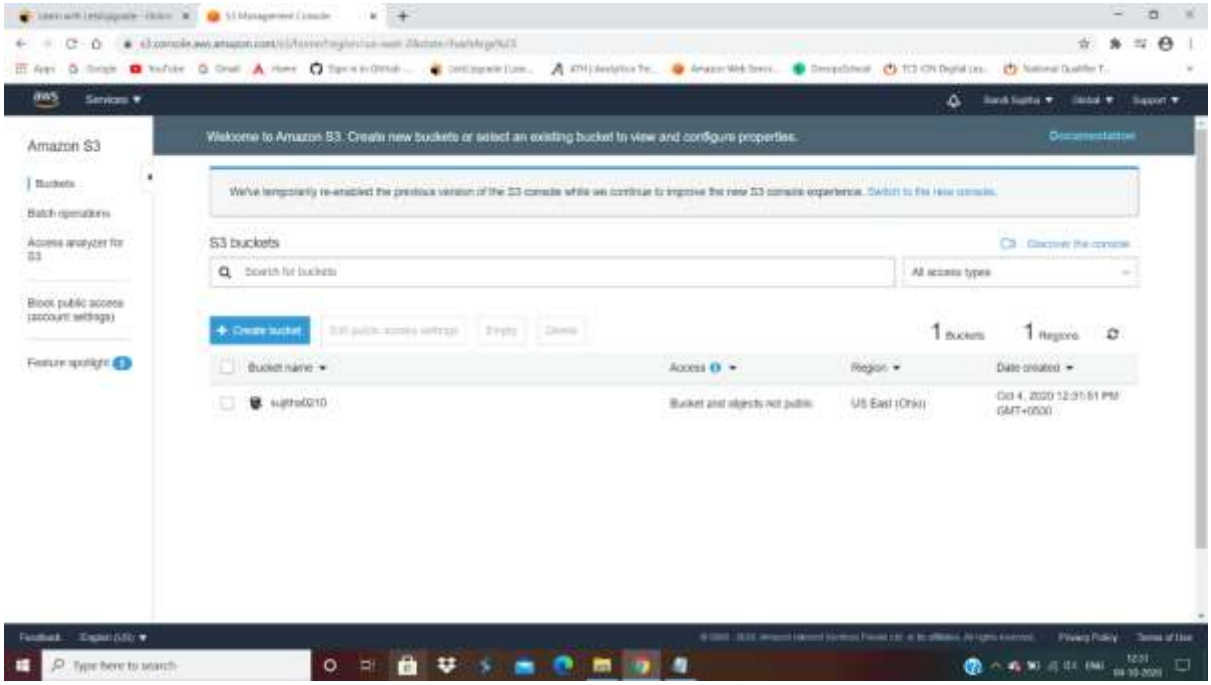


PROJECT 5: Working with S3

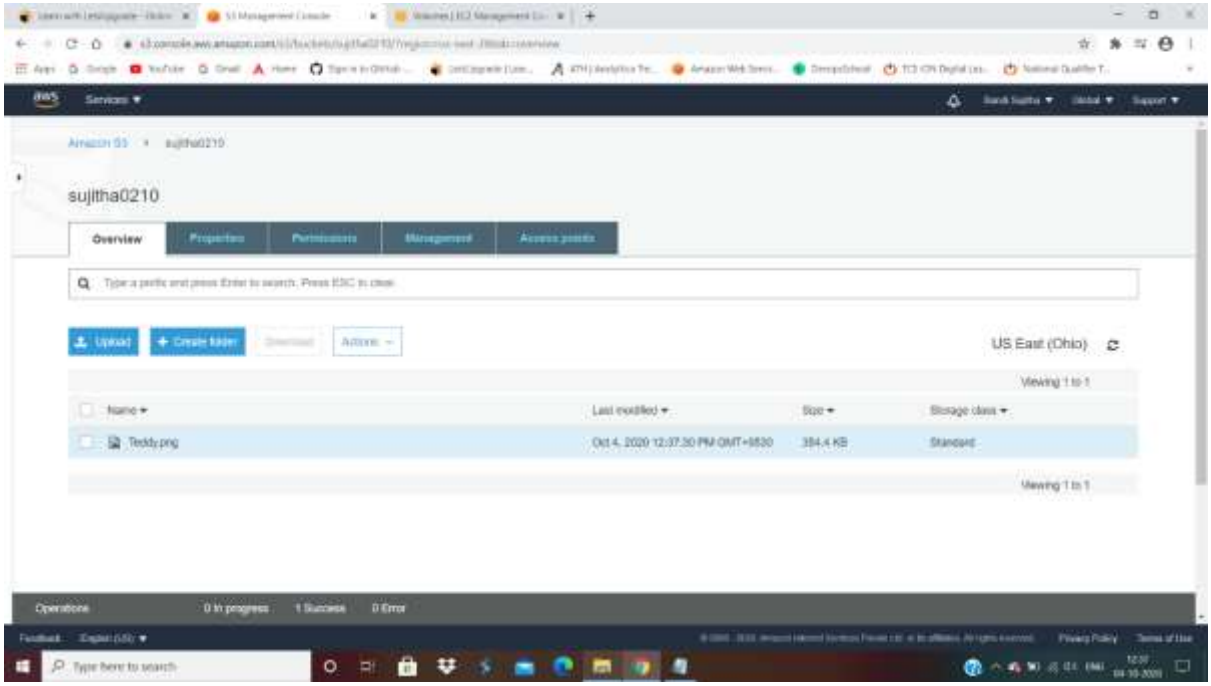


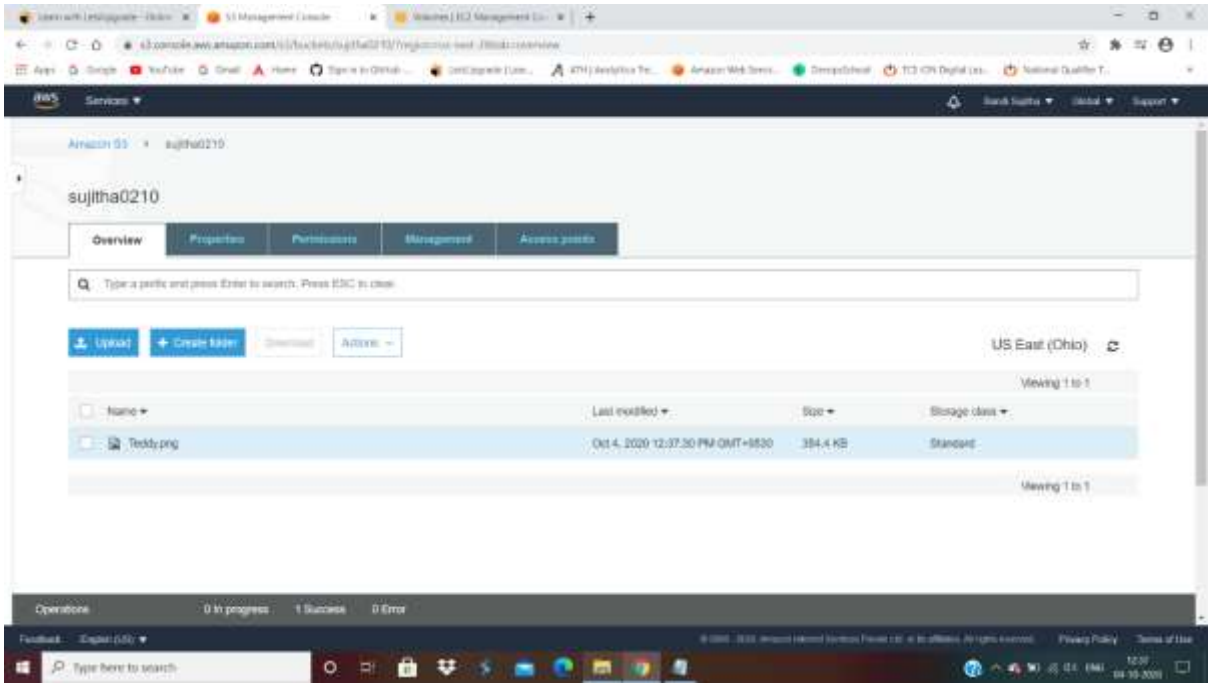
Create Bucket:

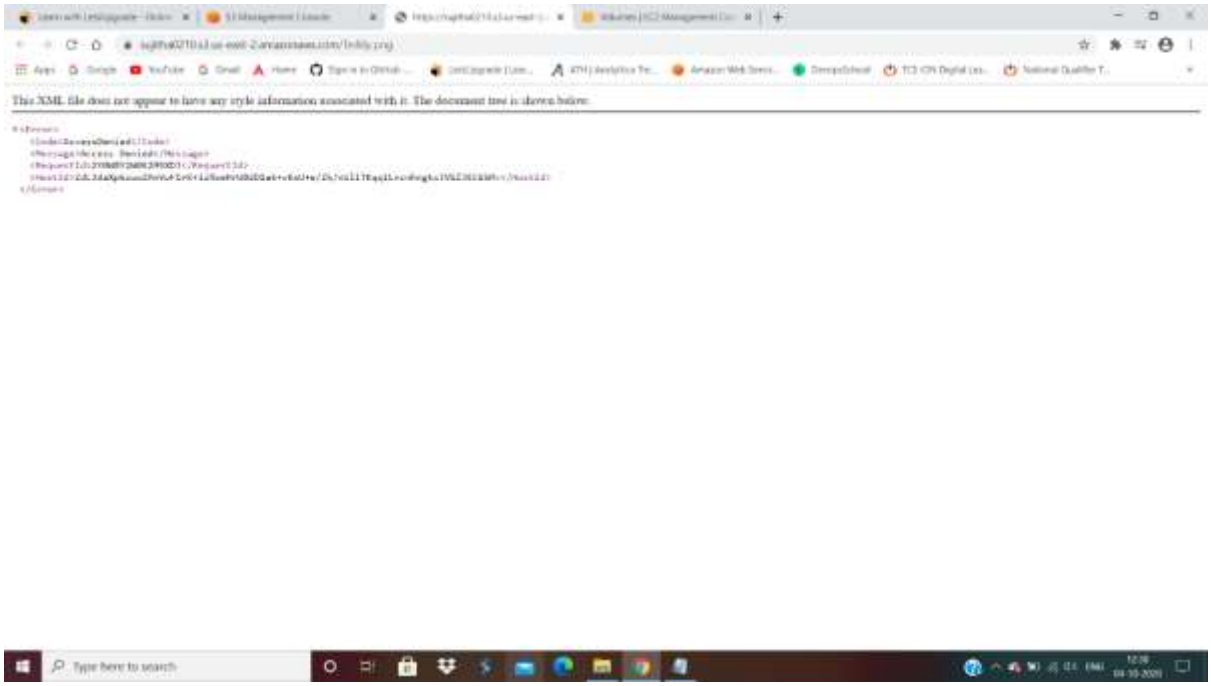


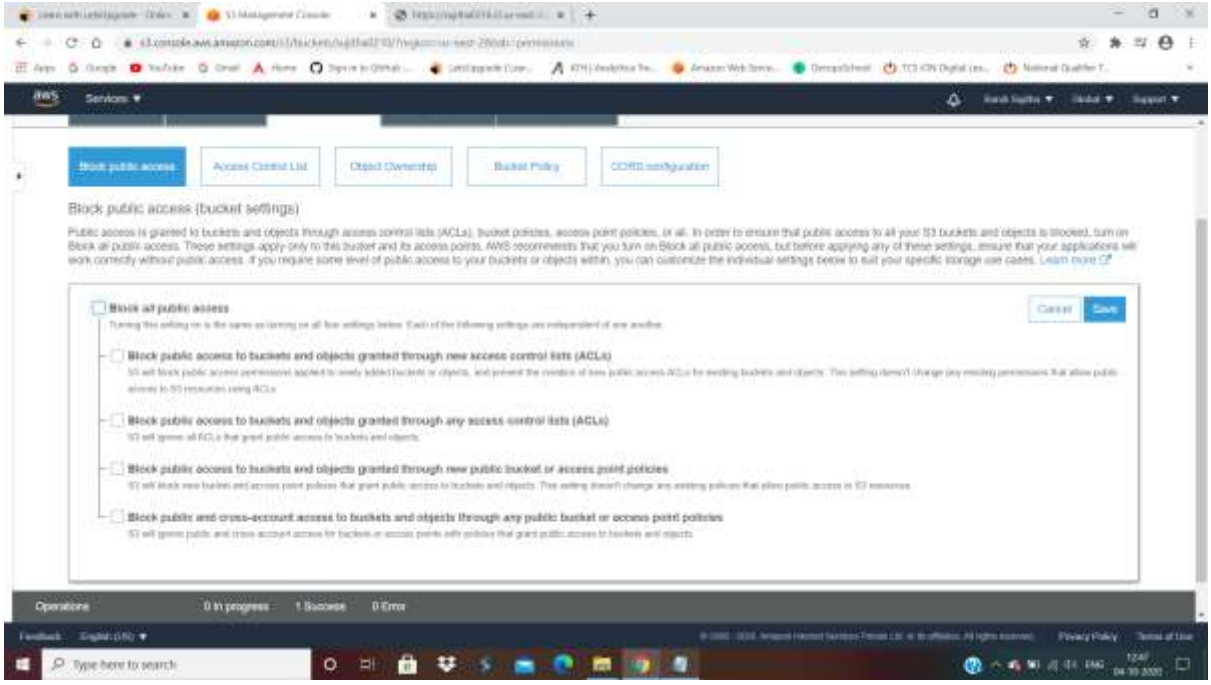


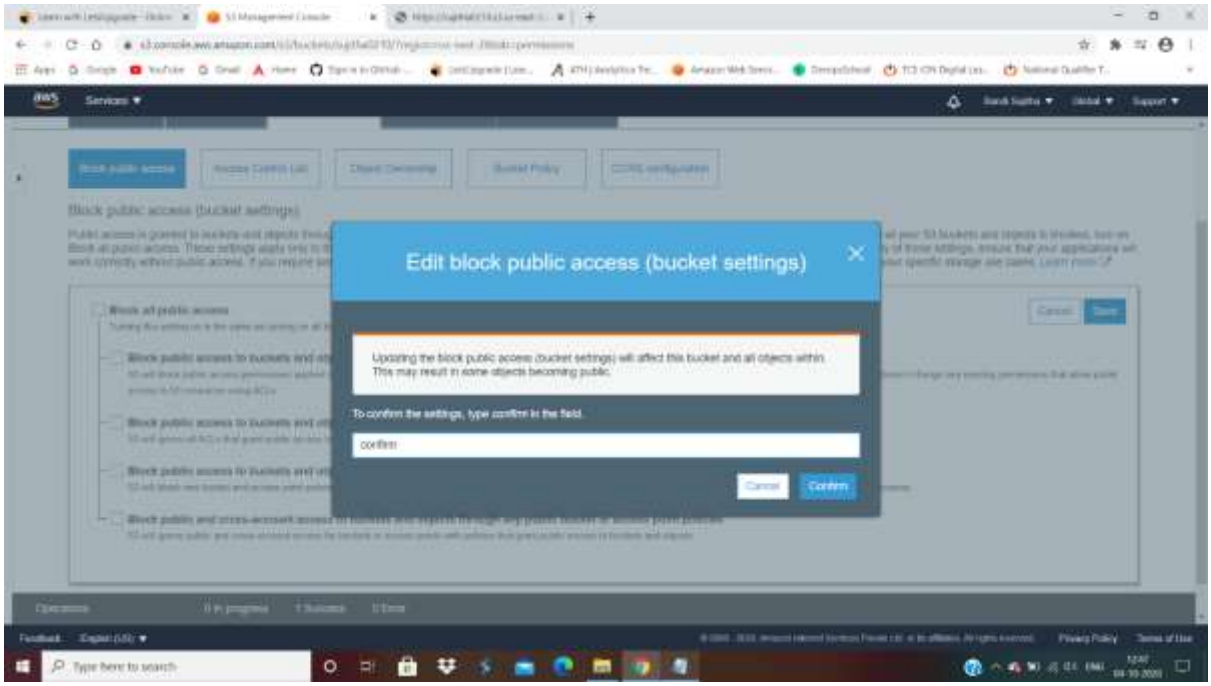
a. Working with S3-.jpg

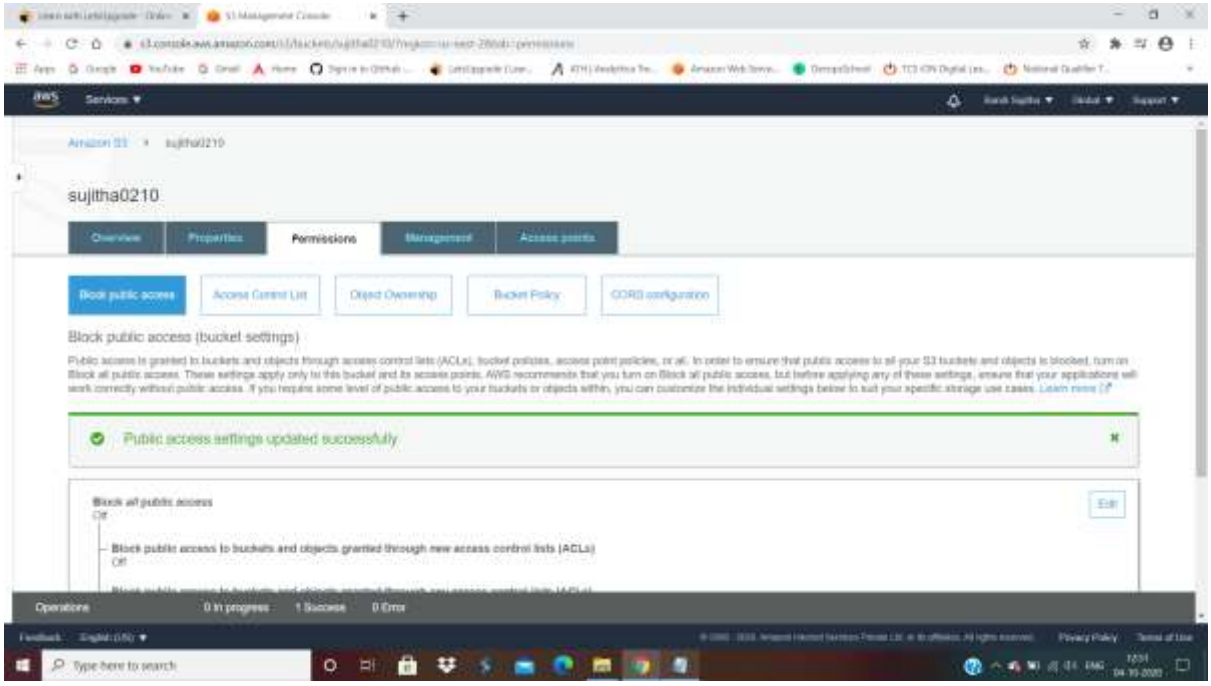




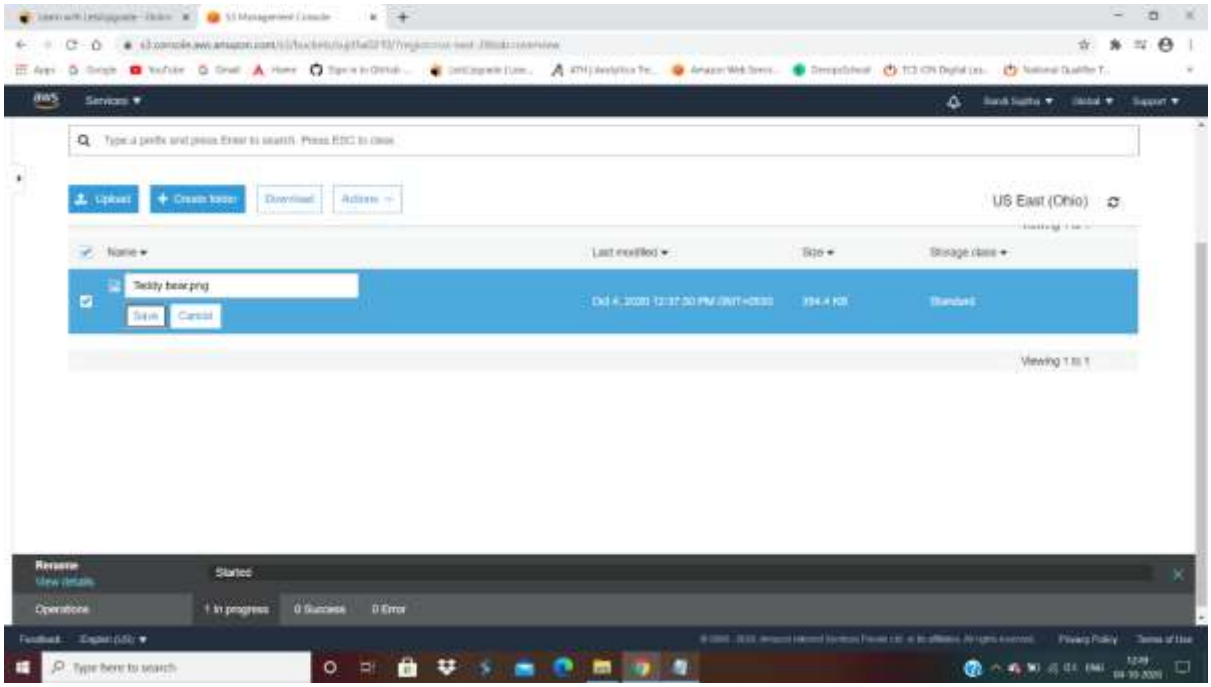

This XML file does not appear to have any style information associated with it. The document tree is shown below.
Type here to search


Services
Block public access
Access Control List
Object Ownership
Bucket Policy
CORS configuration
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
Block all public access
Cancel
Save
Block public access to buckets and objects granted through new access control lists (ACLs)
Block public access to buckets and objects granted through any access control lists (ACLs)
Block public access to buckets and objects granted through new public bucket or access point policies
Block public and cross-account access to buckets and objects through any public bucket or access point policies
Operations
0 In progress
1 Success
0 Errors
Feedback
English (US)
Privacy Policy
Terms of Use
Type here to search

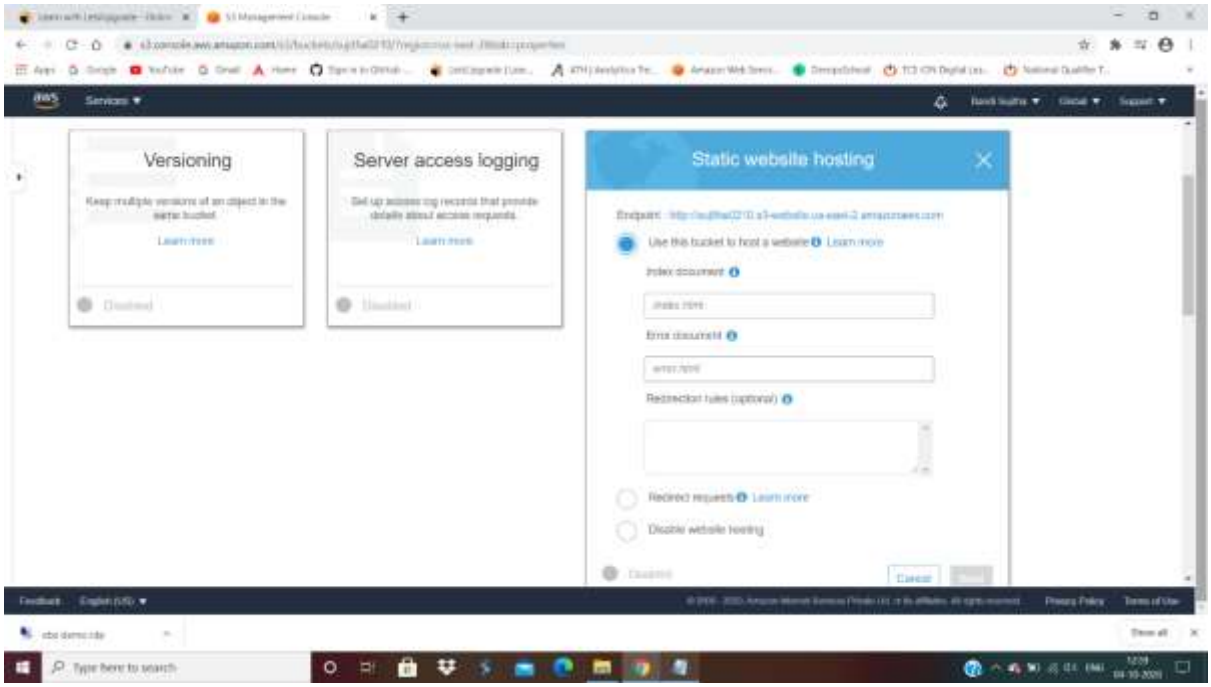

Edit block public access (bucket settings)
Updating the block public access (bucket settings) will affect this bucket and all objects within. This may result in some objects becoming public.
To confirm the settings, type confirm in the field.
confirm
Cancel
Confirm

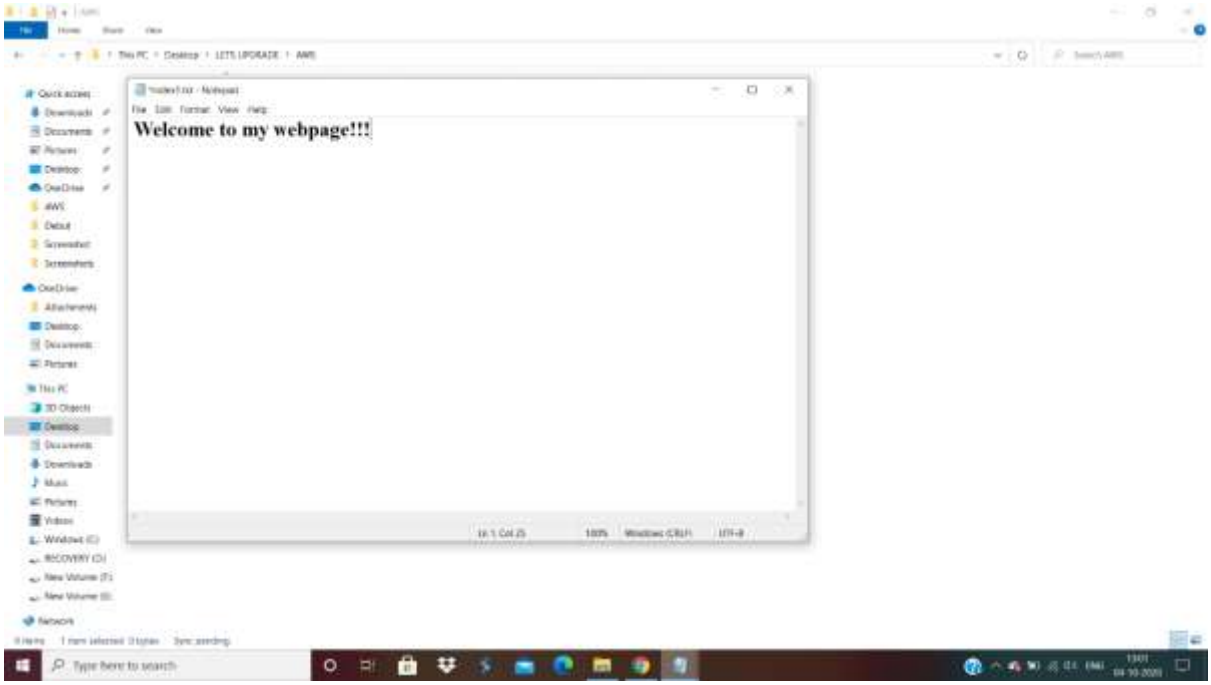

sujitha0210
Overview
Properties
Permissions
Management
Access points
Block public access
Access Control List
Object Ownership
Bucket Policy
CORS configuration
Block public access (bucket settings)
Public access settings updated successfully
Block all public access
Off
Block public access to buckets and objects granted through new access control lists (ACLs)
Off
Edit
Operations
0 In progress
1 Success
0 Error

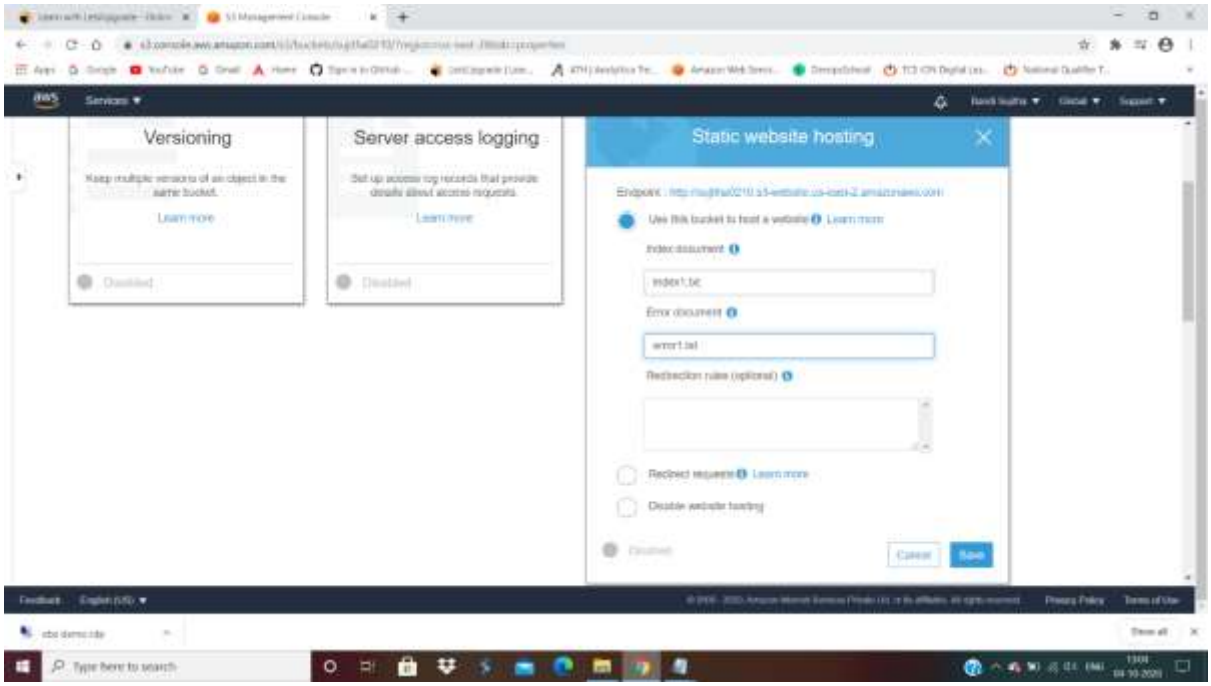
Rename jpg file:

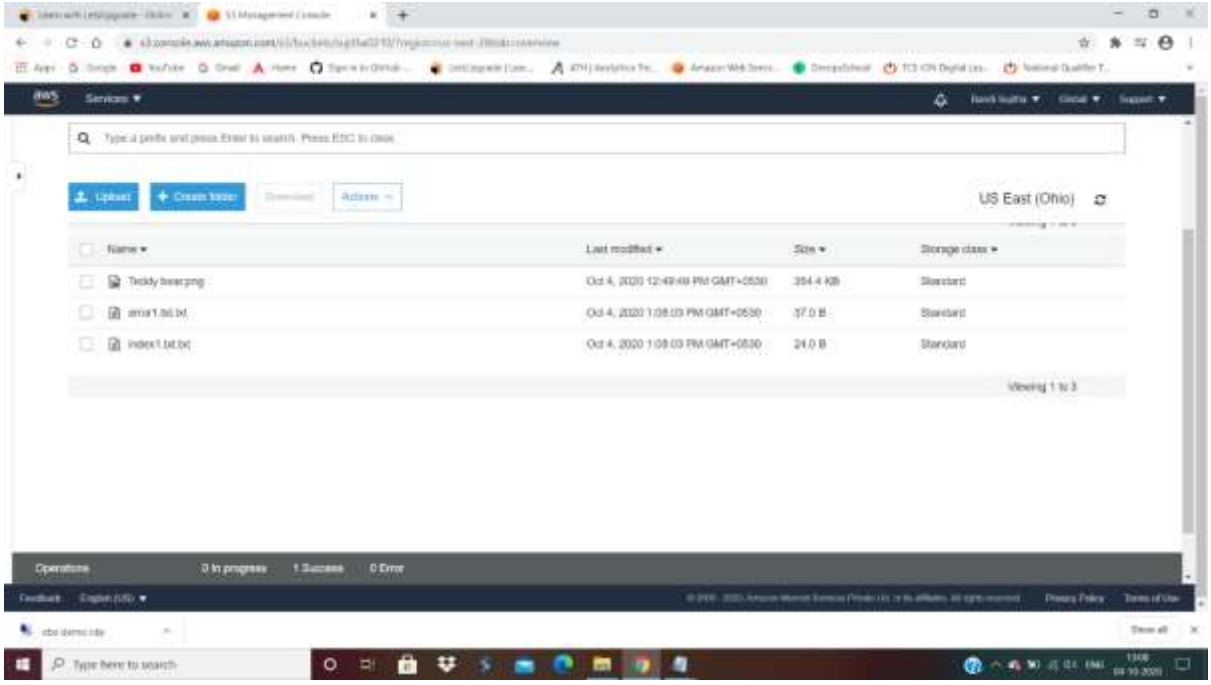


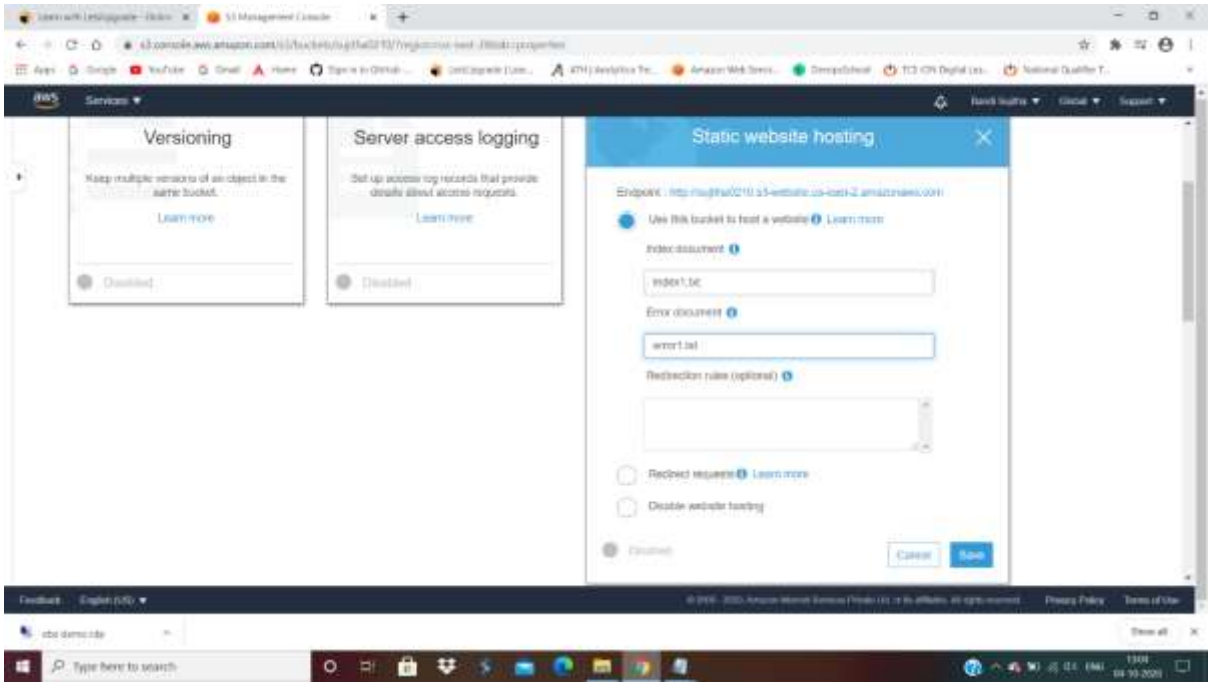
B) Static Web Hosting:

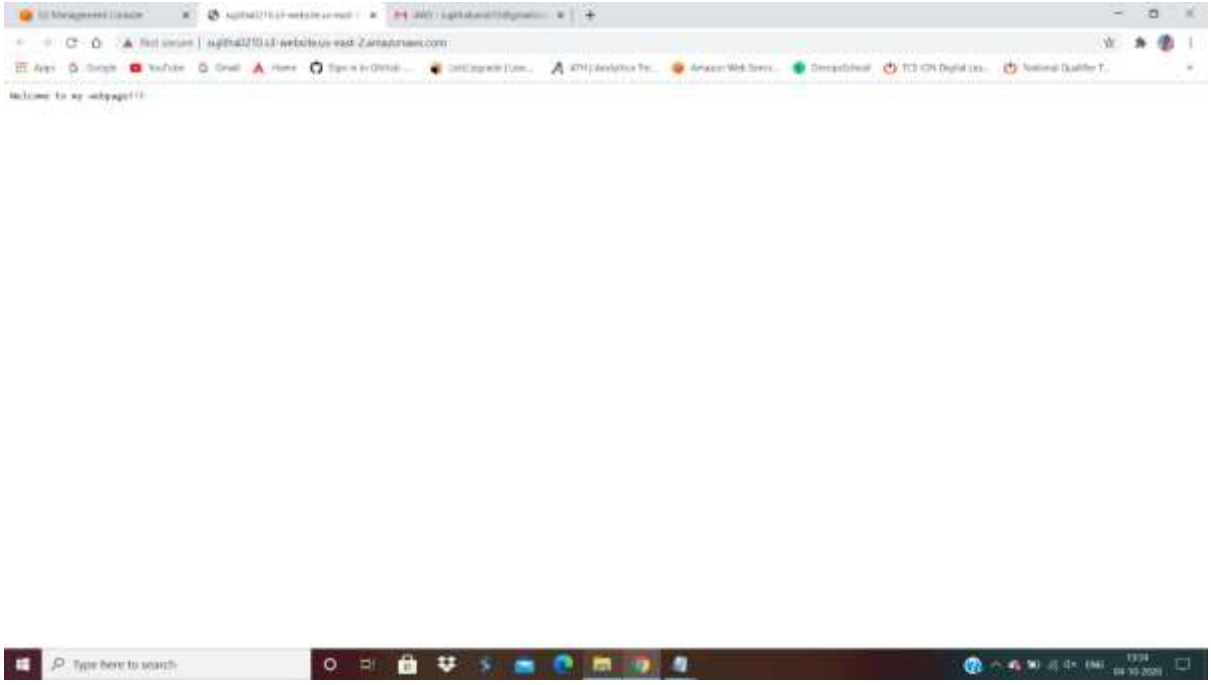


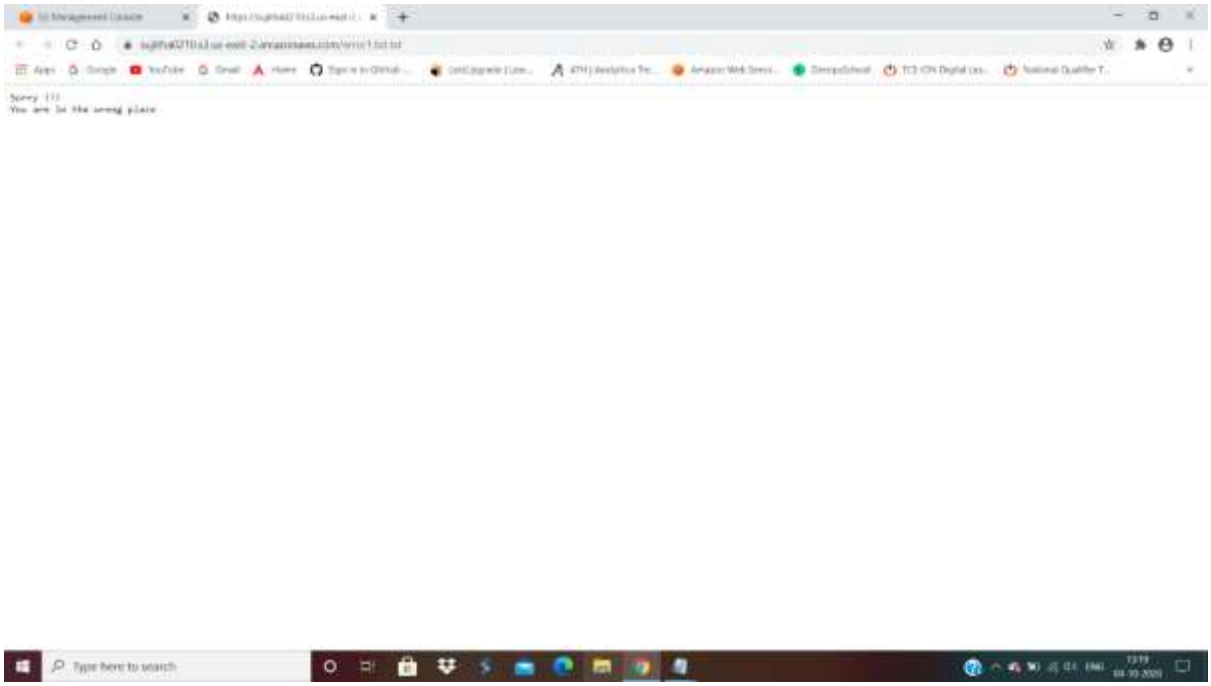



Versioning
Server access logging
Static website hosting
Index document
index1.txt
Error document
error1.txt
Redirection rules (optional)
Redirect requests
Disable website hosting
Cancel
Save


Upload
Create folder
Actions
US East (Ohio)
Name
Last modified
Size
Storage class
Teddy bear.png
error1.txt.txt
index1.txt.txt
Operations
0 In progress
1 Success
0 Error

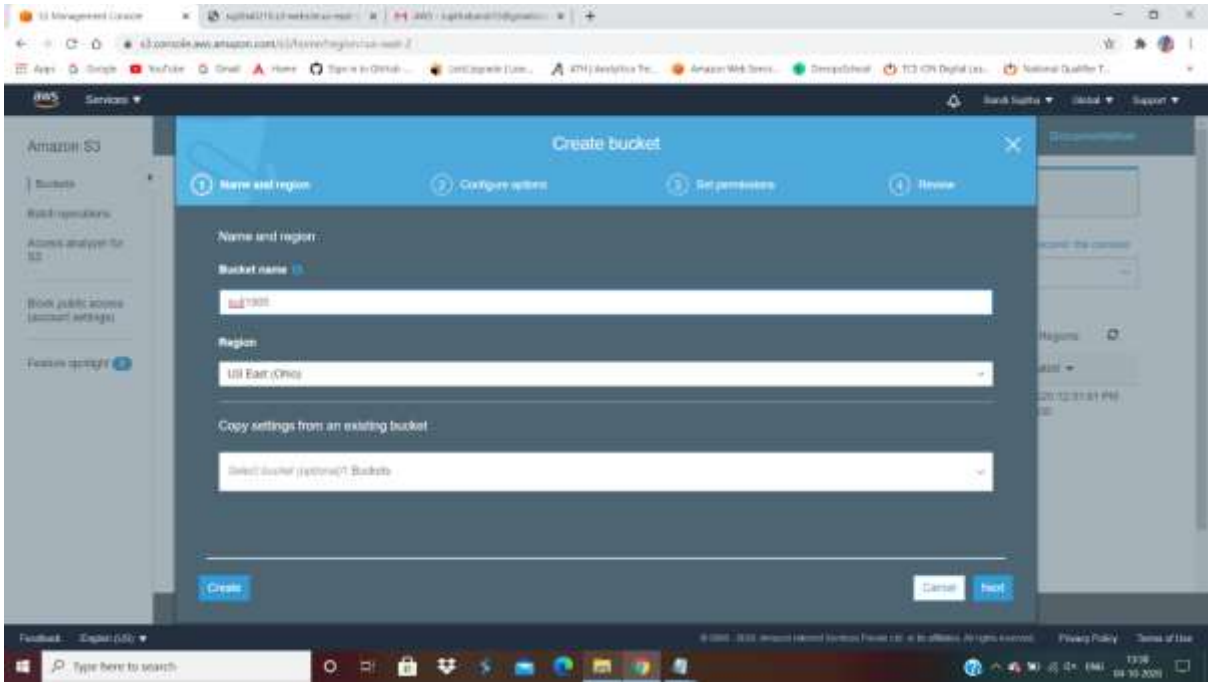

Versioning
Server access logging
Static website hosting
Index document
index1.txt
Error document
error1.txt
Redirection rules (optional)
Disable website hosting
Cancel
Save
Type here to search

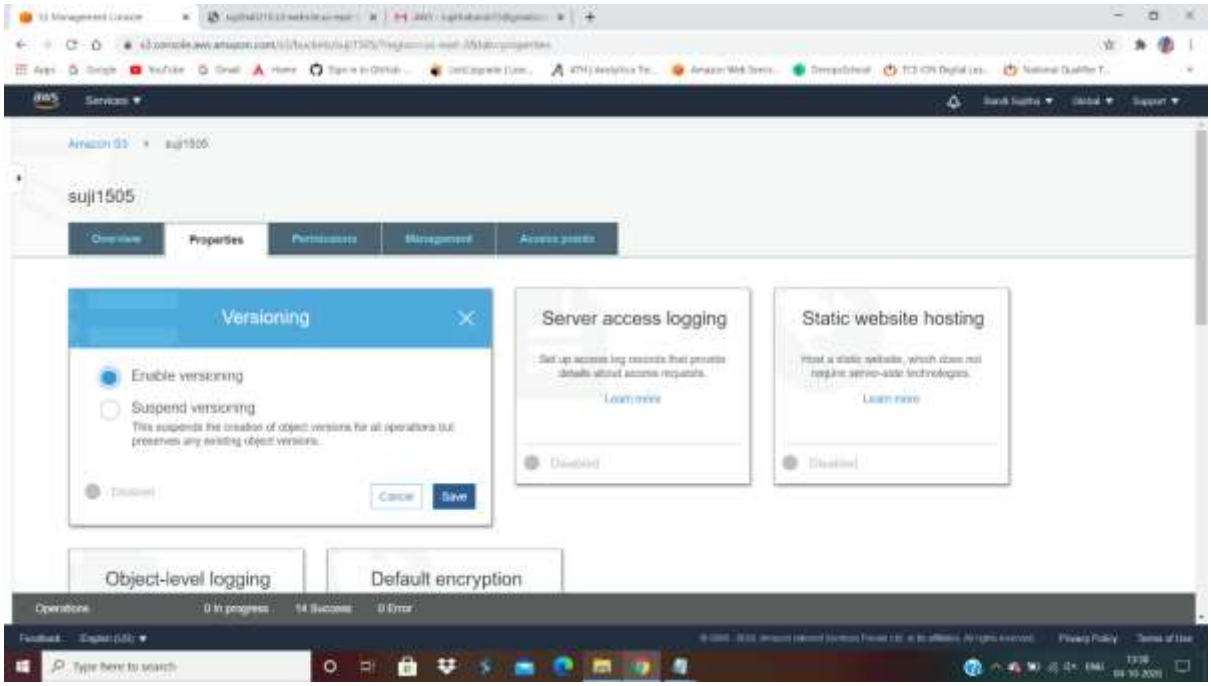

Welcome to my webpage!!!
Type here to search

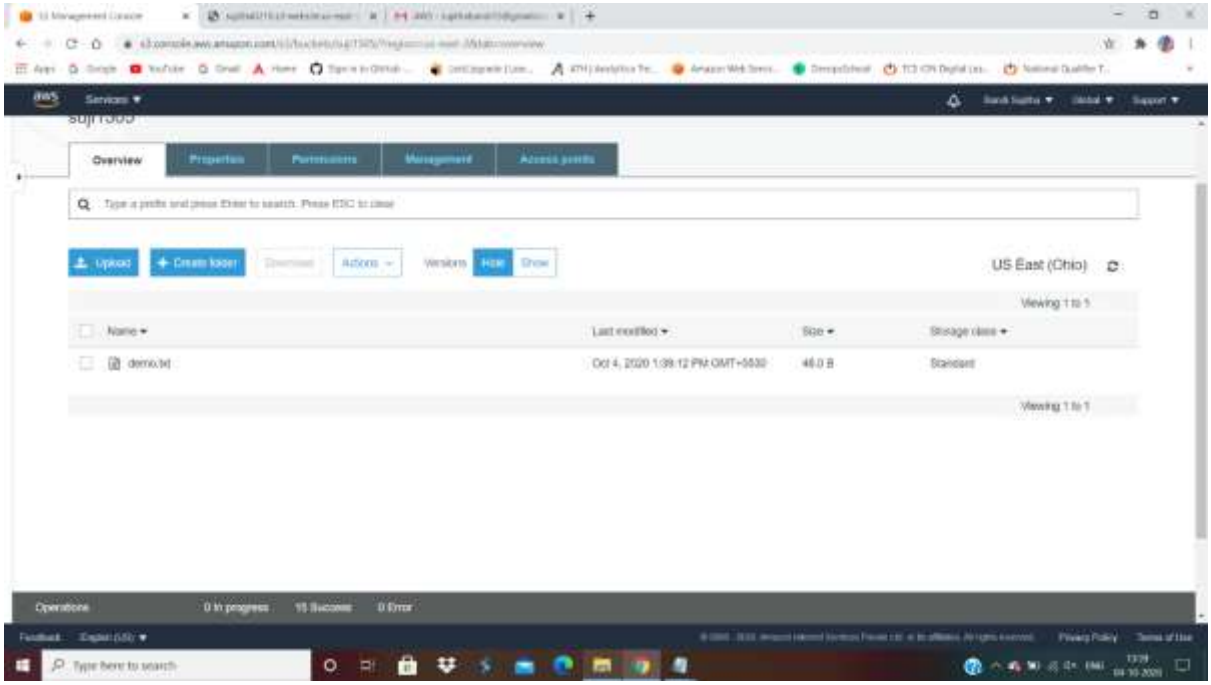


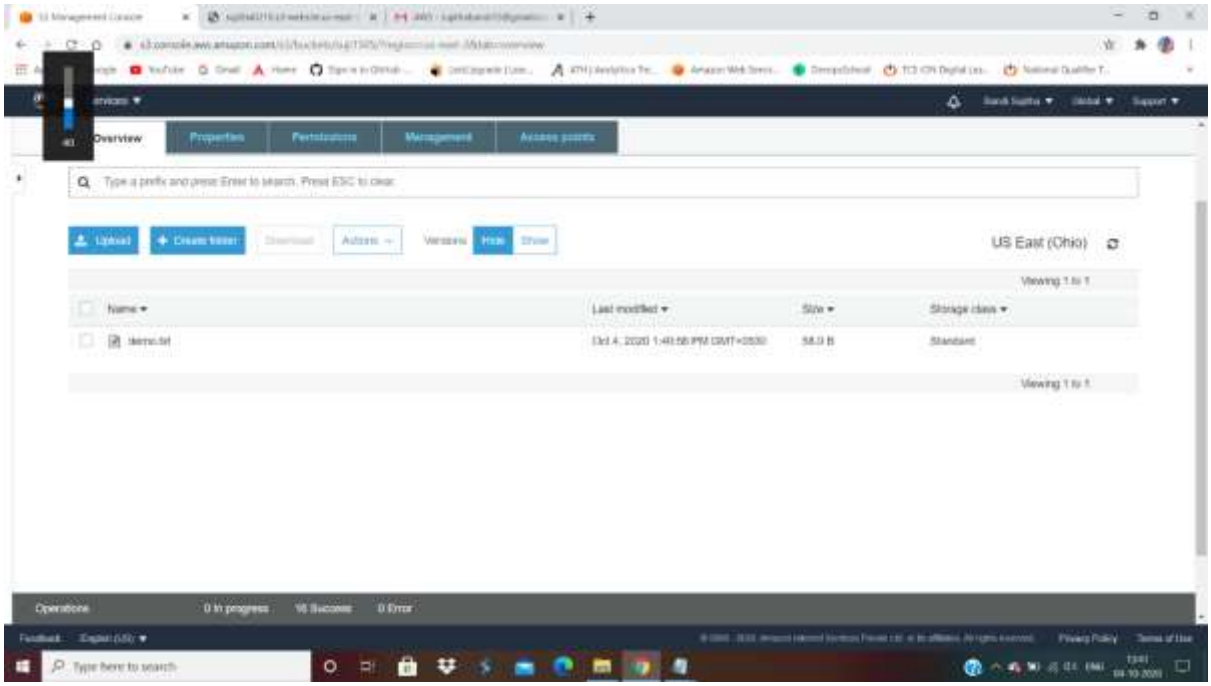
C)Versioning:

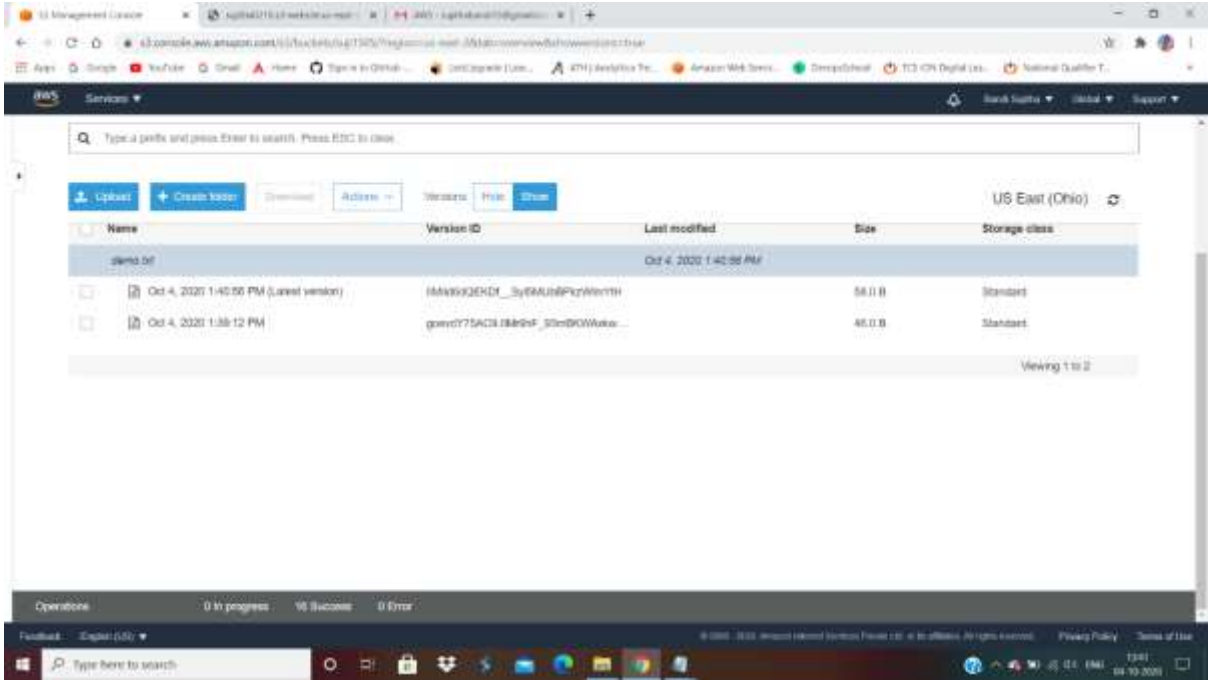
Create another bucket

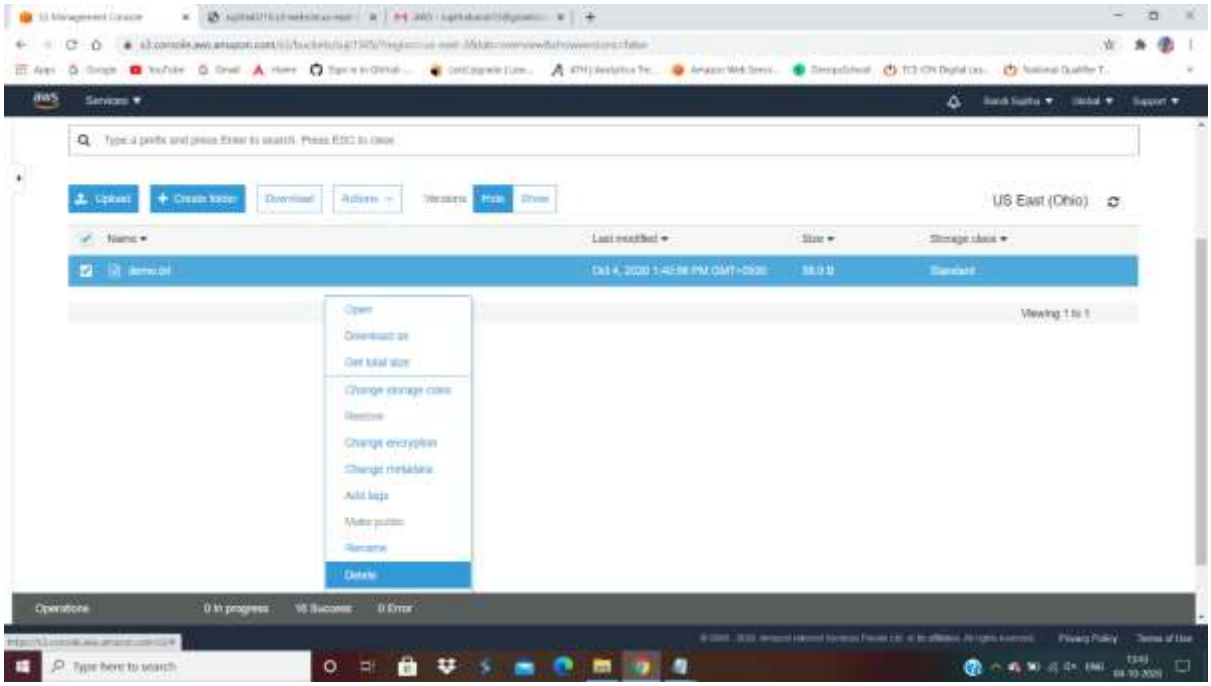


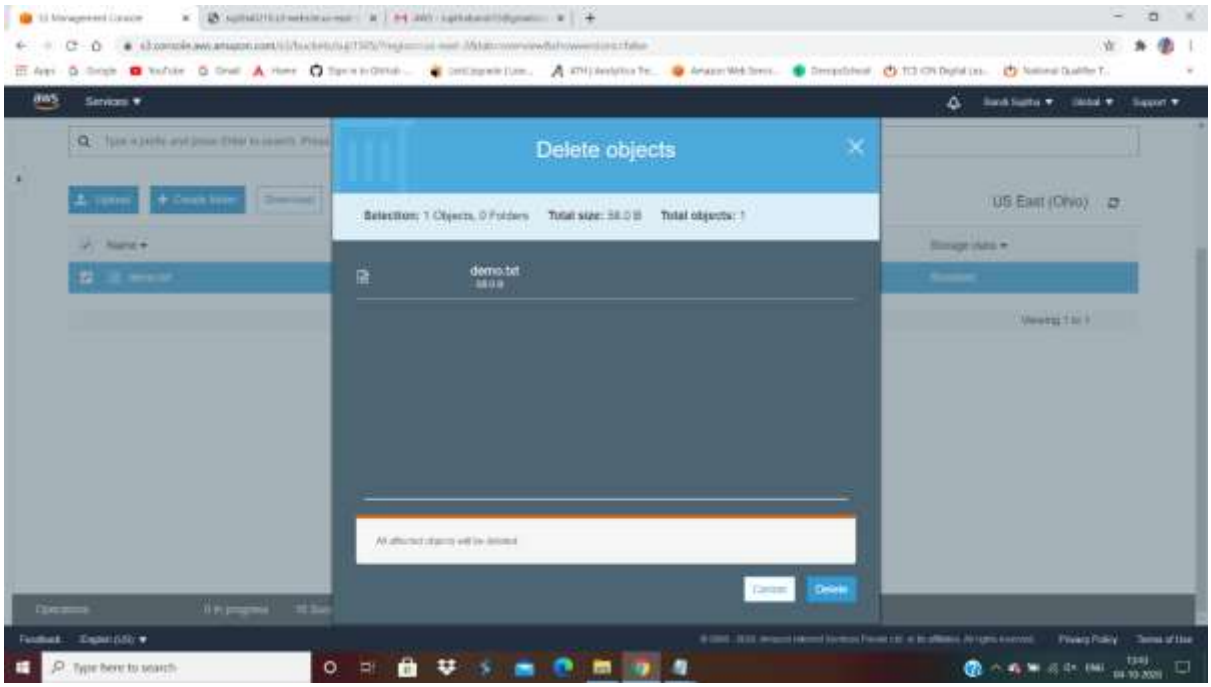

suji1505
Overview
Properties
Permissions
Management
Access points
Versioning
Enable versioning
Suspend versioning
This suspends the creation of object versions for all operations but preserves any existing object versions.
Cancel
Save
Server access logging
Learn more
Static website hosting
Learn more
Object-level logging
Default encryption
Operations
0 In progress
14 Success
0 Error

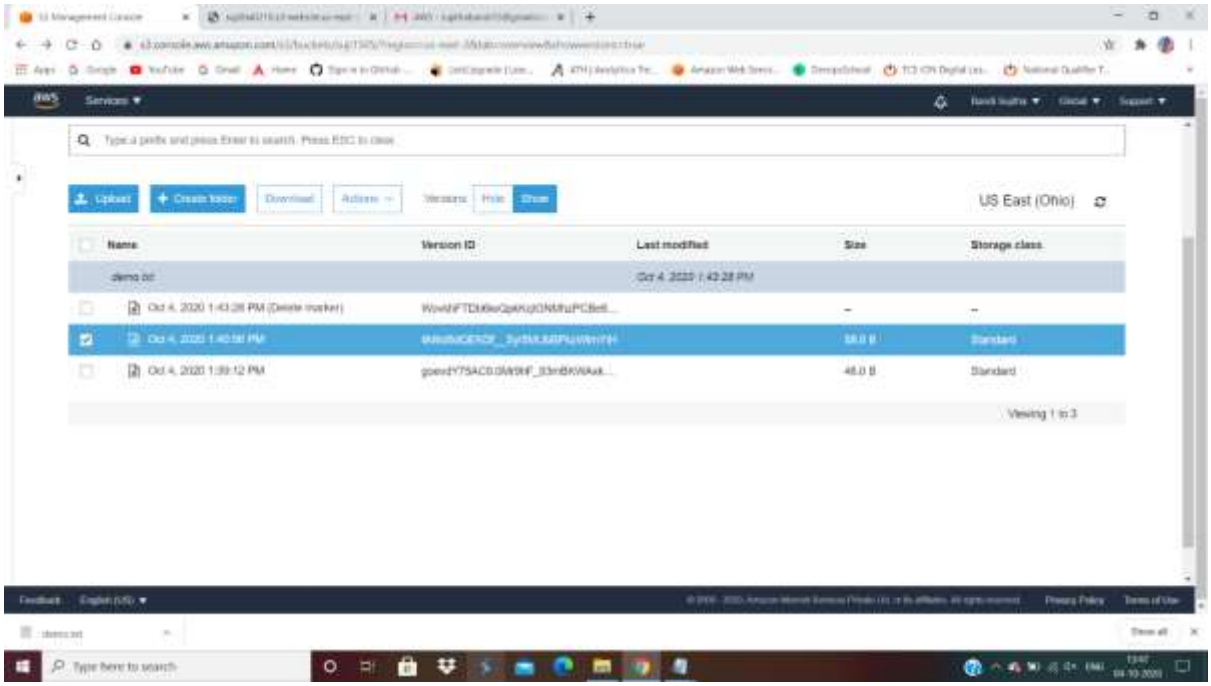

Overview
Upload
Create folder
Actions
Hide
Show
US East (Ohio)
Name
Last modified
Size
Storage class
demo.txt
Oct 4, 2020 1:09:12 PM GMT+5530
46.0 B
Standard
Operations
0 In progress
15 Success
0 Error

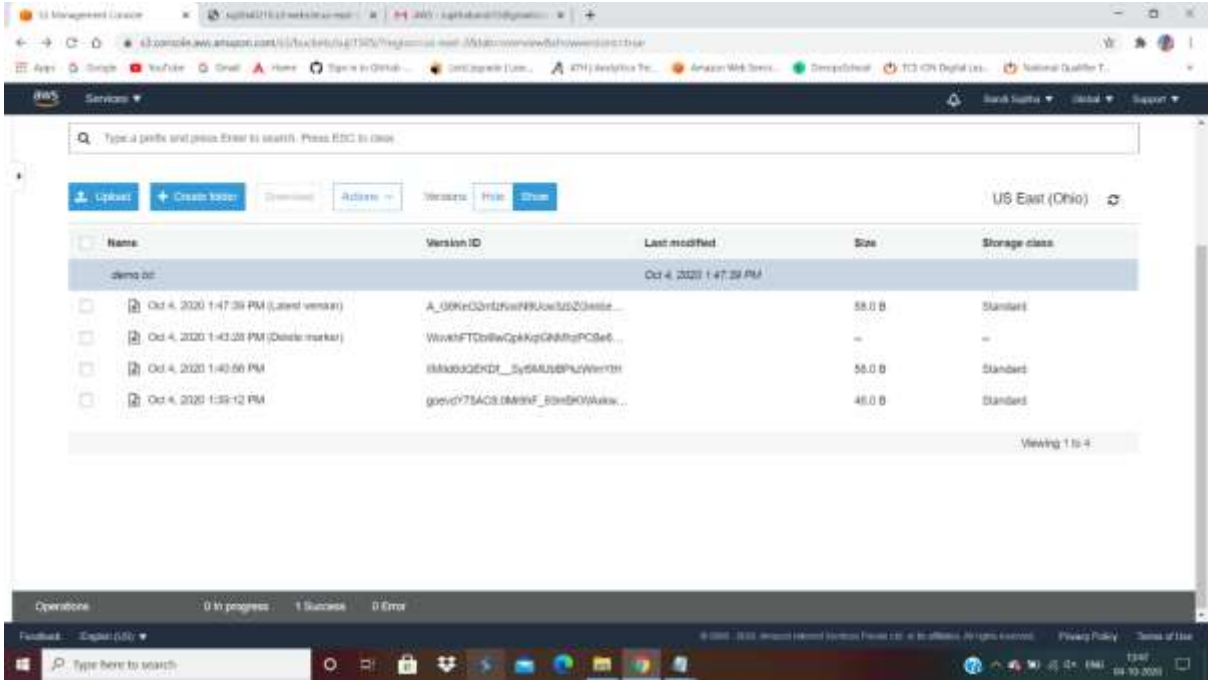

Overview
Properties
Permissions
Management
Access points
Upload
Create folder
Actions
Versions
Hide
Show
US East (Ohio)
Name
Last modified
Size
Storage class
demo.txt
Standard
Operations
0 In progress
0 Success
0 Error


Upload
Create folder
Actions
Versions
Hide
Show
US East (Ohio)
Name
Version ID
Last modified
Size
Storage class
demo.txt
Oct 4, 2020 1:40:56 PM
Oct 4, 2020 1:40:56 PM (Latest version)
Standard
Oct 4, 2020 1:39:12 PM
Standard
Operations
0 In progress
0 Success
0 Error


Upload
Create folder
Download
Actions
Versions
Hide
Show
US East (Ohio)
Name
Last modified
Size
Storage class
demo.txt
Open
Download as
Get total size
Change storage class
Restore
Change encryption
Change metadata
Add tags
Make public
Rename
Delete
Operations
0 In progress
0 Success
0 Error


Delete objects
Selection: 1 Objects, 0 Folders
Total size: 58.0 B
Total objects: 1
demo.txt
Cancel
Delete
US East (Ohio)


Upload
+ Create folder
Download
Actions
Versions
Hide
Show
US East (Ohio)
Name
Version ID
Last modified
Size
Storage class
demo oct
Oct 4, 2020 1:43:28 PM
Oct 4, 2020 1:43:28 PM (Delete marker)
Oct 4, 2020 1:40:56 PM
Oct 4, 2020 1:39:12 PM
Standard
Viewing 1 to 3

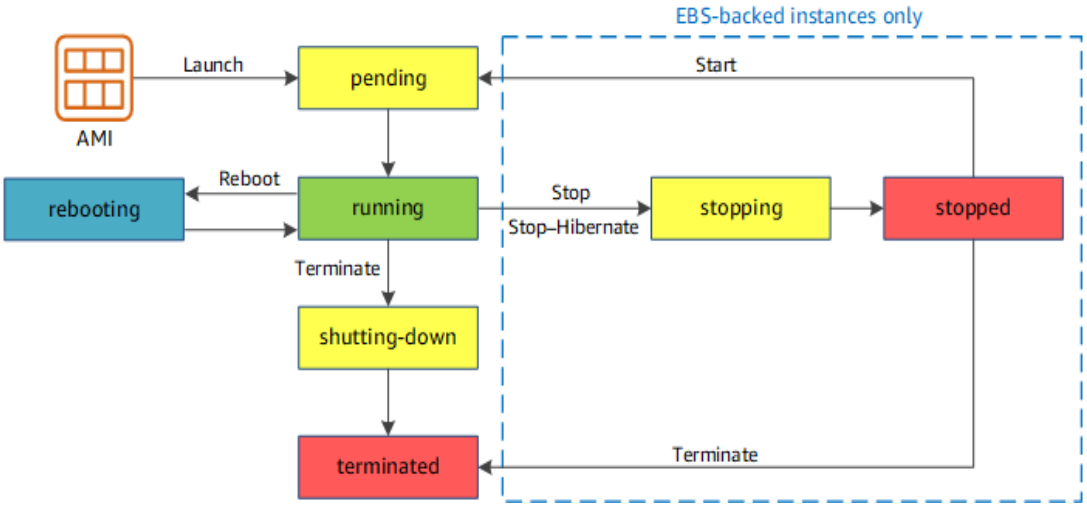

Upload
+ Create folder
Actions
Versions
Hide
Show
US East (Ohio)
Name
Version ID
Last modified
Size
Storage class
demo oct
Oct 4, 2020 1:47:39 PM
Oct 4, 2020 1:43:28 PM (Delete marker)
Oct 4, 2020 1:40:56 PM
Oct 4, 2020 1:39:12 PM
Standard
Viewing 1 to 4
Operations
0 In progress
1 Success
0 Error

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

Instance LifeCycle:

An Amazon EC2 instance transitions through different states from the moment you launch it through to its termination.

The following illustration represents the transitions between instance states. Notice that you can't stop and start an instance store-backed instance.



Instance start and stop:

If your instance fails a status check or is not running your applications as expected, and if the root volume of your instance is an Amazon EBS volume, you can stop and start your instance to try to fix the problem.

When you stop your instance, it enters the stopping state, and then the stopped state. We don't charge usage or data transfer fees for your instance after you stop it, but we do charge for the storage for any Amazon EBS volumes. While your instance is in the stopped state, you can modify certain attributes of the instance, including the instance type.

When you start your instance, it enters the pending state, and we move the instance to a new host computer (though in some cases, it remains on the current host). When you stop and start your instance, you lose any data on the instance store volumes on the previous host computer.

Your instance retains its private IPv4 address, which means that an Elastic IP address associated with the private IPv4 address or network interface is still associated with your instance. If your instance has an IPv6 address, it retains its IPv6 address.

Each time you transition an instance from stopped to running, we charge per second when the instance is running, with a minimum of one minute every time you start your instance.

Instance reboot:

You can reboot your instance using the Amazon EC2 console, a command line tool, and the Amazon EC2 API. We recommend that you use Amazon EC2 to reboot your instance instead of running the operating system reboot command from your instance.

Rebooting an instance is equivalent to rebooting an operating system. The instance remains on the same host computer and maintains its public DNS name, private IP address, and any data on its instance store volumes. It typically takes a few minutes for the reboot to complete, but the time it takes to reboot depends on the instance configuration.

Rebooting an instance doesn't start a new instance billing period; per second billing continues without a further one-minute minimum charge.

Instance Termination:

When you've decided that you no longer need an instance, you can terminate it. As soon as the status of an instance changes to shutting-down or terminated, you stop incurring charges for that instance.

If you enable termination protection, you can't terminate the instance using the console, CLI, or API.

After you terminate an instance, it remains visible in the console for a short while, and then the entry is automatically deleted. You can also describe a terminated instance using the CLI and API. Resources (such as tags) are gradually disassociated from the terminated instance, therefore may no longer be visible on the terminated instance after a short while. You can't connect to or recover a terminated instance.

Each Amazon EBS-backed instance supports the InstanceInitiatedShutdownBehavior attribute, which controls whether the instance stops or terminates when you initiate shutdown from within the instance itself (for example, by

using the **shutdown** command on Linux). The default behaviour is to stop the instance. You can modify the setting of this attribute while the instance is running or stopped.

Each Amazon EBS volume supports the `DeleteOnTermination` attribute, which controls whether the volume is deleted or preserved when you terminate the instance it is attached to. The default is to delete the root device volume and preserve any other EBS volumes.

Characteristic	Reboot	Stop/start (Amazon EBS-backed instances only)	Hibernate (Amazon EBS-backed instances only)	Terminate
Private and public IPv4 addresses	These addresses stay the same	The instance keeps its private IPv4 address. The instance gets a new public IPv4 address, unless it has an Elastic IP address, which doesn't change during a stop/start.	The instance keeps its private IPv4 address. The instance gets a new public IPv4 address, unless it has an Elastic IP address, which doesn't change during a stop/start.	None