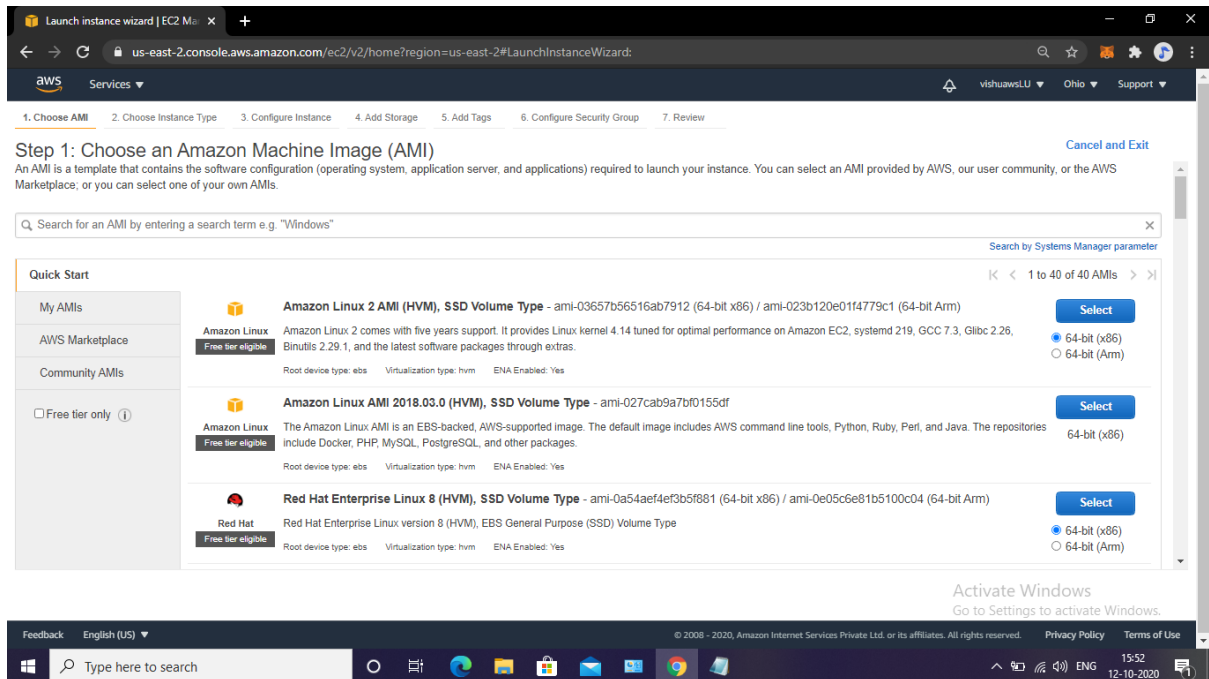


Lets Upgrade AWS Advance Project-2

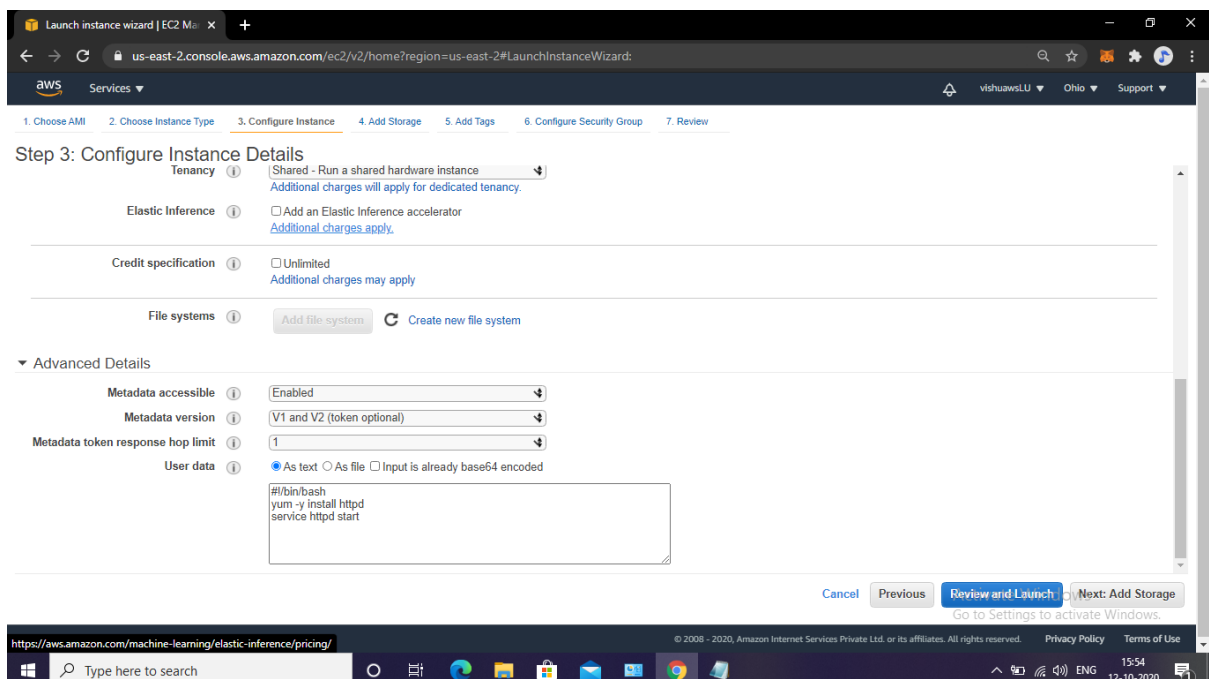
WEEK-3(Day-5):

1.Working with IAM Roles with S3 and bootstrapping with Ec2:

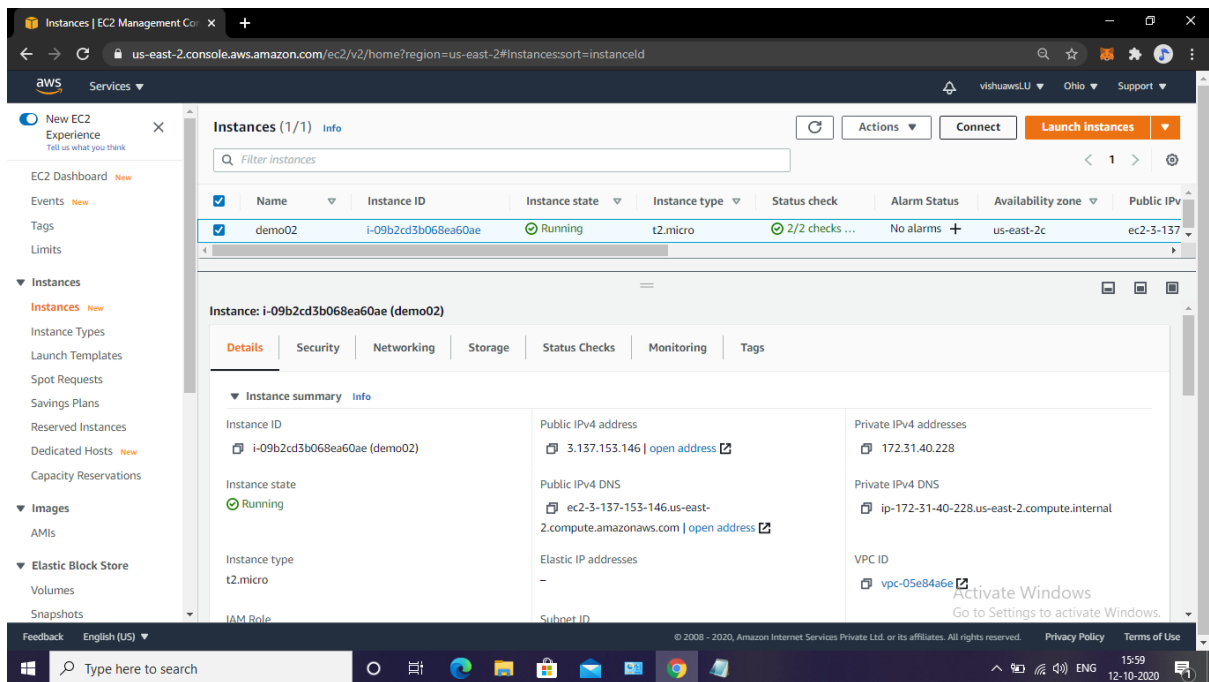
Task-1: Creating a bootstrapped instance:



SS 1: Edit User Data:



SS 2: List of Ec2 instances with description:



The screenshot shows the AWS Management Console interface. On the left, there is a navigation menu with options like 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMIs', 'Elastic Block Store', 'Volumes', and 'Snapshots'. The main area displays a table of EC2 instances. One instance, 'demo02', is selected, and its details are shown below the table. The details include the instance ID, state (Running), type (t2.micro), public IP address, private IP addresses, public DNS, private DNS, elastic IP addresses, VPC ID, and subnet ID.

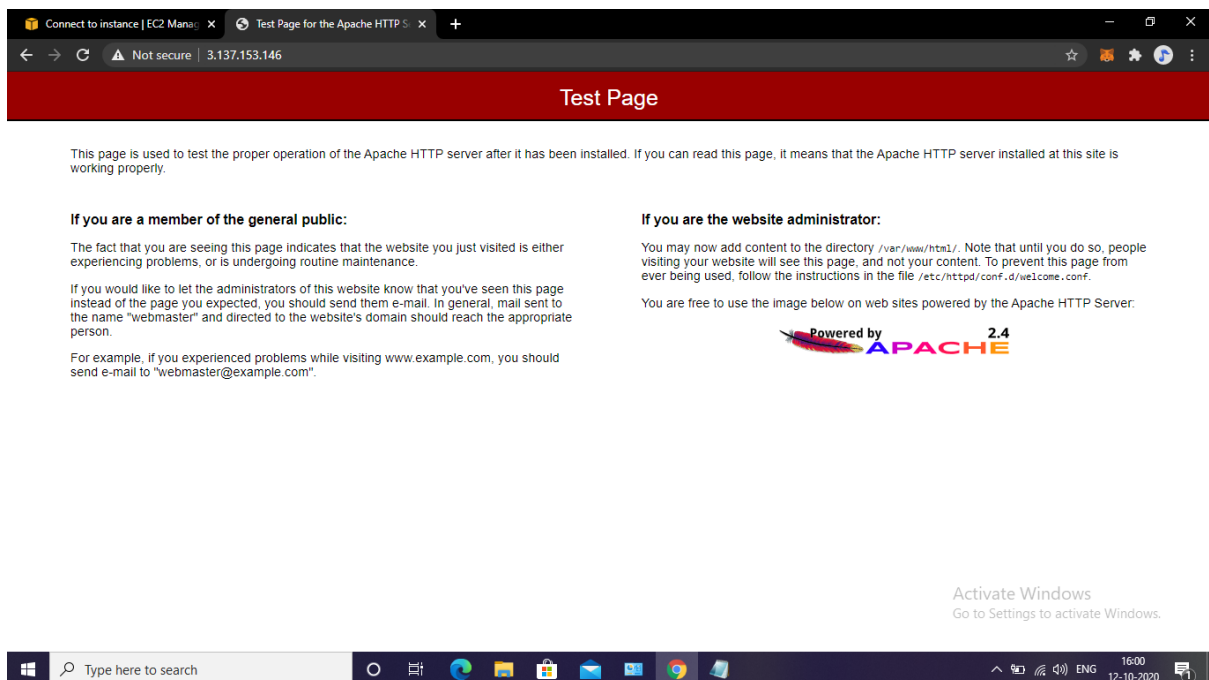
Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public IPv
demo02	i-09b2cd3b068ea60ae	Running	t2.micro	2/2 checks ...	No alarms +	us-east-2c	ec2-3-137

Instance: i-09b2cd3b068ea60ae (demo02)

Instance summary

Instance ID	Public IPv4 address	Private IPv4 addresses
i-09b2cd3b068ea60ae (demo02)	3.137.153.146 open address	172.31.40.228
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-3-137-153-146.us-east-2.compute.amazonaws.com open address	ip-172-31-40-228.us-east-2.compute.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-05e84a6e
IAM Role	Subnet ID	

SS 3: Test Page:



The screenshot shows a web browser window with the address bar displaying '3.137.153.146'. The page has a red header with the text 'Test Page'. Below the header, there is a message: '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:

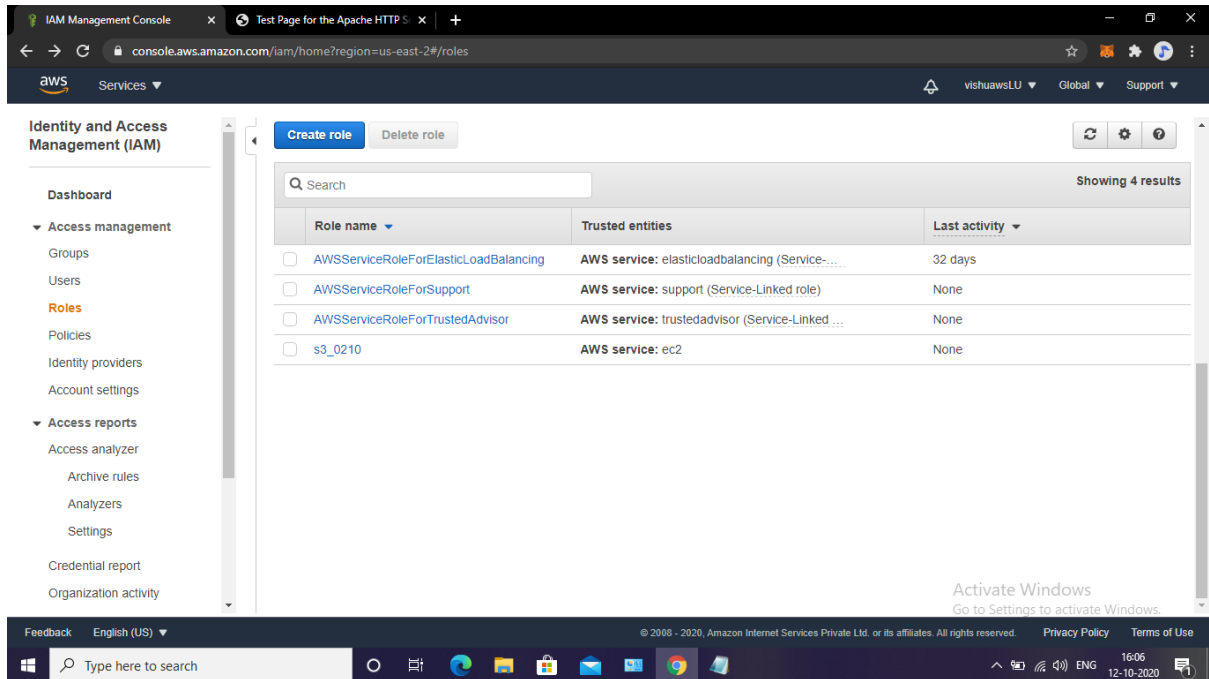
You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

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

Powered by 2.4

Activate Windows
Go to Settings to activate Windows.

Task-2: Checking Bucket list and Creating a new bucket from Ec2 using IAM roles:

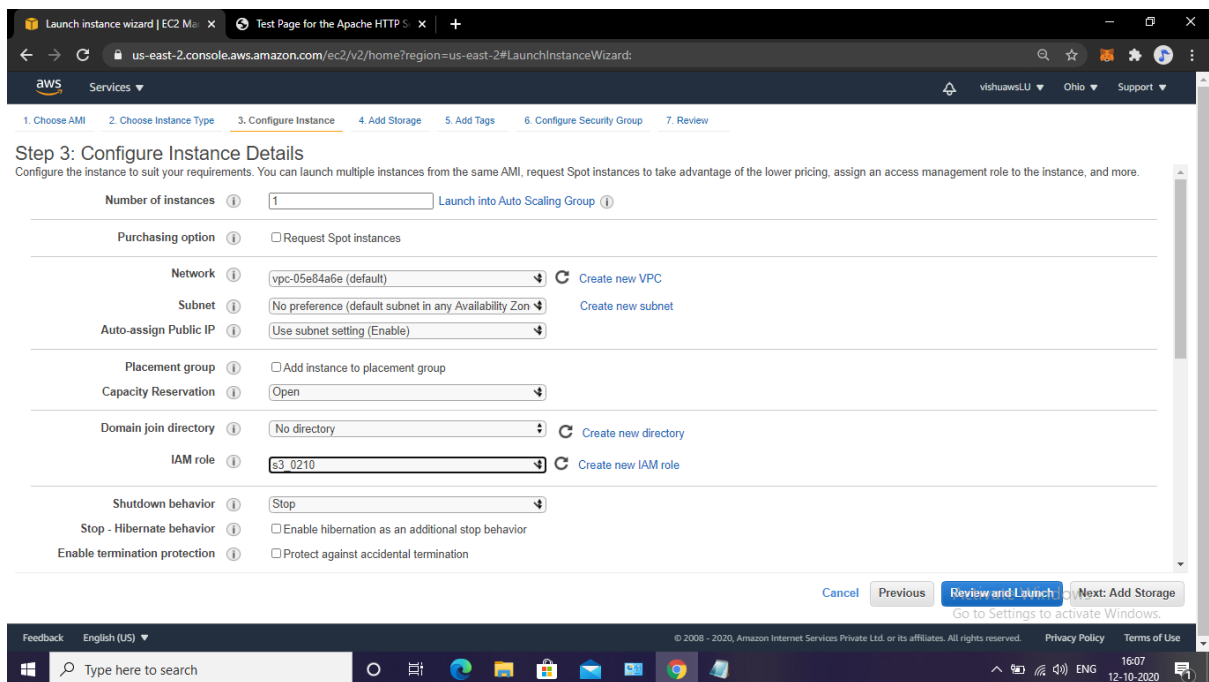


The screenshot shows the AWS IAM Management Console. The left sidebar contains the navigation menu with 'Roles' highlighted. The main content area displays a table of roles with the following data:

Role name	Trusted entities	Last activity
<input type="checkbox"/> AWSServiceRoleForElasticLoadBalancing	AWS service: elasticloadbalancing (Service-Linked role)	32 days
<input type="checkbox"/> AWSServiceRoleForSupport	AWS service: support (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Linked role)	None
<input type="checkbox"/> s3_0210	AWS service: ec2	None

At the bottom of the console, there is a Windows taskbar with the search bar and system tray showing the date and time as 12-10-2020, 16:06.

SS1: User Data:

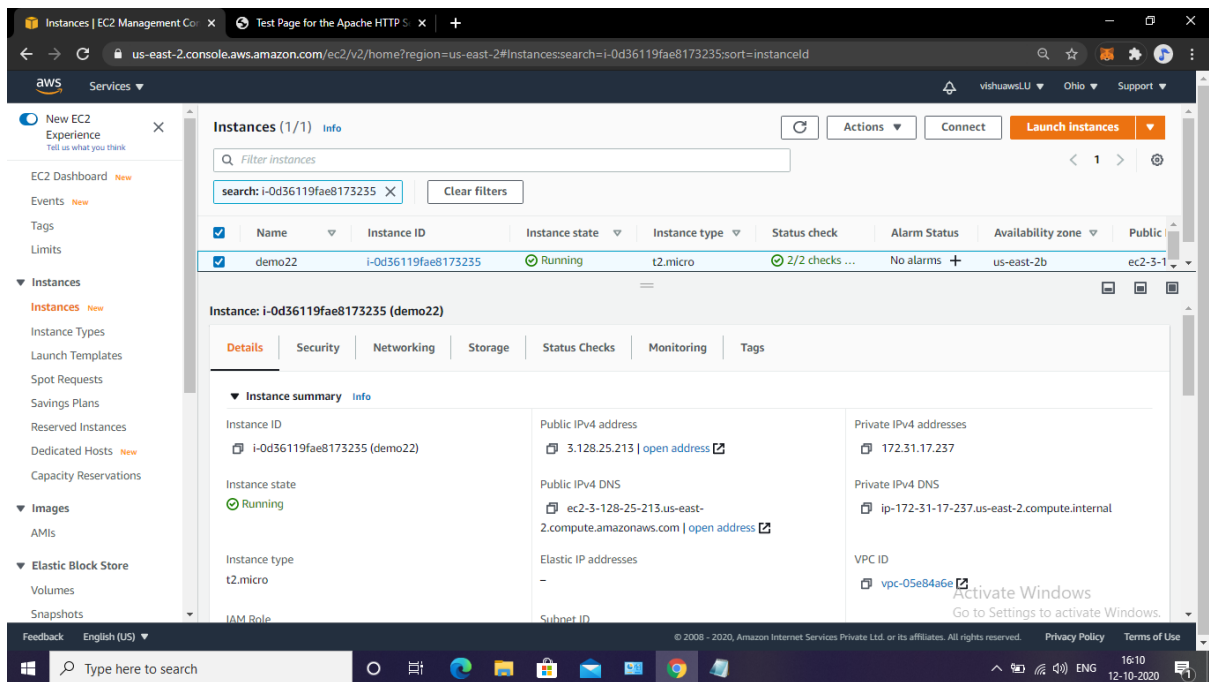


The screenshot shows the 'Step 3: Configure Instance Details' of the AWS Launch Instance Wizard. The configuration is as follows:

- Number of instances:** 1
- Purchasing option:** ☐ Request Spot instances
- Network:** vpc-05e84a6e (default)
- Subnet:** No preference (default subnet in any Availability Zone)
- Auto-assign Public IP:** Use subnet setting (Enable)
- Placement group:** ☐ Add instance to placement group
- Capacity Reservation:** Open
- Domain join directory:** No directory
- IAM role:** s3_0210
- Shutdown behavior:** Stop
- Stop - Hibernate behavior:** ☐ Enable hibernation as an additional stop behavior
- Enable termination protection:** ☐ Protect against accidental termination

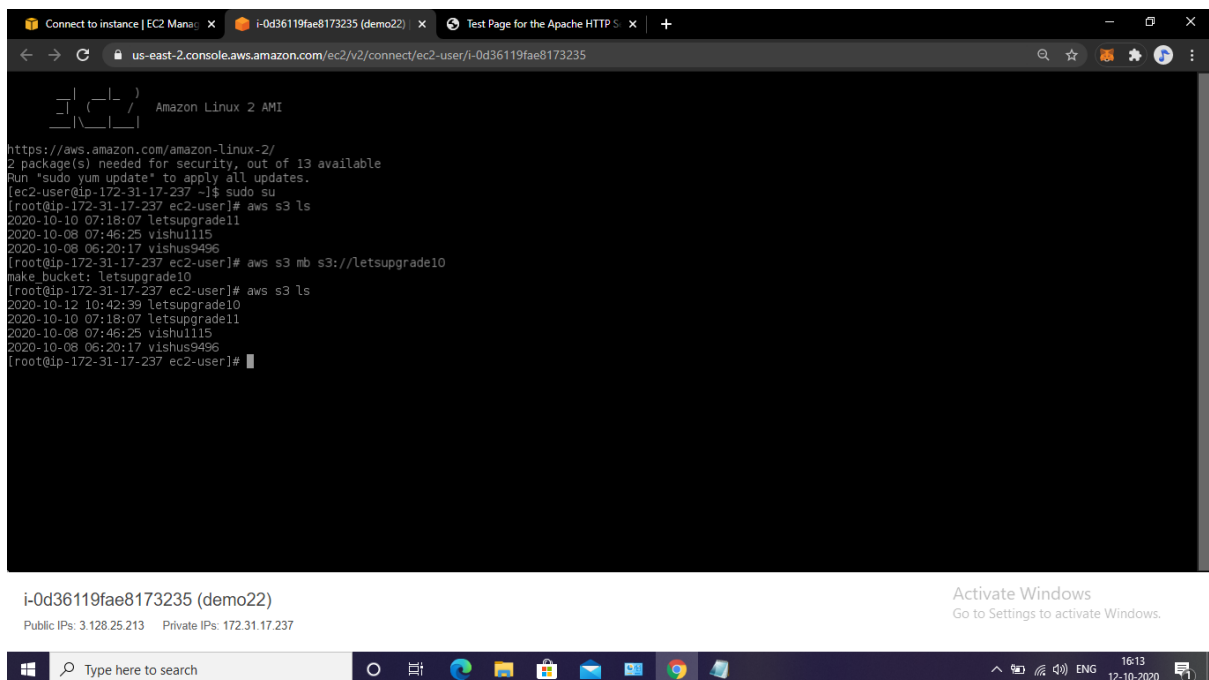
At the bottom, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Storage'.

SS2: List of Ec2 instances with Description:



The screenshot displays the AWS Management Console interface for EC2 instances. The left sidebar shows navigation options like 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', and 'Instances'. The main content area shows a list of instances with columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm Status, Availability zone, and Public IP. One instance, 'demo22' (i-0d36119fae8173235), is shown in a 'Running' state with type 't2.micro'. Below the list, the 'Instance summary' for 'demo22' is displayed, showing details such as Instance ID, Public IPv4 address (3.128.25.213), Private IPv4 addresses (172.31.17.237), Instance state (Running), Public IPv4 DNS, Private IPv4 DNS, Elastic IP addresses, and VPC ID (vpc-05e84a6e).

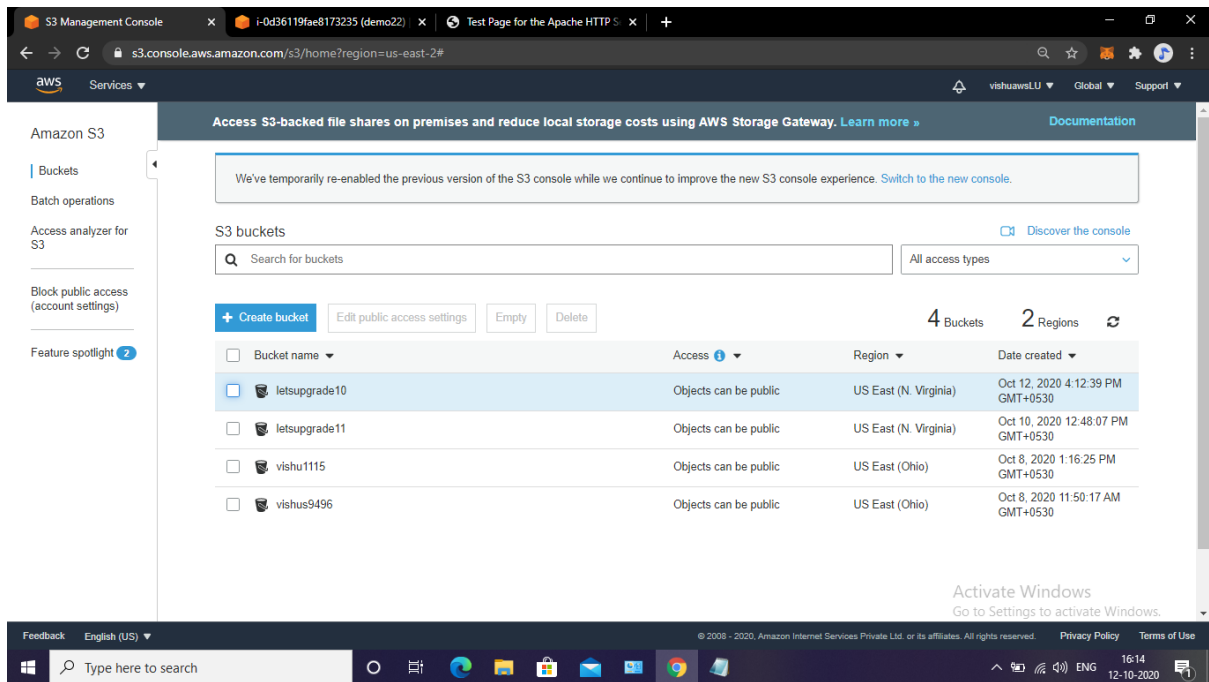
SS3: Commands to be Executed and Outputs Displayed:



The screenshot shows a terminal window connected to the EC2 instance 'demo22'. The terminal displays the following commands and their outputs:

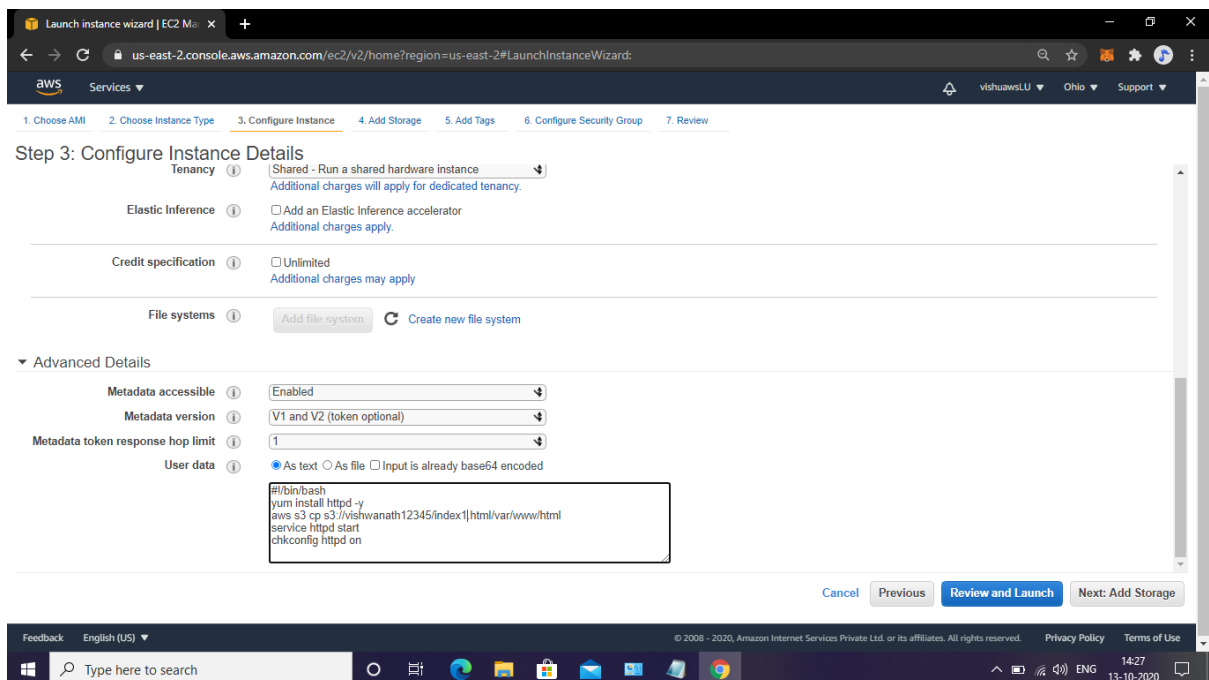
```
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
2 package(s) needed for security, out of 13 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-17-237 ~]$ sudo su
[root@ip-172-31-17-237 ec2-user]# aws s3 ls
2020-10-10 07:18:07 letsupgrade11
2020-10-08 07:46:25 vishu1115
2020-10-08 06:20:17 vishus9496
[root@ip-172-31-17-237 ec2-user]# aws s3 mb s3://letsupgrade10
make_bucket: letsupgrade10
[root@ip-172-31-17-237 ec2-user]# aws s3 ls
2020-10-12 10:42:39 letsupgrade10
2020-10-10 07:18:07 letsupgrade11
2020-10-08 07:46:25 vishu1115
2020-10-08 06:20:17 vishus9496
[root@ip-172-31-17-237 ec2-user]#
```

Below the terminal window, the instance details for 'i-0d36119fae8173235 (demo22)' are shown, including Public IPs (3.128.25.213) and Private IPs (172.31.17.237). An 'Activate Windows' watermark is visible in the bottom right corner.

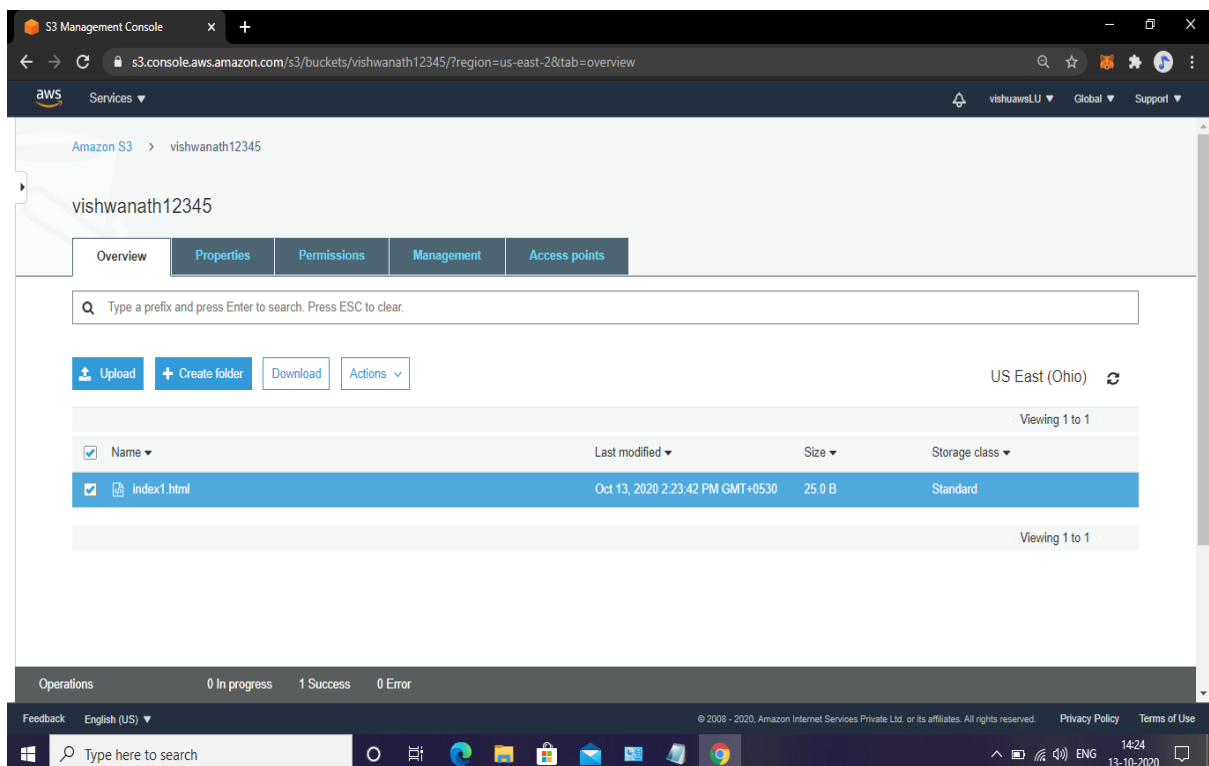
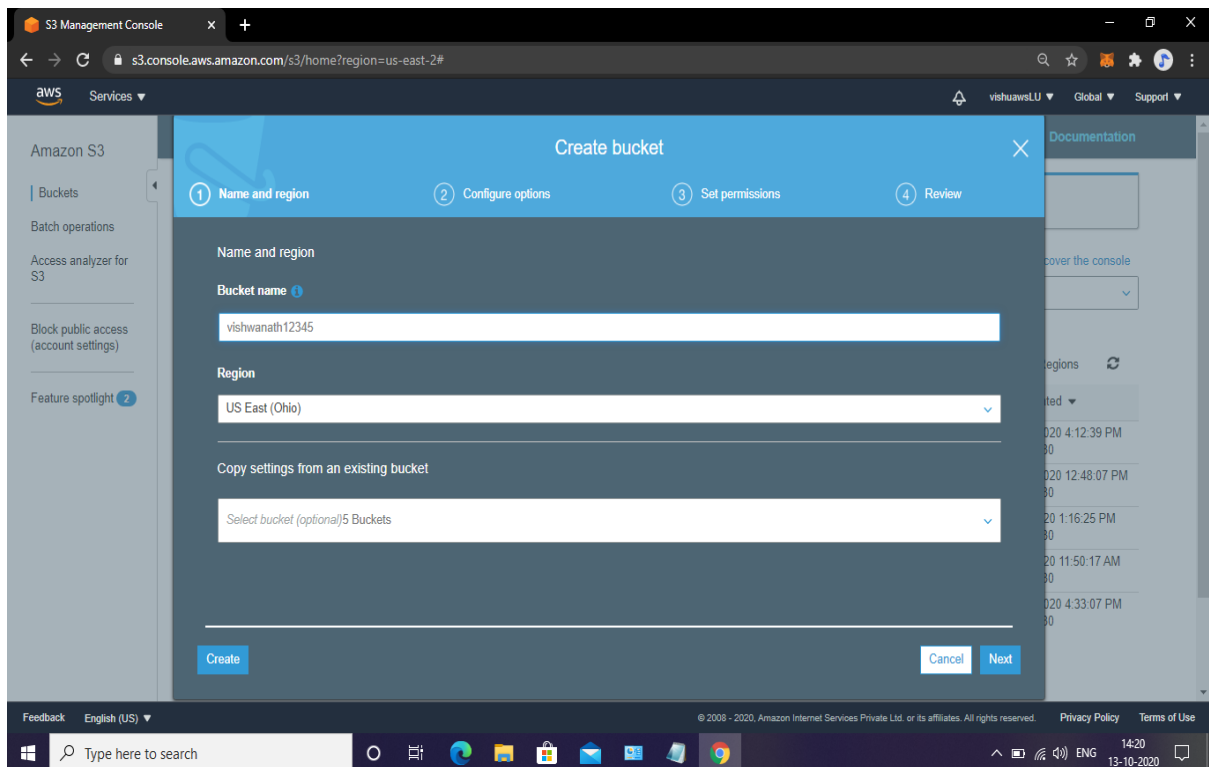


Task-3: Hosting a webpage using bootstrap Script on Ec2:

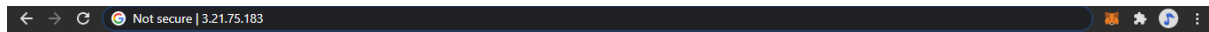
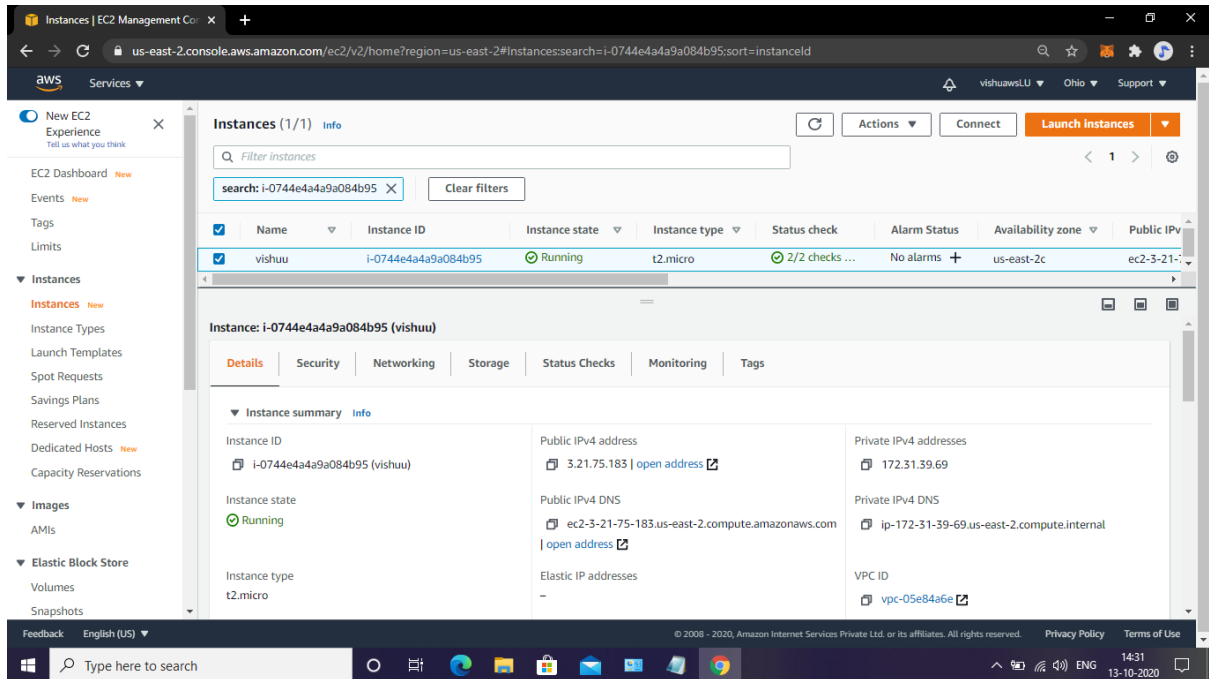
SS1: User data:



SS2: S3 bucket, Index.html:



SS3: Testing using Public IP:



welcome to my webpage!!!!

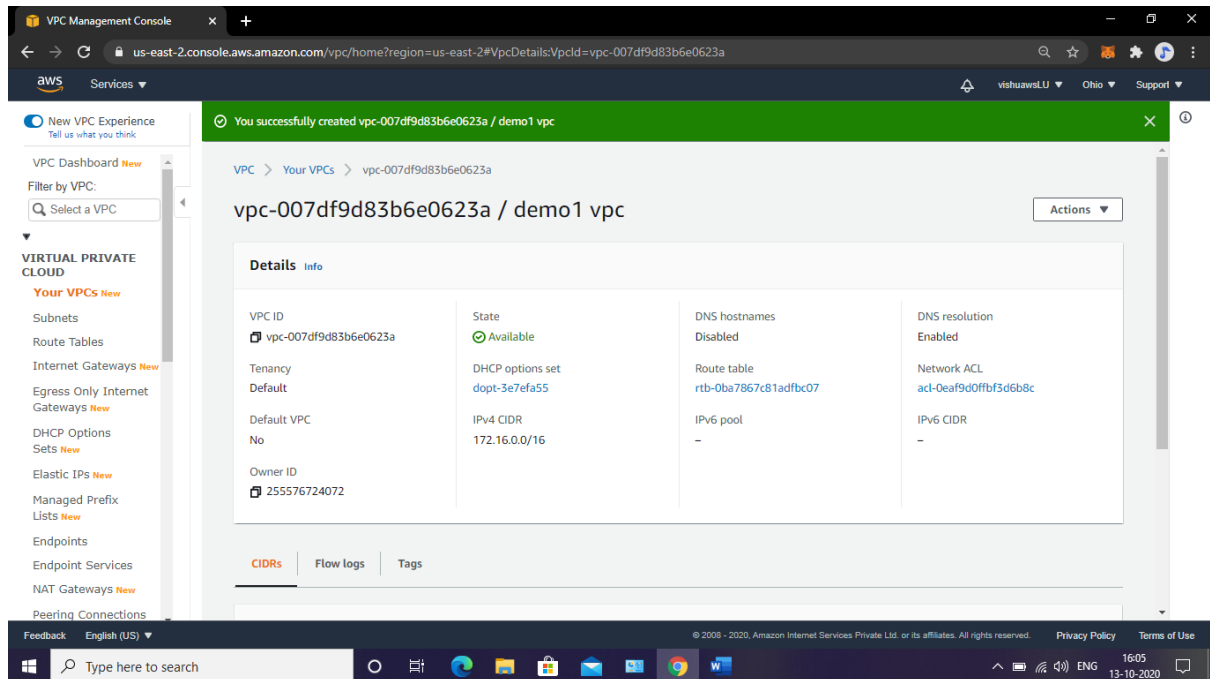


WEEK-3(Day-6):

2.Creating an Ec2 instance custom VPC:

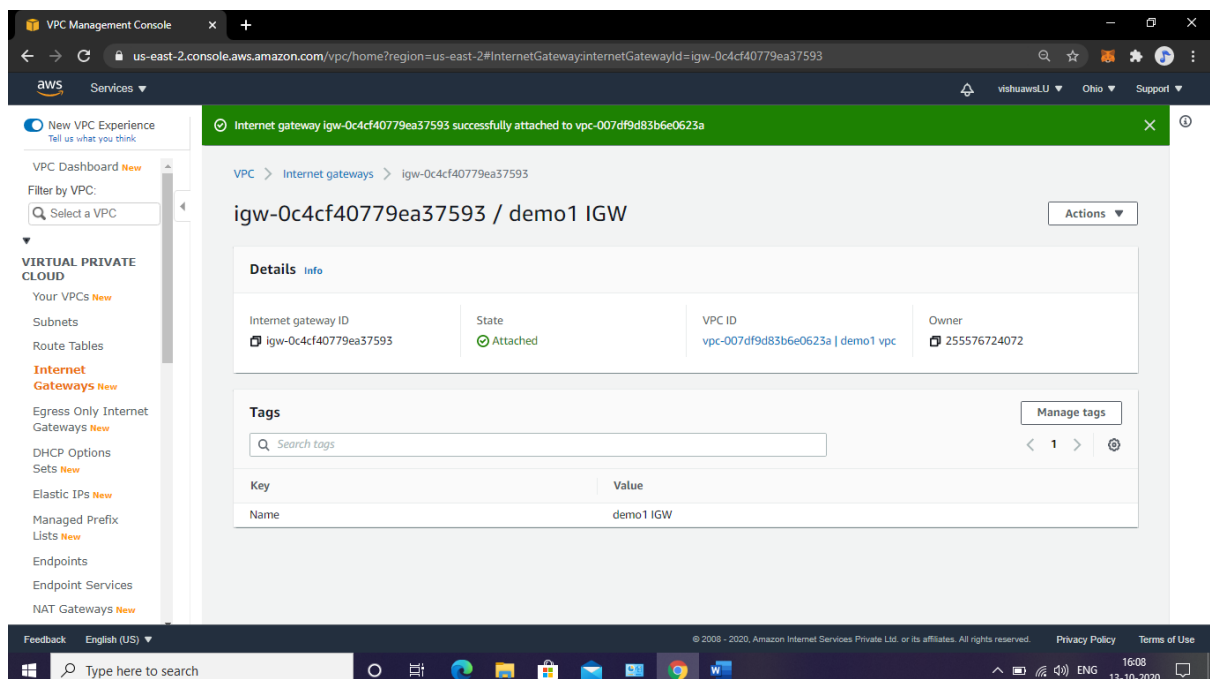
Task-1: Create a VPC:

SS1: VPC Created:



Task-2: Create an Internet Gateway:

SS2: IGW with VPC Associated:



Task-3: Create a Route Table:

Create route table | VPC Manager

us-east-2.console.aws.amazon.com/vpc/home?region=us-east-2#CreateRouteTable:

Route Tables > Create route table

Create route table

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Name tag: demoroute123

VPC*: vpc-007df9d83b6e0623a

Key (128 characters maximum)	Value (256 characters maximum)
This resource currently has no tags	

Add Tag 50 remaining (Up to 50 tags maximum)

* Required

Cancel Create

Feedback English (US)

Type here to search

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16:11 13-10-2020

Edit routes | VPC Manager

us-east-2.console.aws.amazon.com/vpc/home?region=us-east-2#EditRoutesrouteTableId=rtb-01dc51f3e2e5910d5

Route Tables > Edit routes

Edit routes

Destination	Target	Status	Propagated
172.16.0.0/16	local	active	No
0.0.0.0/0	igw-0c4cf40779ea37593		No

Add route

* Required

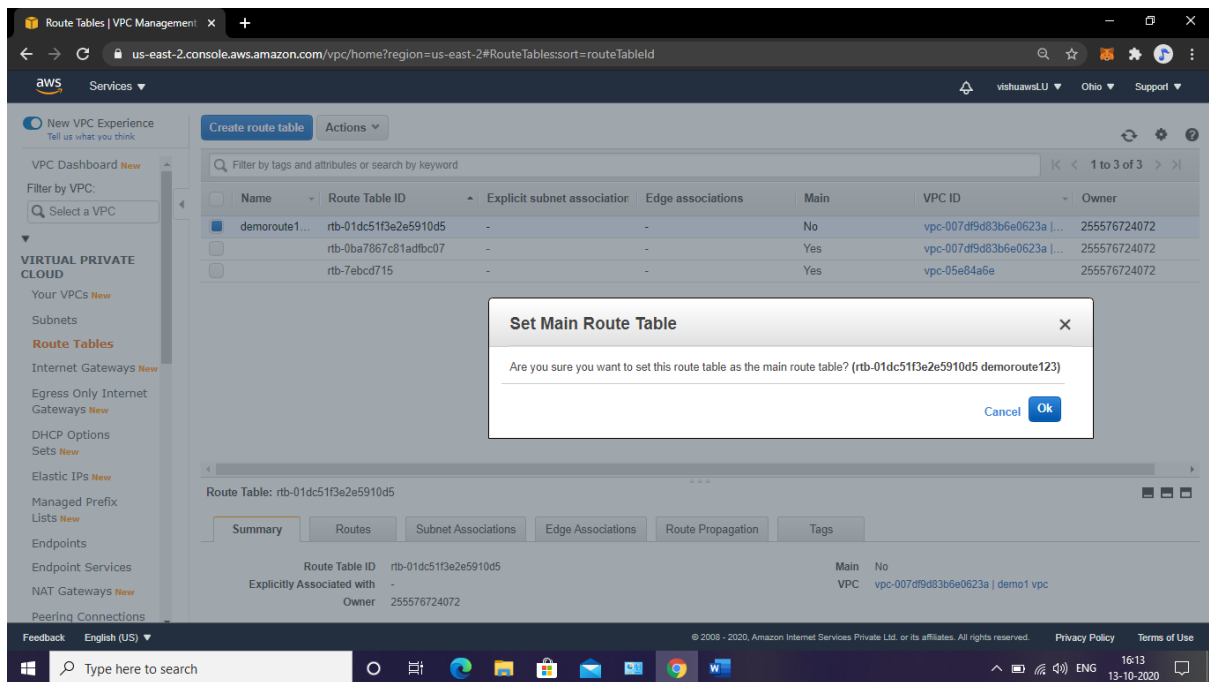
Cancel Save routes

Feedback English (US)

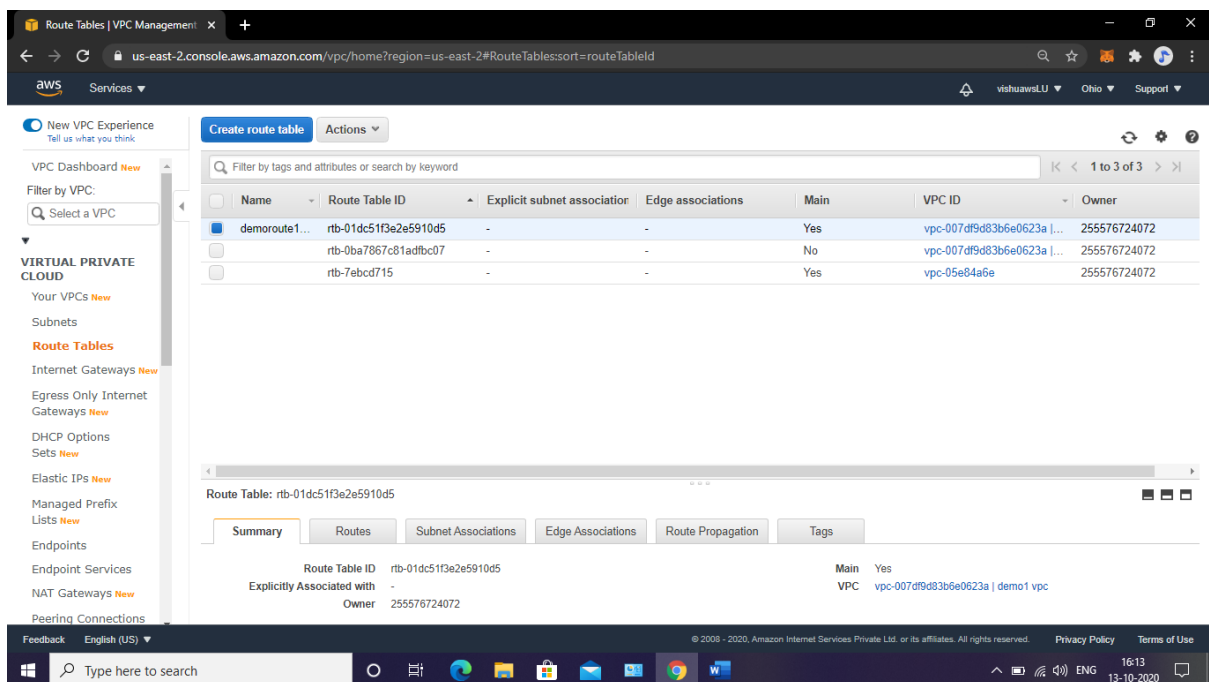
Type here to search

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16:12 13-10-2020



SS3: Route table with Routes:



Task-4: Create a Subnet:

The screenshot shows the 'Create subnet' page in the AWS Management Console. The breadcrumb navigation is 'Subnets > Create subnet'. The page title is 'Create subnet'. A note specifies that the subnet's IP address block must be in CIDR format, with IPv4 block sizes between /16 and /28, and IPv6 block sizes as /64.

Form fields include:

- Name tag:** A text input field containing 'demosubnet123'.
- VPC:** A dropdown menu showing 'vpc-007df9d83b6e0623a'.
- Availability Zone:** A dropdown menu showing 'No preference'.
- VPC CIDRs:** A table with columns 'CIDR', 'Status', and 'Status Reason'. It contains one entry: '172.16.0.0/16' with a status of 'associated'.
- IPv4 CIDR block:** A text input field containing '172.16.0.0/24'.

At the bottom left, there is a note '* Required'. At the bottom right, there are 'Cancel' and 'Create' buttons.

The footer of the console shows 'Feedback', 'English (US)', and copyright information for Amazon Internet Services Private Ltd. The Windows taskbar at the bottom displays the search bar and various application icons.

The screenshot shows the 'Modify auto-assign IP settings' page in the AWS Management Console. The breadcrumb navigation is 'Subnets > Modify auto-assign IP settings'. The page title is 'Modify auto-assign IP settings'. A note explains that enabling this setting will automatically request a public IPv4 or IPv6 address for instances launched in the subnet.

Form fields include:

- Subnet ID:** A text input field containing 'subnet-0691548ceed9fd9a5'.
- Auto-assign IPv4:** A checkbox labeled 'Enable auto-assign public IPv4 address' which is checked.
- Auto-assign Co-IP:** A checkbox labeled 'Enable auto-assign customer-owned IPv4 address' which is unchecked.

At the bottom left, there is a note '* Required'. At the bottom right, there are 'Cancel' and 'Save' buttons.

The footer of the console shows 'Feedback', 'English (US)', and copyright information for Amazon Internet Services Private Ltd. The Windows taskbar at the bottom displays the search bar and various application icons.

SS4: Subnet Screen:

The screenshot shows the AWS VPC Subnets console. The left sidebar contains navigation links for VPC Dashboard, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Options, VPC Sets, Elastic IPs, Managed Prefix Lists, Endpoints, Endpoint Services, NAT Gateways, and Peering Connections. The main area displays a table of subnets with columns: Name, Subnet ID, State, VPC, IPv4 CIDR, Available IPv4, IPv6 CIDR, Availability Zone, and Availability. One subnet is selected, and its details are shown below the table.

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	Availability Zone	Availability
subnet-03c30968	subnet-03c30968	available	vpc-05e84a6e	172.31.0.0/20	4091	-	us-east-2a	use2
demosubne...	subnet-0691548ceed9fd9a5	available	vpc-007d9d83b6e0623a demo1 vpc	172.16.0.0/24	251	-	us-east-2c	use2
subnet-27f79f6b	subnet-27f79f6b	available	vpc-05e84a6e	172.31.32.0/20	4090	-	us-east-2c	use2
subnet-ecc8c896	subnet-ecc8c896	available	vpc-05e84a6e	172.31.16.0/20	4091	-	us-east-2b	use2

Subnet: subnet-0691548ceed9fd9a5

Description	Flow Logs	Route Table	Network ACL	Tags	Sharing
Subnet ID	subnet-0691548ceed9fd9a5				
VPC	vpc-007d9d83b6e0623a demo1 vpc				
Available IPv4 Addresses	251				
Availability Zone	us-east-2c (use2-az3)				
Network ACL	acl-0eaf9d0f7b3d8b8c				
Auto-assign public IPv4 address	Yes				
Customer-owned IPv4 pool	-				
Outpost ID	-				
State	available				
IPv4 CIDR	172.16.0.0/24				
IPv6 CIDR	-				
Route Table	rtb-01dc51f3e2e5910d5 demoroute123				
Default subnet	No				
Auto-assign customer-owned IPv4 address	No				
Auto-assign IPv6 address	No				
Owner	255576724072				

Task-5: Create a Ec2 in Custom VPC:

The screenshot shows the AWS Launch Instance wizard, Step 1: Choose an Amazon Machine Image (AMI). The wizard is divided into seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review. The main area displays a list of AMIs with columns: Name, Root device type, Virtualization type, and ENA Enabled. One AMI is selected, and its details are shown below the list.

Name	Root device type	Virtualization type	ENA Enabled
Ubuntu Server 20.04 LTS (HVM), SSD Volume Type	ebs	hvm	Yes
Microsoft Windows Server 2019 Base	ebs	hvm	Yes
Microsoft Windows Server 2019 Base with Containers	ebs	hvm	Yes
Microsoft Windows Server 1909 Core Base	ebs	hvm	Yes

Selected AMI: Microsoft Windows Server 2019 Base - ami-0ca69a9d06da3835d

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

64-bit (x86)

Launch instance wizard | EC2 Management Console

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services vishuawsLU Ohio Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1 [Launch into Auto Scaling Group](#)

Purchasing option ☐ Request Spot instances

Network vpc-007df9d83b6e0623a | demo1 vpc [Create new VPC](#)

Subnet subnet-0691548ceed9fd9a5 | demosubnet123 | us-east-2 [Create new subnet](#)
251 IP Addresses available

Auto-assign Public IP Enable

Placement group ☐ Add instance to placement group

Capacity Reservation Open

Domain join directory No directory [Create new directory](#)

IAM role None [Create new IAM role](#)

Shutdown behavior Stop

Stop - Hibernate behavior ☐ Enable hibernation as an additional stop behavior

Enable termination protection ☐ Protect against accidental termination

Cancel Previous **Review and Launch** Next: Add Storage

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Type here to search

SS5: Ec2 Dashboard:

Instances | EC2 Management Console

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#Instances:

Services vishuawsLU Ohio Support

New EC2 Experience Tell us what you think

EC2 Dashboard **New**

Events **New**

Tags

Limits

▼ Instances

Instances **New**

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts **New**

Capacity Reservations

▼ Images

AMIs

▼ Elastic Block Store

Volumes

Snapshots

Welcome to the new instances experience!
We're redesigning the EC2 console to make it easier to use. To switch between the old console and the new console, use the New EC2 Experience toggle above the navigation panel. We'll release updates continuously based on customer feedback.

Instances (1/2) [Info](#) [Refresh](#) [Actions](#) [Connect](#) [Launch instances](#)

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm Status	Availability zone	Public
<input checked="" type="checkbox"/>	VPC Instance	i-0e580b9c348560947	Running	t2.micro	2/2 checks ...	No alarms +	us-east-2c	-

▼ Instance summary [Info](#)

Instance ID i-0e580b9c348560947	Public IPv4 address 18.188.72.5 open address	Private IPv4 addresses 172.16.0.96
Instance state Running	Public IPv4 DNS -	Private IPv4 DNS ip-172-16-0-96.us-east-2.compute.internal
Instance type t2.micro	Elastic IP addresses -	VPC ID vpc-007df9d83b6e0623a (demo1 vpc) Info
IAM Role -	Subnet ID subnet-0691548ceed9fd9a5 (demosubnet123) Info	

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Type here to search

Task-6: Check ipconfig in VM Command Prompt:

SS6: CMD prompt: ipconfig

