CLOUD COMPUTING LABORATORY- 07

AWS ACADEMY LAB 4.1

Amazon Web Services

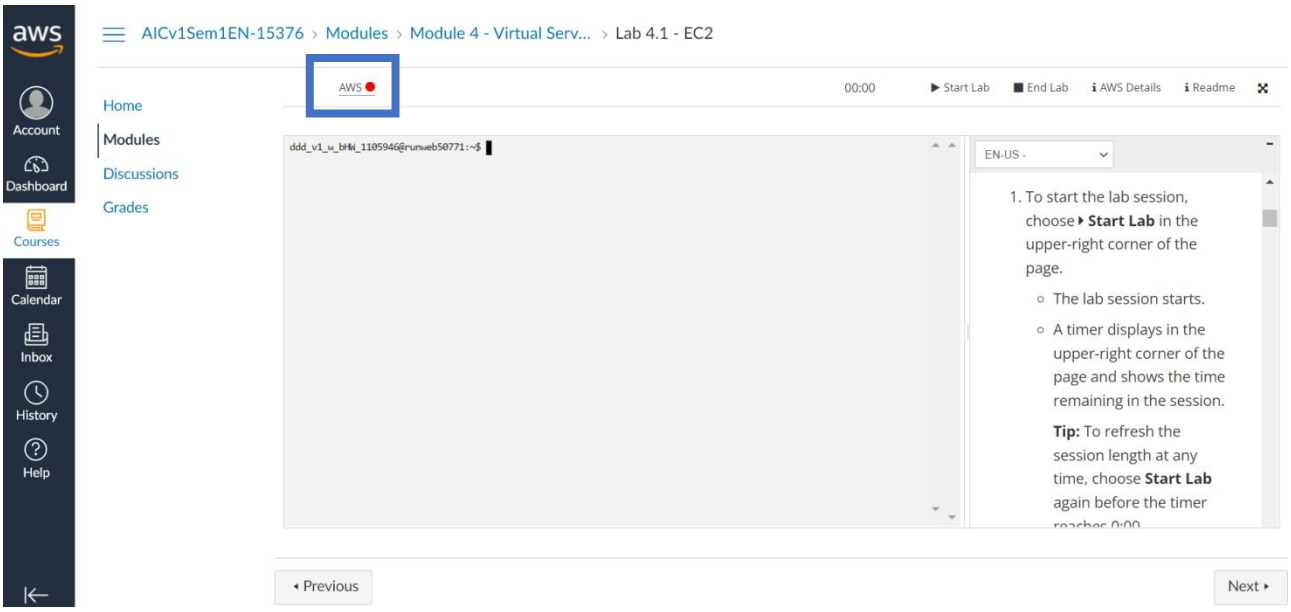
Name: Drishti.

Roll No: 1928228

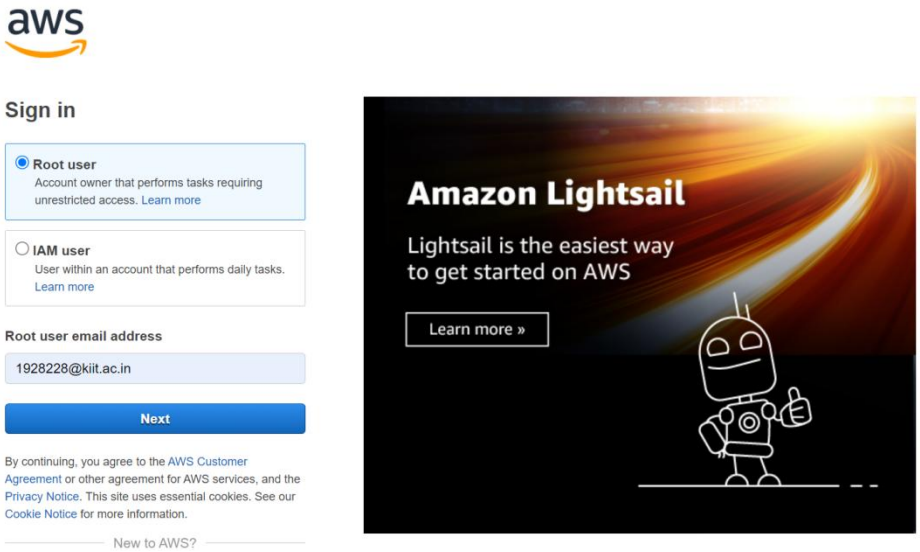
Date: 09/03/2022

Aim: Create an Amazon Elastic Compute Cloud (Amazon EC2) instance that hosts a simple website.
Time Duration: Approximately 1 hour 30 minutes.
Requirements: - AWS account (access to AWS console dashboard)
- Internet connection

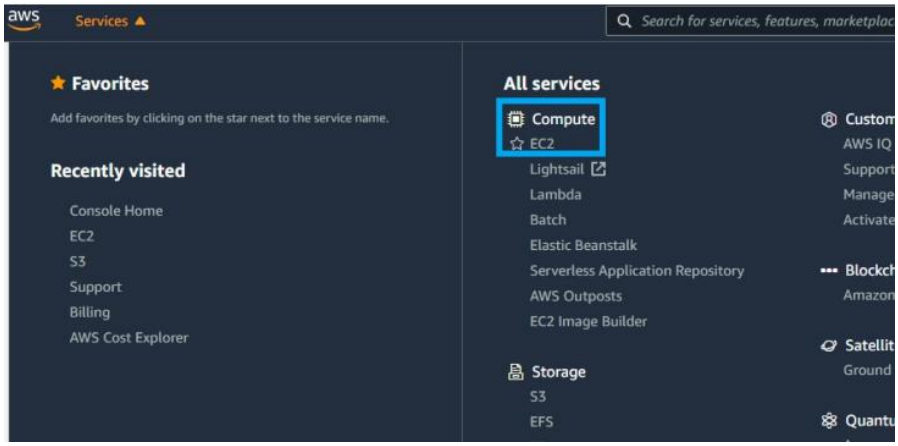
- If we use AWS academy to log in, we go to LAB4.1 and click on start lab, allowing the light beside AWS to turn green, before clicking on AWS on the left side, which automatically displays the AWS console dashboard.



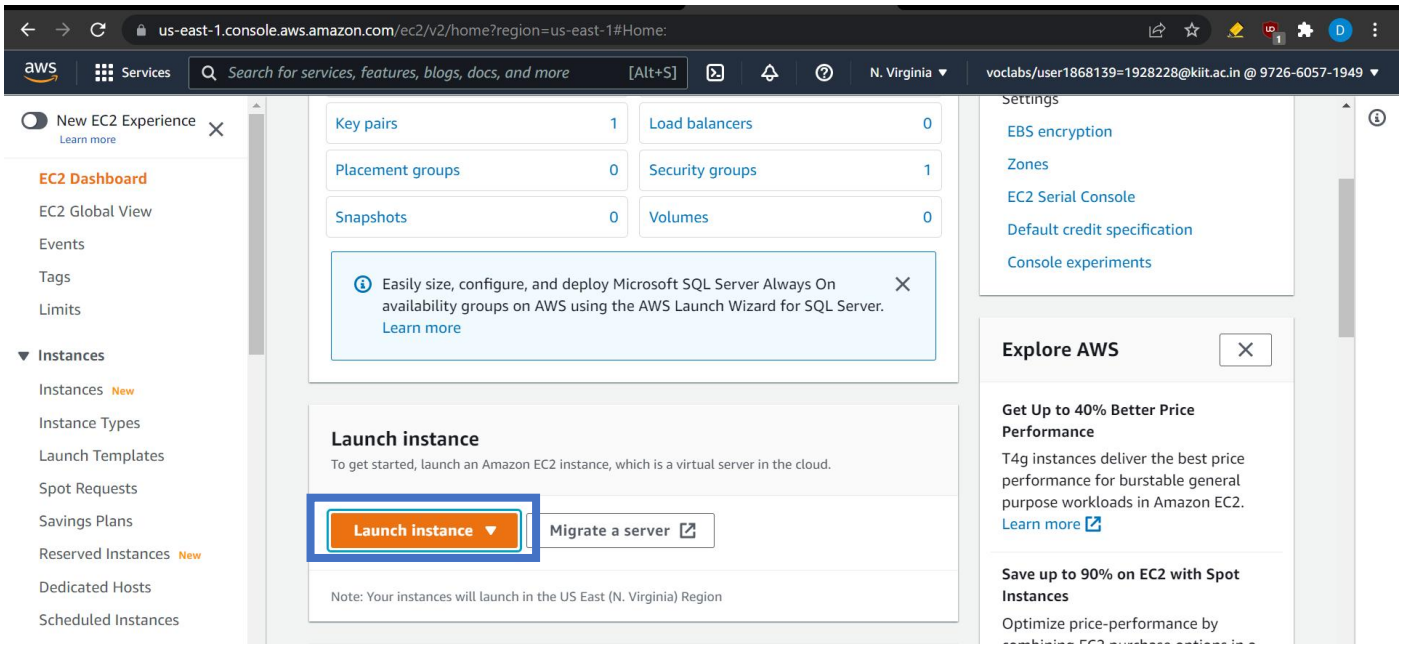
- We go to https://aws.amazon.com , click on 'Sign in to Console', and login with our root account.



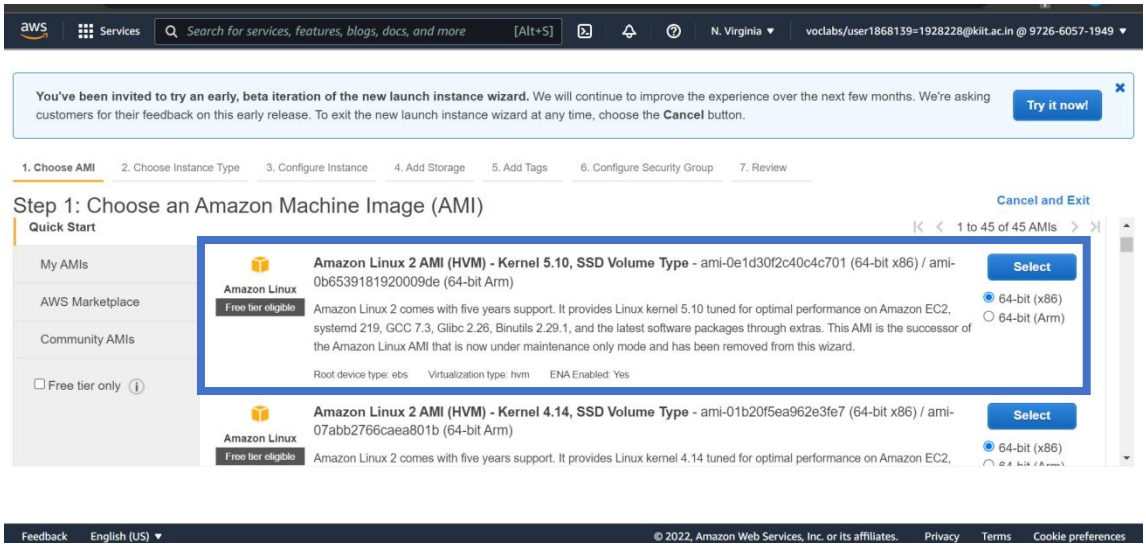
- We are directed to our "AWS Management Console," where we click on "Services," then "EC2," which is Amazon Web Services' Computing as a Service.



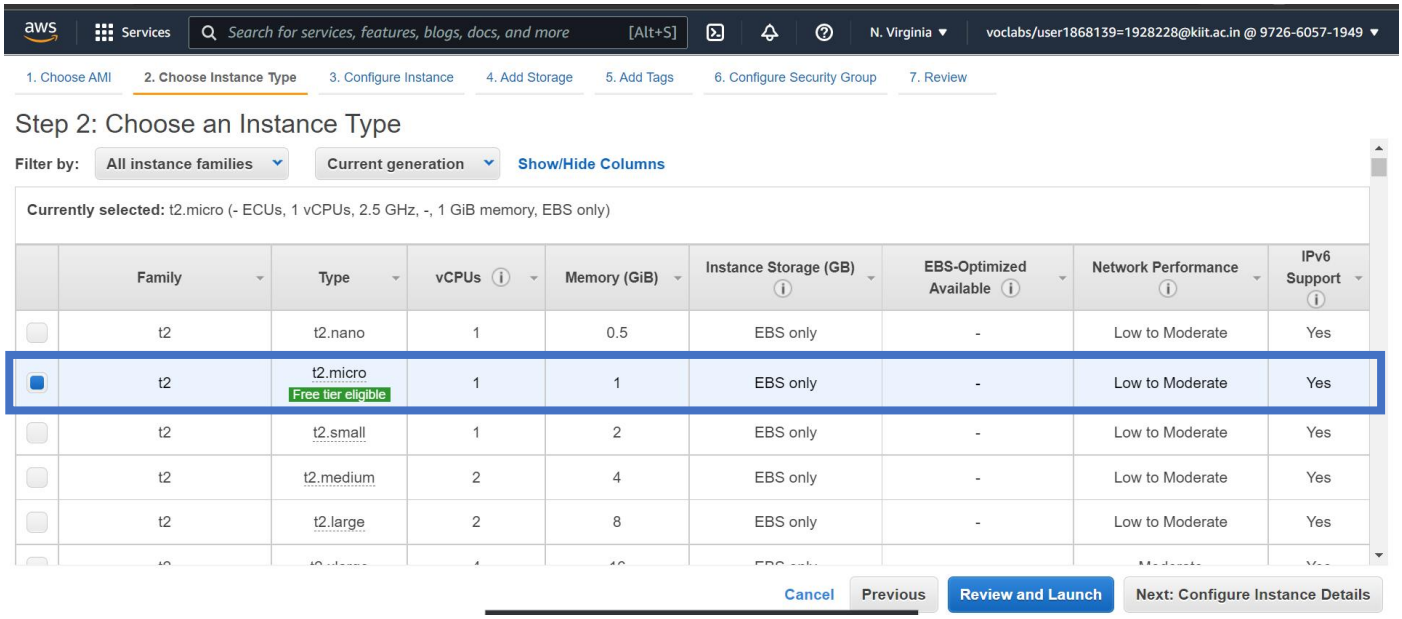
- We are then directed to the "EC2 Management Console," which maintains track of our resources on the EC2 Service; we then click "Launch Instance" to set our resources for our cloud instance.



- We configure our resources with the default AMI or “Amazon Machine Image” i.e “Amazon Linux 2 AMI 64 bit(x86)”, we click select.



- Choose the default instance type “t2.micro” which comes with a flavour of 1 CPU, 1 GB RAM, flexible EBS storage support or internal storage and support for IPv6address under the free tier. We click next.



- For custom configuration of the instance details, we go with the default configuration and click next but before that we in the text for connection in user data field we add a code snippet

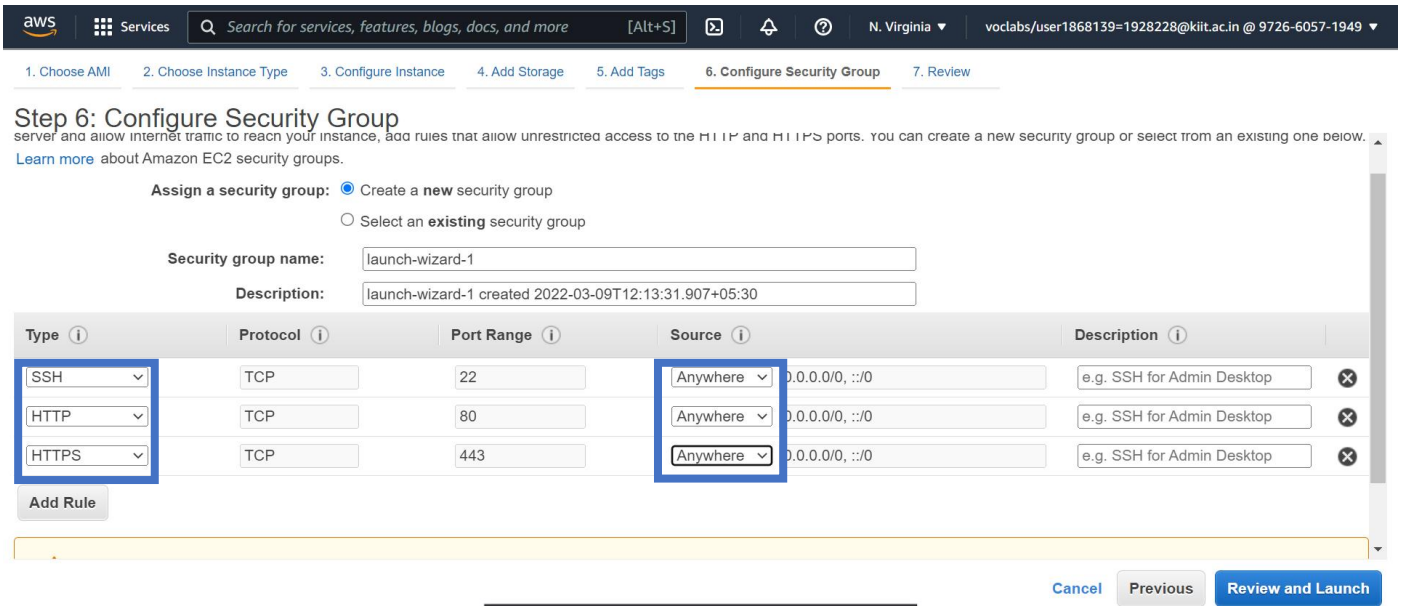
```
#!/bin/bash
yum update -y
yum -y install httpd
systemctl enable httpd
systemctl start httpd
echo '<html><h1>Hello World!</h1></html>' >
/var/www/html/index.html
```

The script the following:

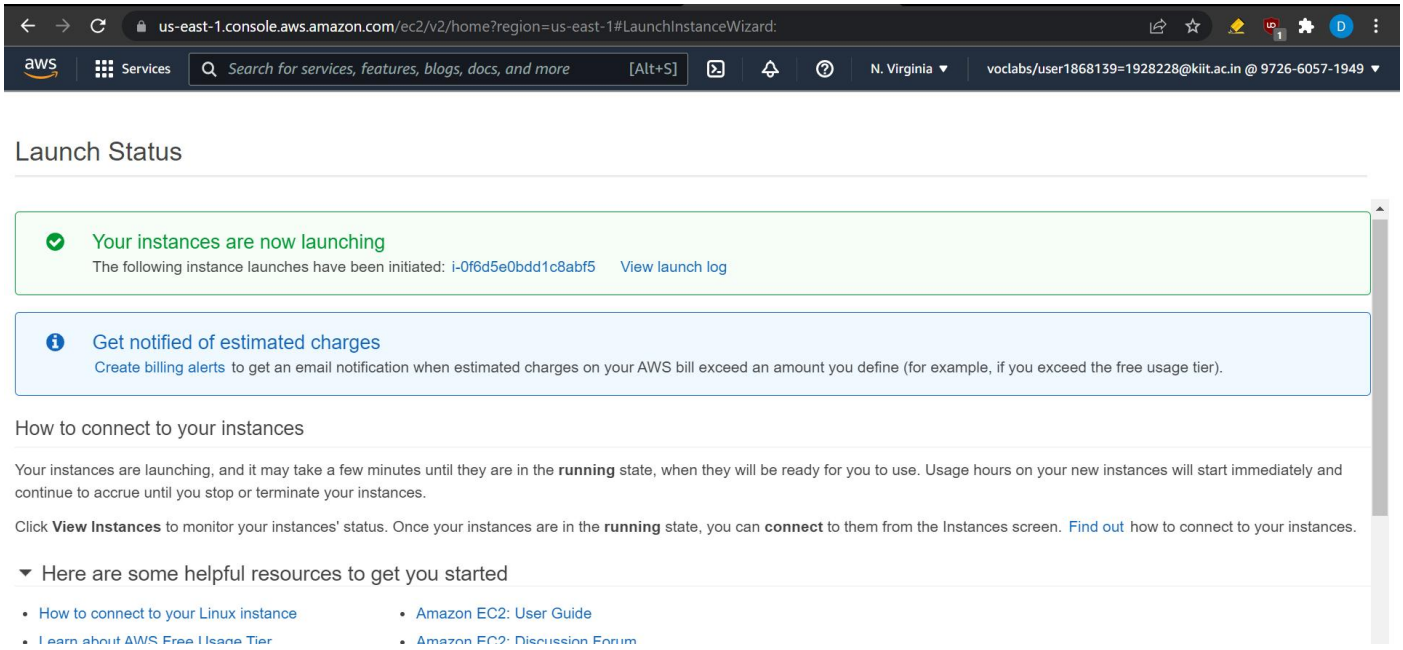
- Updates the server.
- Installs an Apache web server (httpd).
- Configures the web server to automatically start on boot.
- Activates the web server.
- Creates a simple webpage.

- We are guided to“Add Storage” or internal EBS storage, we go for the default 8GBvalue, and click next,
- We are then guided to “Add Tags” here in key we write ‘”Name”and in value we write “Web Server” .
- We move ahead to “Configure our Security Group” and go for the default group and write SSH with TCP protocol on the port 22, HTTP with TCP protocol on the port 80, HTTPS with TCP protocol on the port 22 whose source can be from anywhere.

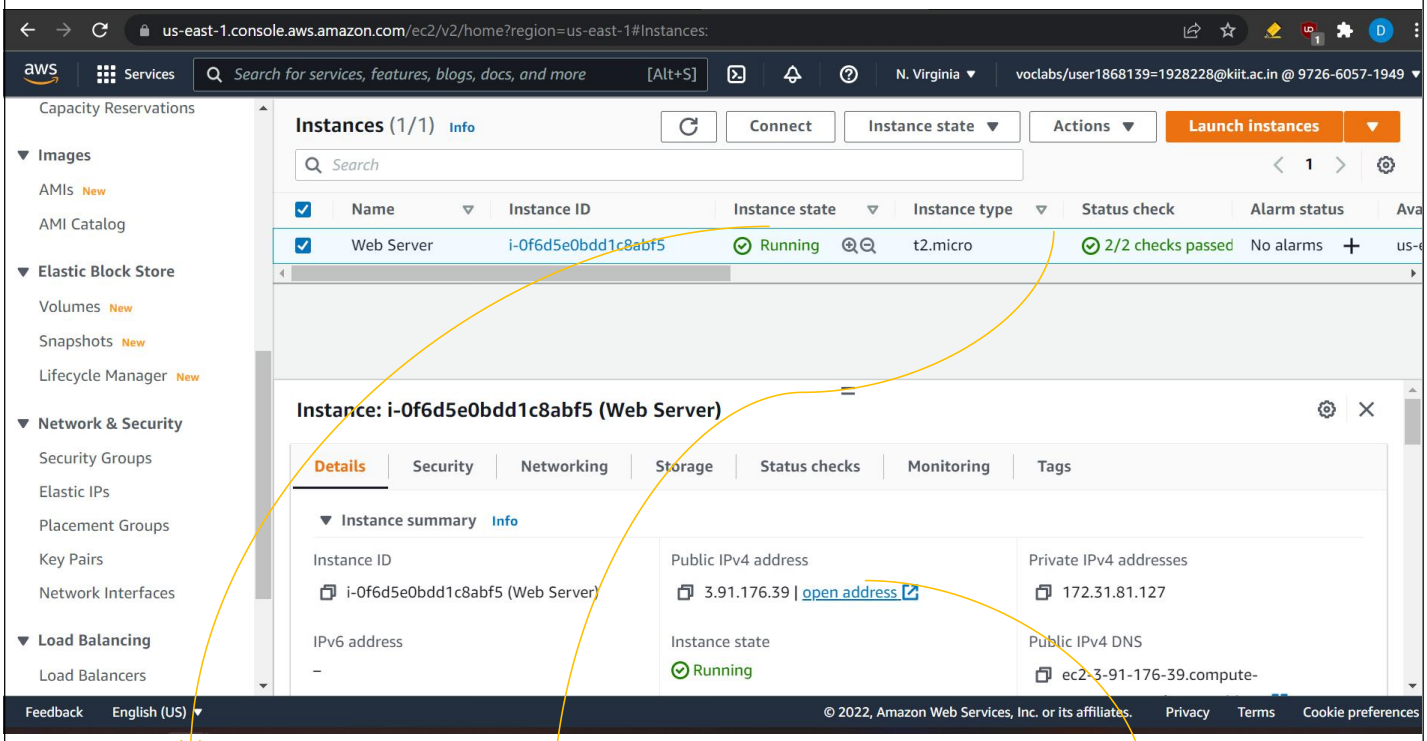
- After adding all the HTTP, HTTPS, SSH, we don't have to change any setting in the coming section for launch and we will just have to copy and paste the IP address in the browser and it will show the output.

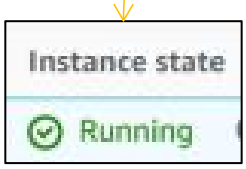


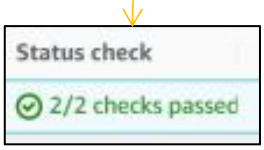
- We click on review and launch after completing all of the processes and filling up all of the appropriate fields for the desired features we want in the EC2 interface to host the website, and then we receive this screen.



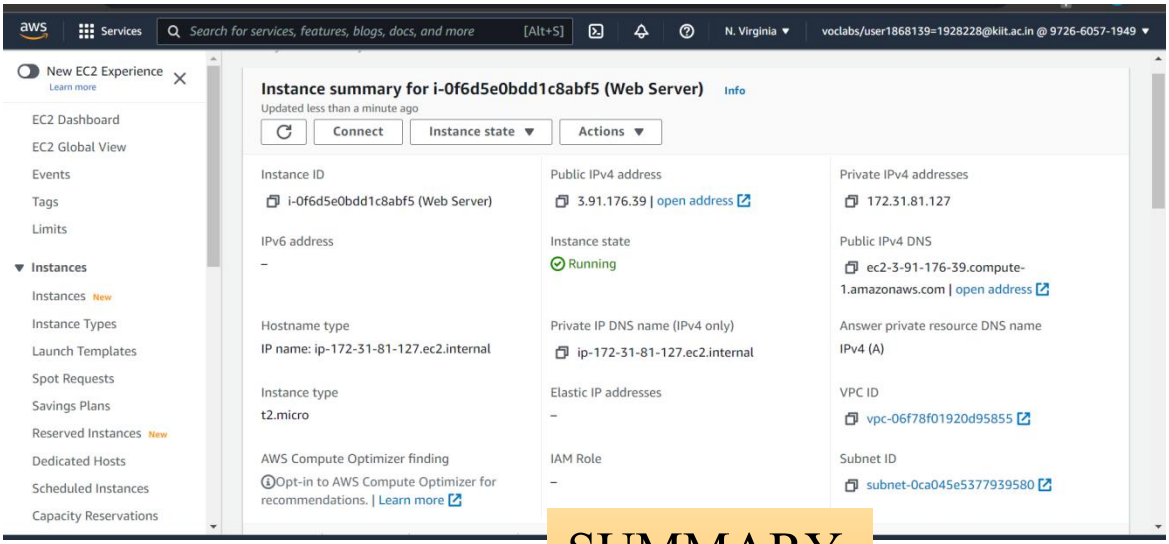
- We'll click 'Launch' in the bottom right of the page after analyzing all of the instance's characteristics. After that, the page will take a bit to load, but once it does, we can copy and paste the IP address and even access to the terminal using command prompt.


us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:
Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia
voclabs/user1868139=1928228@kiit.ac.in @ 9726-6057-1949
Capacity Reservations
Images
AMIs New
AMI Catalog
Elastic Block Store
Volumes New
Snapshots New
Lifecycle Manager New
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Instances (1/1) Info
Connect
Instance state
Actions
Launch instances
Search
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Web Server
i-0f6d5e0bdd1c8abf5
Running
t2.micro
2/2 checks passed
No alarms
Instance: i-0f6d5e0bdd1c8abf5 (Web Server)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-0f6d5e0bdd1c8abf5 (Web Server)
Public IPv4 address
3.91.176.39 | open address
Private IPv4 addresses
172.31.81.127
IPv6 address
–
Instance state
Running
Public IPv4 DNS
ec2-3-91-176-39.compute-
Feedback
English (US)
© 2022, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

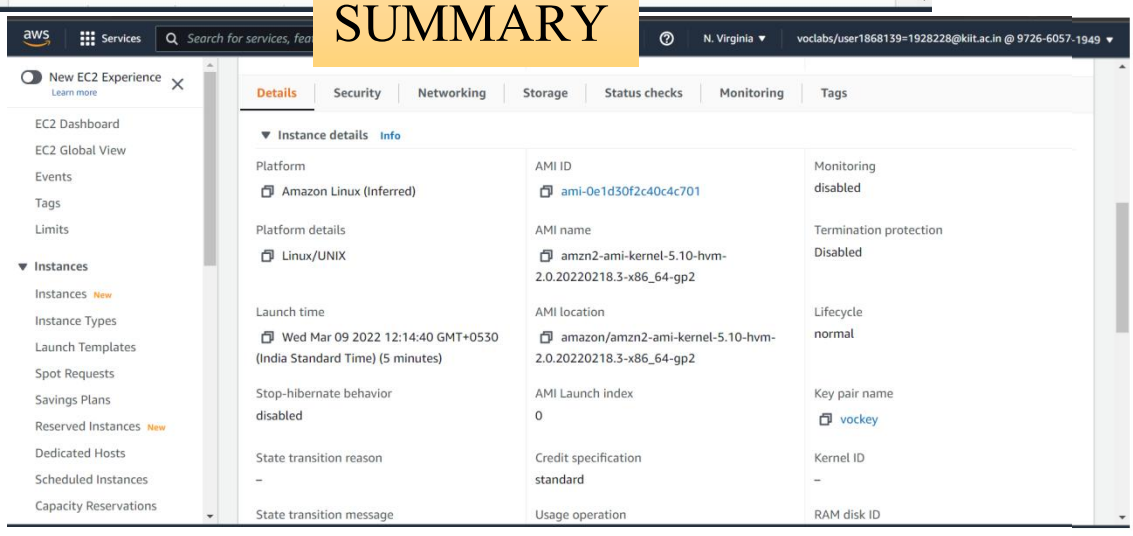

Instance state
Running


Status check
2/2 checks passed

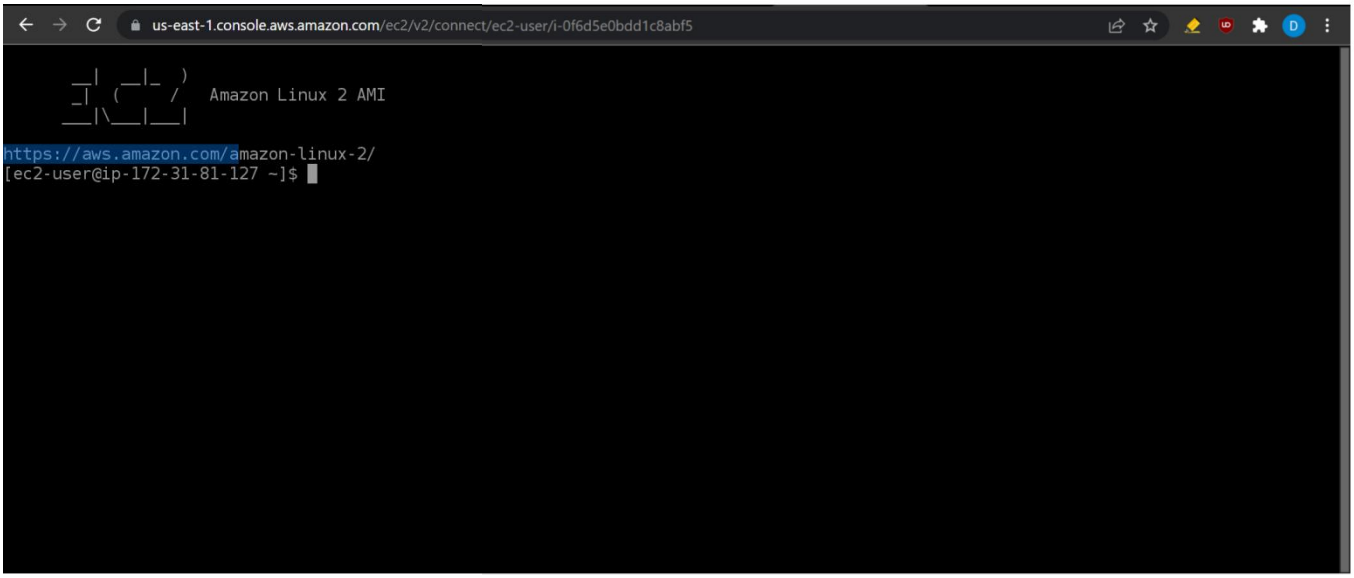

Public IPv4 address
3.91.176.39 | open address


Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia
voclabs/user1868139=1928228@kiit.ac.in @ 9726-6057-1949
New EC2 Experience
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Instance summary for i-0f6d5e0bdd1c8abf5 (Web Server) Info
Updated less than a minute ago
Connect
Instance state
Actions
Instance ID
i-0f6d5e0bdd1c8abf5 (Web Server)
Public IPv4 address
3.91.176.39 | open address
Private IPv4 addresses
172.31.81.127
IPv6 address
–
Instance state
Running
Public IPv4 DNS
ec2-3-91-176-39.compute-1.amazonaws.com | open address
Hostname type
IP name: ip-172-31-81-127.ec2.internal
Private IP DNS name (IPv4 only)
ip-172-31-81-127.ec2.internal
Answer private resource DNS name
IPv4 (A)
Instance type
t2.micro
Elastic IP addresses
–
VPC ID
vpc-06f78f01920d95855
AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | Learn more
IAM Role
–
Subnet ID
subnet-0ca045e5377939580

SUMMARY


N. Virginia
voclabs/user1868139=1928228@kiit.ac.in @ 9726-6057-1949
New EC2 Experience
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance details Info
Platform
Amazon Linux (Inferred)
AMI ID
ami-0e1d30f2c40c4c701
Monitoring
disabled
Platform details
Linux/UNIX
AMI name
amzn2-ami-kernel-5.10-hvm-2.0.20220218.3-x86_64-gp2
Termination protection
Disabled
Launch time
Wed Mar 09 2022 12:14:40 GMT+0530 (India Standard Time) (5 minutes)
AMI location
amazon/amzn2-ami-kernel-5.10-hvm-2.0.20220218.3-x86_64-gp2
Lifecycle
normal
Stop-hibernate behavior
disabled
AMI Launch index
0
Key pair name
vockey
State transition reason
–
Credit specification
standard
Kernel ID
–
State transition message
Usage operation
RAM disk ID

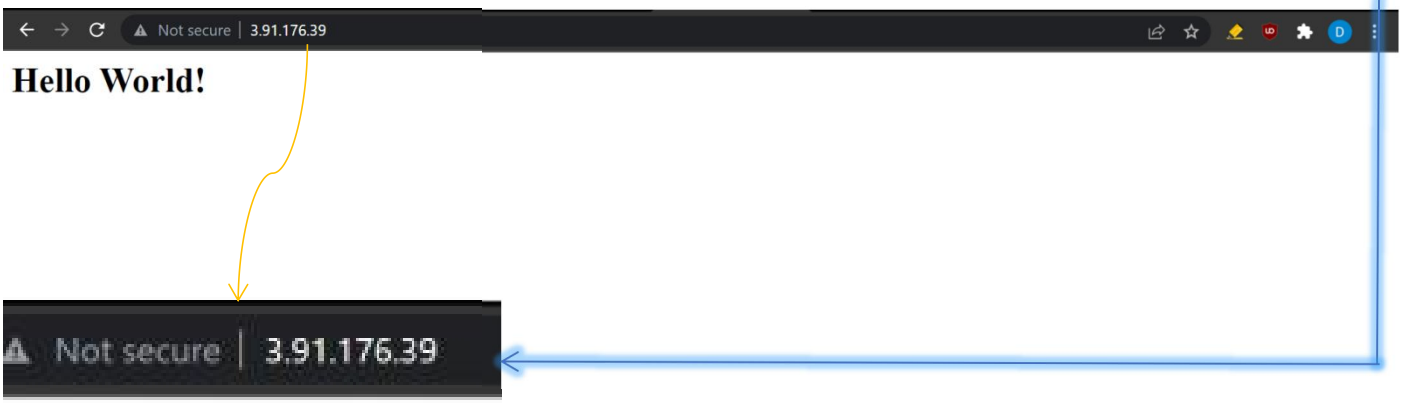
- When we click on CONNECT, we can see if the connections and the virtual computer system are connected. So, we can see that our system is linked to Amazon Linux 2 AMI, as well as other information such as user IP, public and private IPs.



i-0f6d5e0bdd1c8abf5 (Web Server)

Public IPs: 3.91.176.39 Private IPs: 172.31.81.127

RESULT: If the connection was successful, the browser should display Hello World using our output IP address. And it worked!
This indicates that the connection was successful, and we were able to build an Amazon Elastic Compute Cloud (Amazon EC2) instance that runs a simple 'Hello World' webpage.



It is basically http://3.91.176.39 (it came as https but it was showing the error as I has all SSH, HTTPS, HTTP, I hosted as http)

DRISHTI
1928228