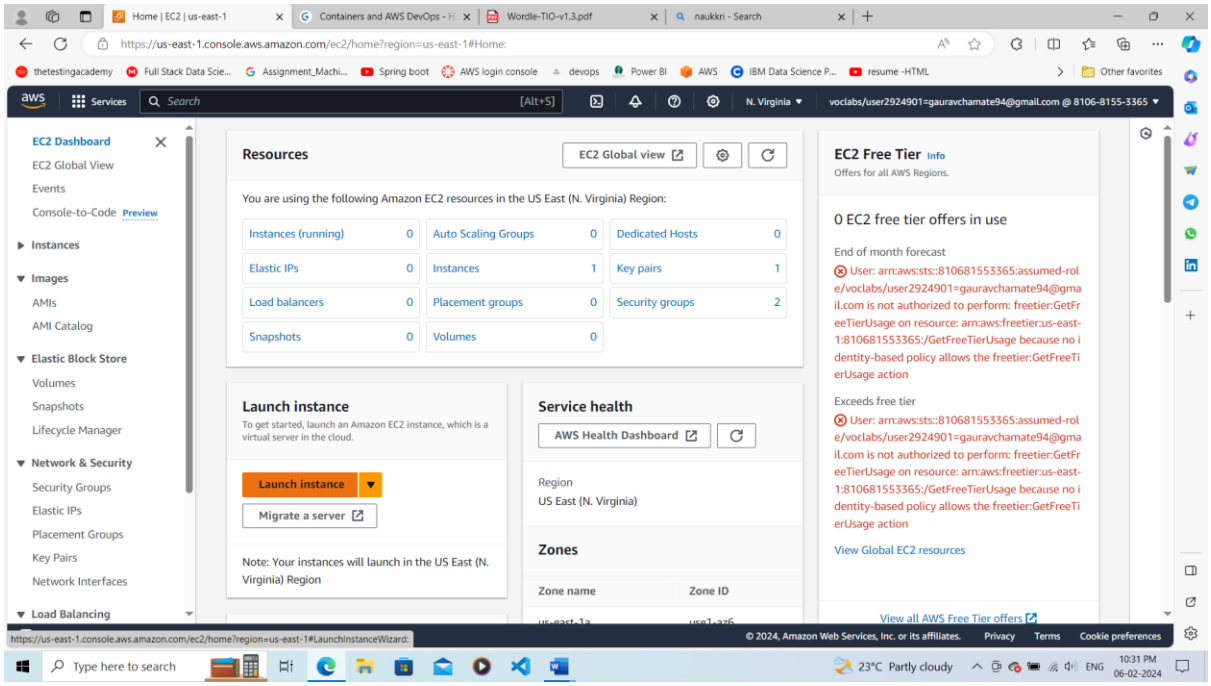
Try it out objective Use this hands-on to learn how to deploy an containerized application using Docker

The goal Following are the goals of this hands-on:

1. Working knowledge of EC2 instances with Ubuntu
2. Deploying an EC2 instance
3. Understanding the docker ecosystem

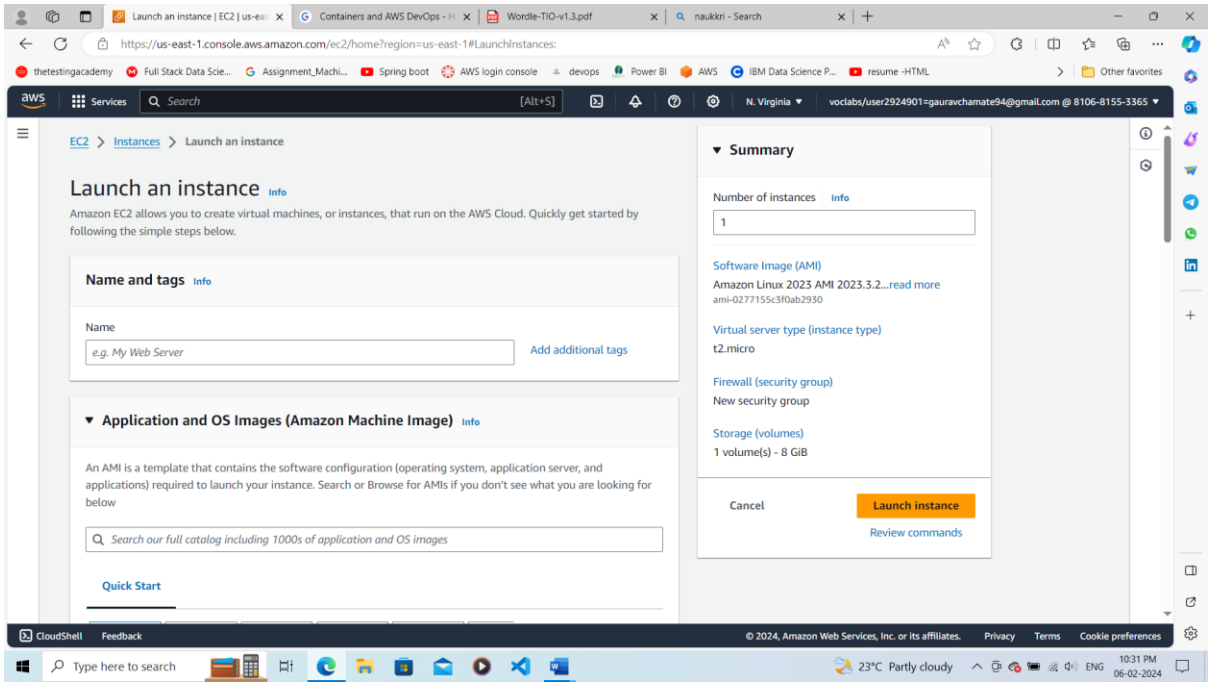
A. Hands-on: Launch an Instance

1. Open the EC2 management console at https://console.aws.amazon.com/ec2/ (you will be required to sign in)

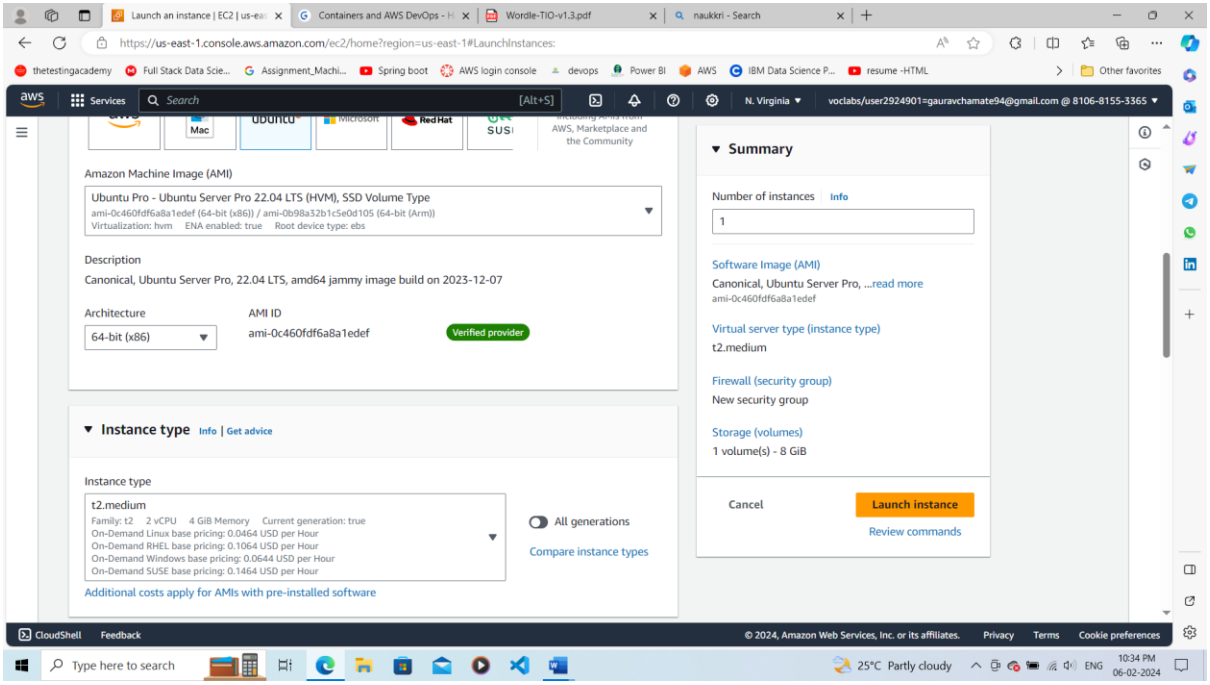


2. Change the region to N Virginia (if it is not already selected).

3. From the EC2 management console, click on Launch Instance.



4. In Name and Tags field, type out any name of your instance.
5. Then choose an Amazon Machine Image (AMI) page that displays a list of basic configurations. Click on Ubuntu and select Ubuntu Server 20.04 LTS.

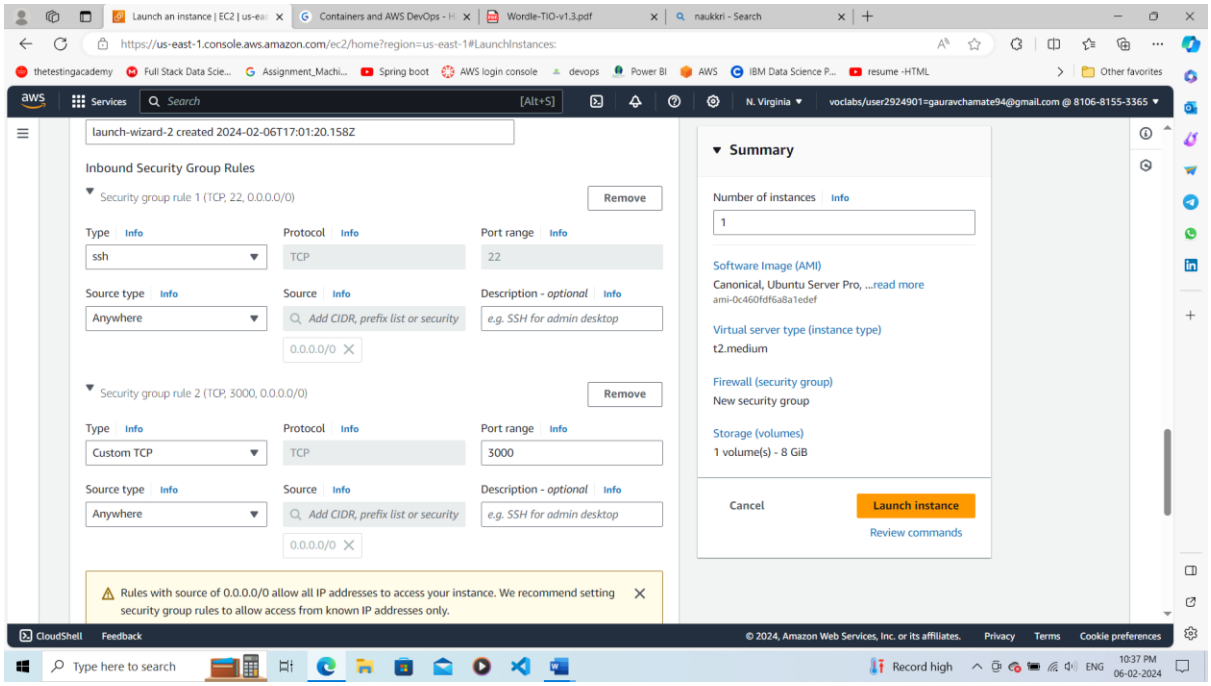


6. Onthe Choose an Instance Type page, select the t2.medium instance type.

7. Under Key pair (login), click on create a new key pair

8. Enter the key pair name of your choice, and then click on Create key pair.

9. Under Network settings, click on Edit.



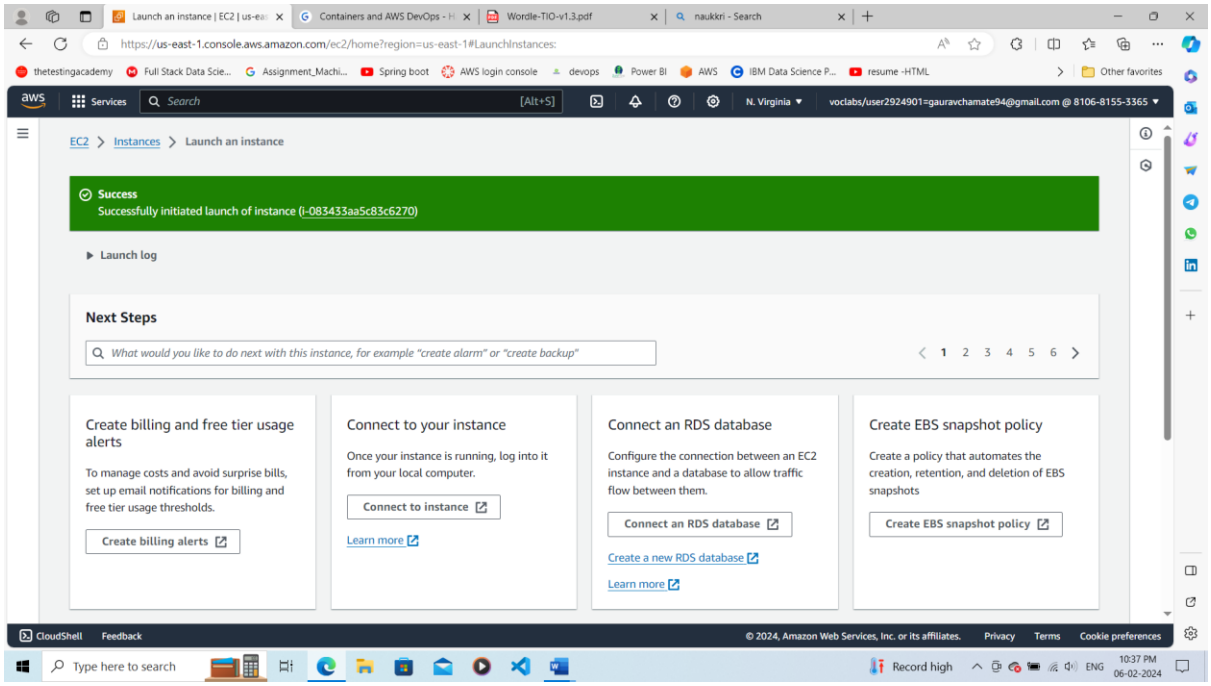
10. Port 22 for SSH should already be present in the security group. Click on Add security group rule and create the rule with the following parameters

a. Type : Custom TCP

b. Port Range : 3000

c. Source Type : Anywhere

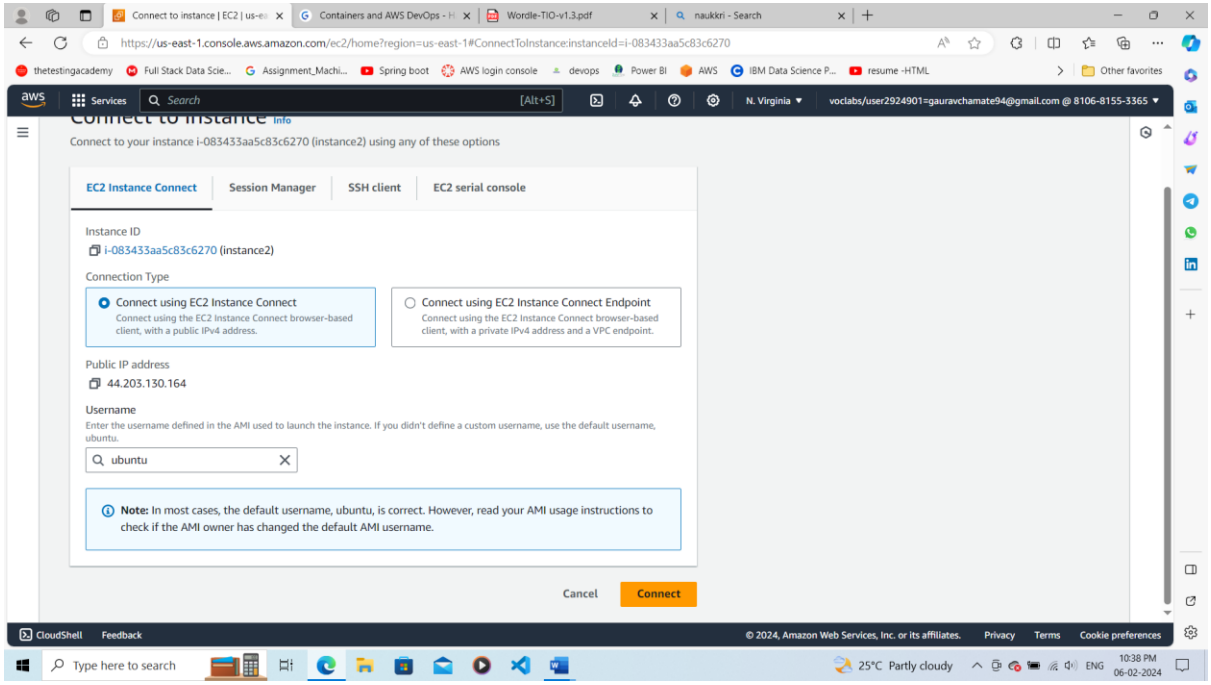
11. At last, click on Launch instance.



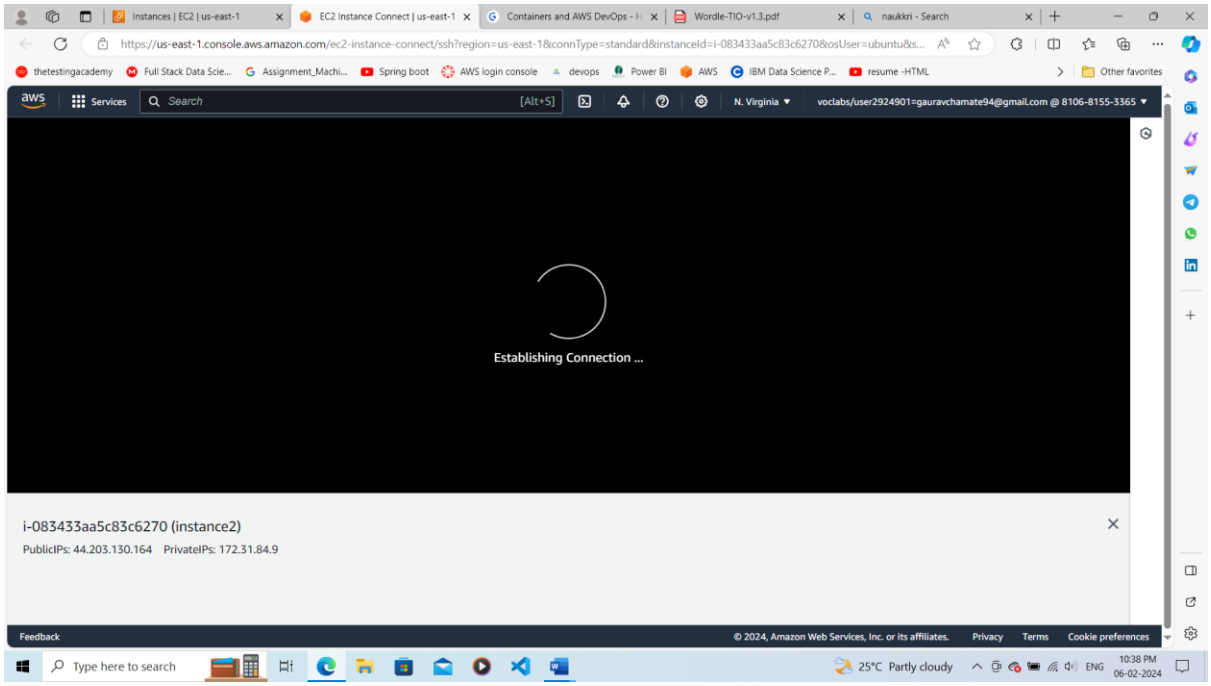
B. Hands-on: Installation of docker

1. Select your running instance by clicking on the checkbox present on the left side.

2. Click on Connect button.

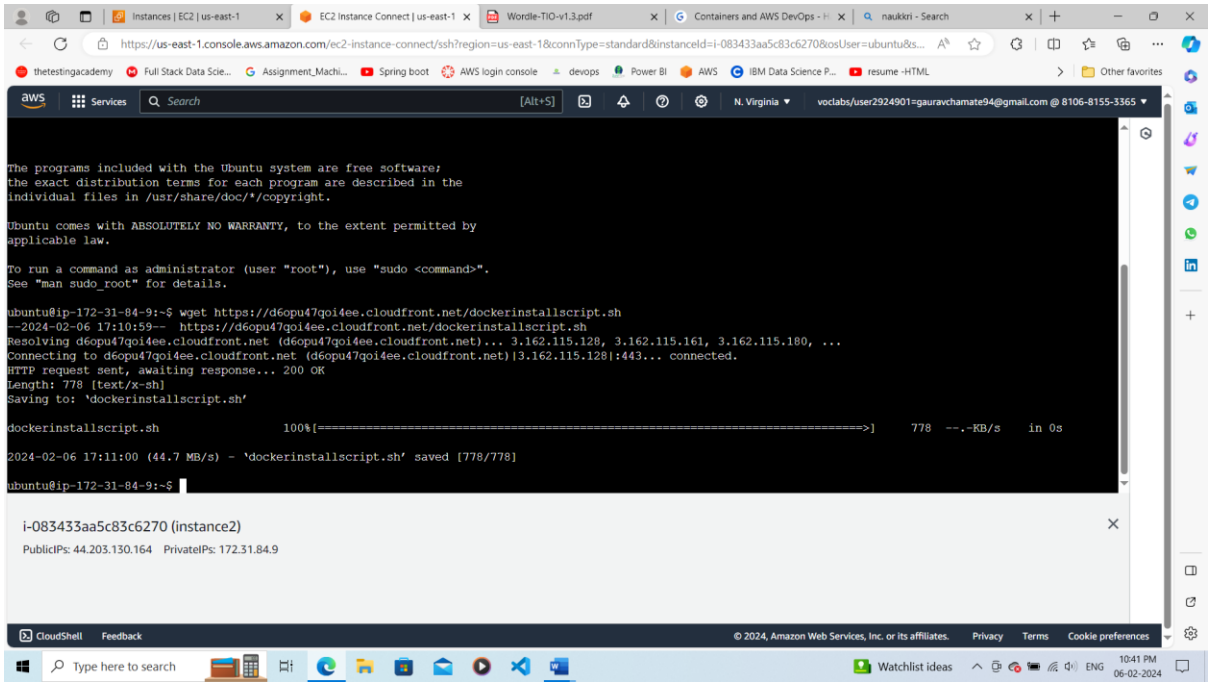


3. Click on the Connect button again present at the bottom of the page. NOTE: You must be under 'EC2 Instance Connect'

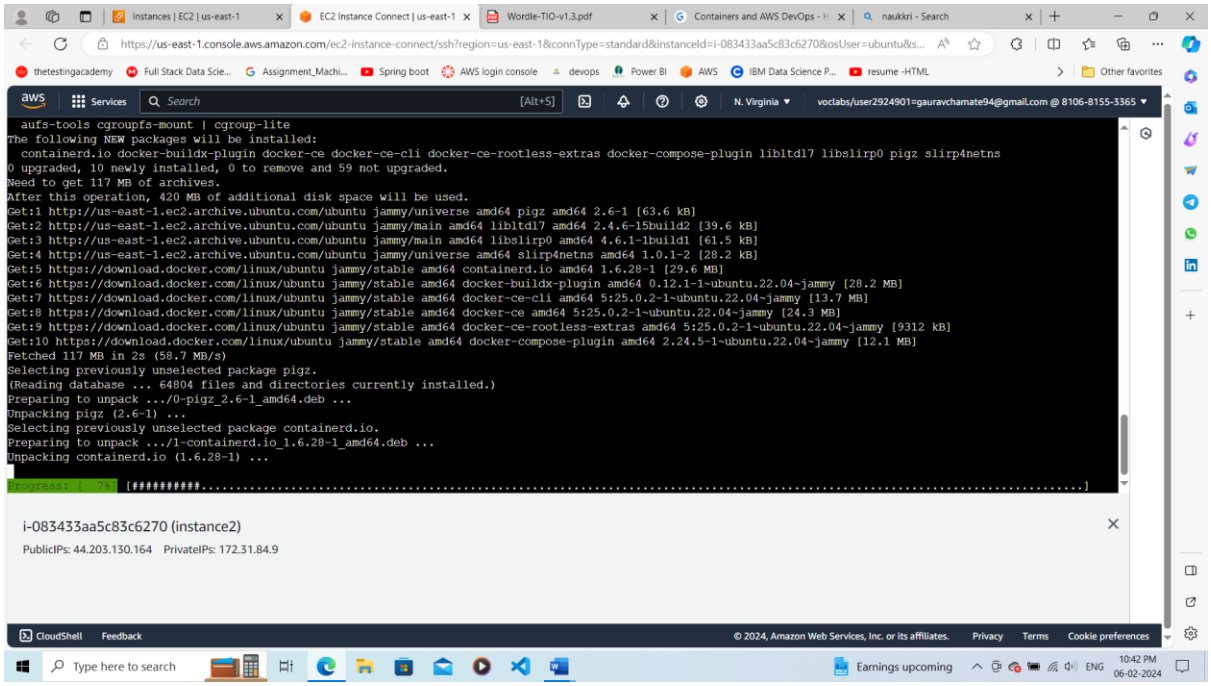


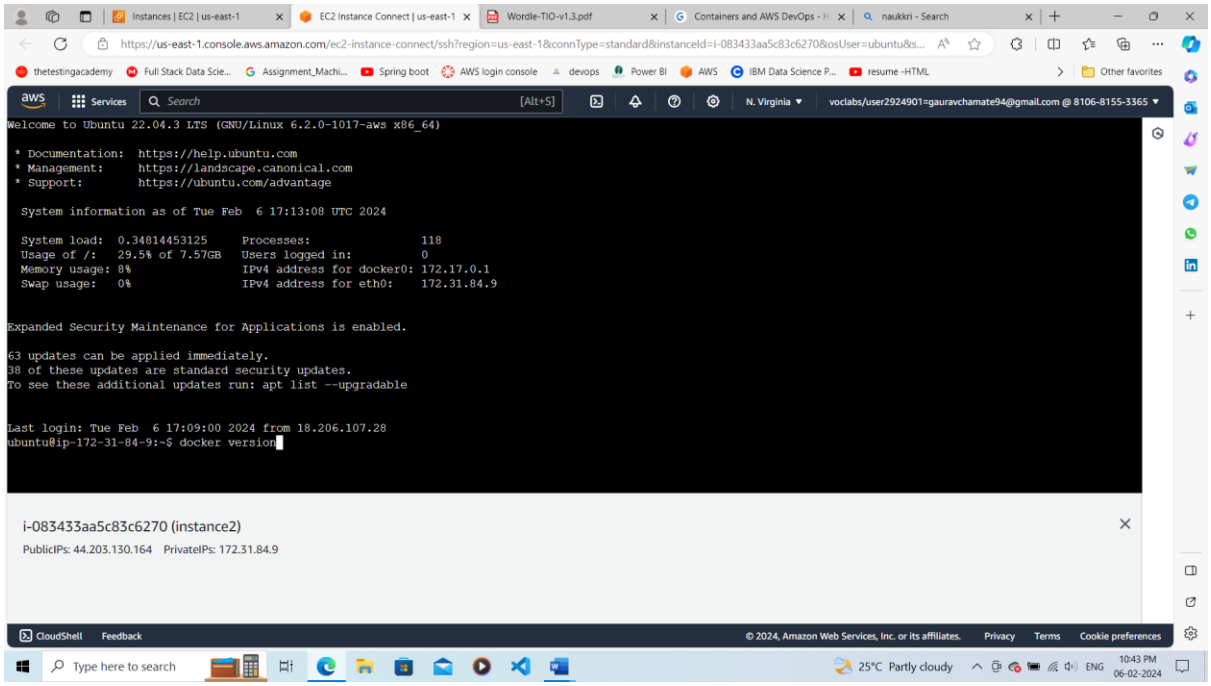
4. This will land you to the EC2 Instance Connect browser terminal.

5. Execute the below commands one by one in the terminal window. NOTE: You are already in your EC2 server, you need not SSH again. wget https://d6opu47qoi4ee.cloudfront.net/dockerinstallscript.sh bash dockerinstallscript.sh exit NOTE: Ensure you restart the shell (Refresh the page) .



3. Now , type the below command (notice there is no sudo) docker version NOTE: The above command should show the client and server versions and other details. The installation is now successful.




Instances | EC2 | us-east-1
EC2 Instance Connect | us-east-1
Wordle-TIO-v1.3.pdf
Containers and AWS DevOps -
naukkri - Search
https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-083433aa5c83c6270&osUser=ubuntu&s...
thetestingacademy
Full Stack Data Scie...
Assignment_Machi...
Spring boot
AWS login console
devops
Power BI
AWS
IBM Data Science P...
resume -HTML
Other favorites
aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2924901=gauravchamate94@gmail.com @ 8106-8155-3365
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1017-aws x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage
System information as of Tue Feb 6 17:13:08 UTC 2024
System load: 0.34814453125 Processes: 118
Usage of /: 29.5% of 7.57GB Users logged in: 0
Memory usage: 8% IPv4 address for docker0: 172.17.0.1
Swap usage: 0% IPv4 address for eth0: 172.31.84.9
Expanded Security Maintenance for Applications is enabled.
63 updates can be applied immediately.
38 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
Last login: Tue Feb 6 17:09:00 2024 from 18.206.107.28
ubuntu@ip-172-31-84-9:~$ docker version
i-083433aa5c83c6270 (instance2)
PublicIPs: 44.203.130.164 PrivateIPs: 172.31.84.9
CloudShell
Feedback
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Privacy
Terms
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Type here to search
25°C Partly cloudy
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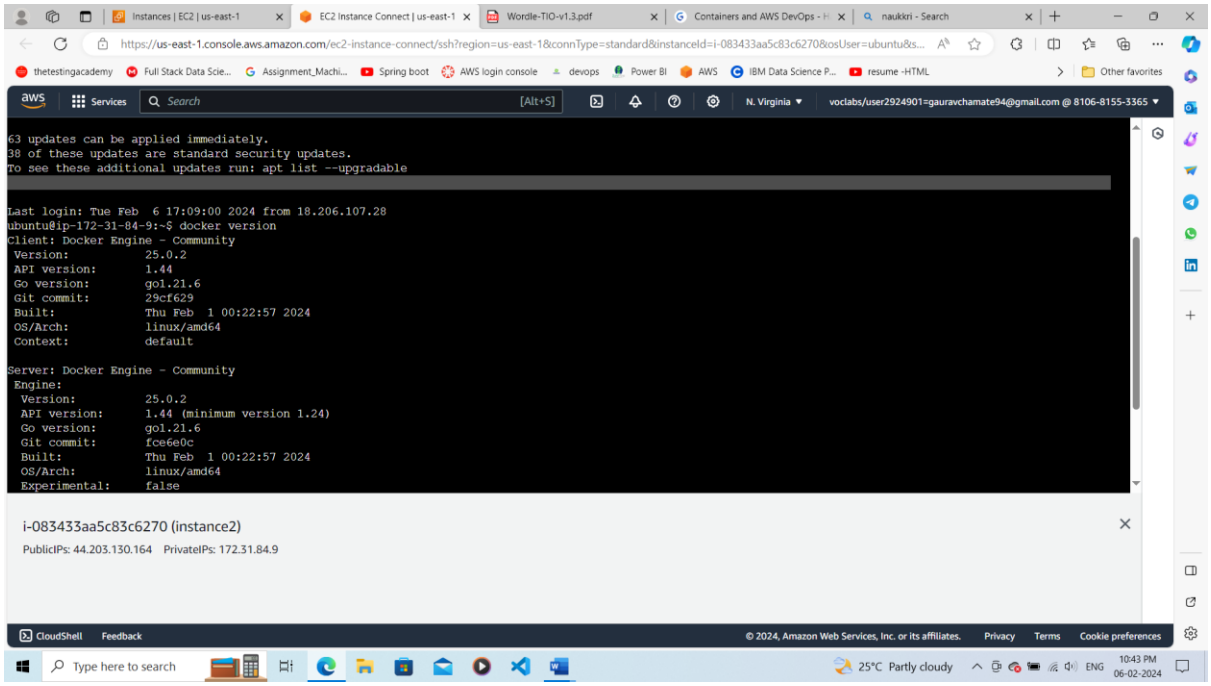
06-02-2024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EC2 Instance Connect | us-east-1
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Containers and AWS DevOps -
naukkri - Search
https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-083433aa5c83c6270&osUser=ubuntu&s...
thetestingacademy
Full Stack Data Scie...
Assignment_Machi...
Spring boot
AWS login console
devops
Power BI
AWS
IBM Data Science P...
resume -HTML
Other favorites
aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2924901=gauravchamate94@gmail.com @ 8106-8155-3365
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Last login: Tue Feb 6 17:09:00 2024 from 18.206.107.28
ubuntu@ip-172-31-84-9:~$ docker version
Client: Docker Engine - Community
Version: 25.0.2
API version: 1.44
Go version: go1.21.6
Git commit: 29cf629
Built: Thu Feb 1 00:22:57 2024
OS/Arch: linux/amd64
Context: default
Server: Docker Engine - Community
Engine:
Version: 25.0.2
API version: 1.44 (minimum version 1.24)
Go version: go1.21.6
Git commit: fce6e0c
Built: Thu Feb 1 00:22:57 2024
OS/Arch: linux/amd64
Experimental: false
i-083433aa5c83c6270 (instance2)
PublicIPs: 44.203.130.164 PrivateIPs: 172.31.84.9
CloudShell
Feedback
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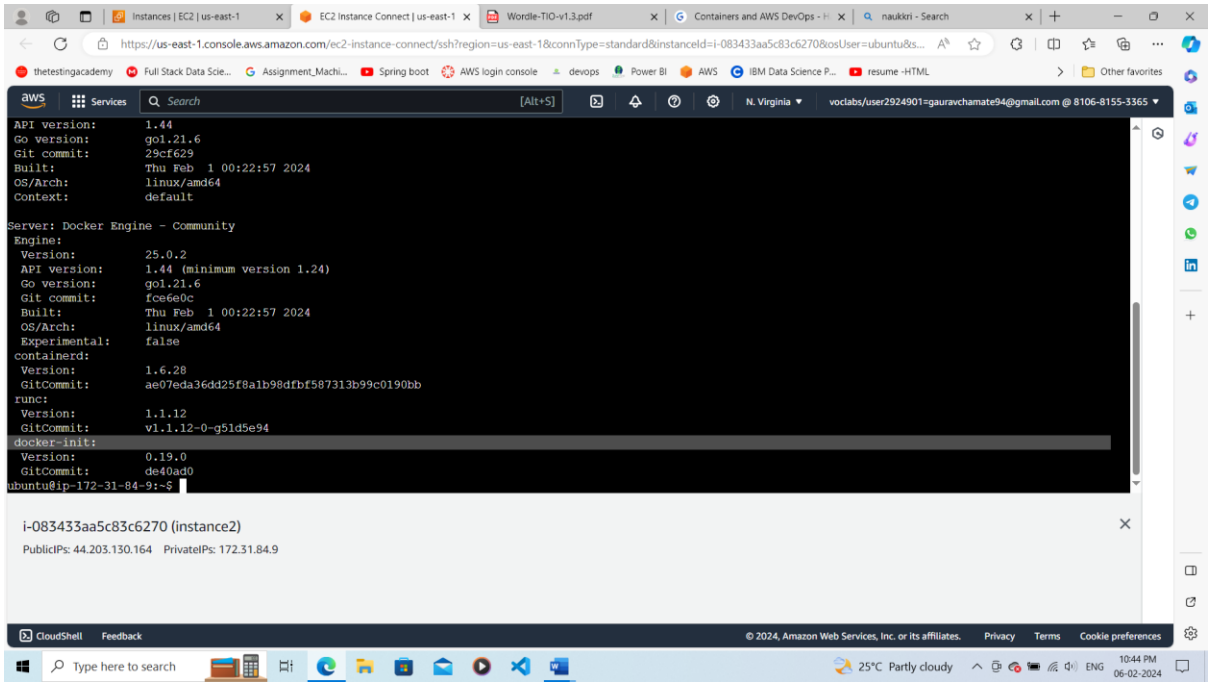
Type here to search
25°C Partly cloudy
ENG
10:43 PM
06-02-2024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thetestingacademy
Full Stack Data Scie...
Assignment_Machi...
Spring boot
AWS login console
devops
Power BI
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API version: 1.44 (minimum version 1.24)
Go version: go1.21.6
Git commit: fce6e0c
Built: Thu Feb 1 00:22:57 2024
OS/Arch: linux/amd64
Experimental: false
containerd:
Version: 1.6.28
GitCommit: ae07eda36dd25f8a1b98dfbf587313b99c0190bb
runc:
Version: 1.1.12
GitCommit: v1.1.12-0-g51d5e94
docker-init:
Version: 0.19.0
GitCommit: de40ad0
ubuntu@ip-172-31-84-9:~$
i-083433aa5c83c6270 (instance2)
PublicIPs: 44.203.130.164 PrivateIPs: 172.31.84.9
CloudShell
Feedback
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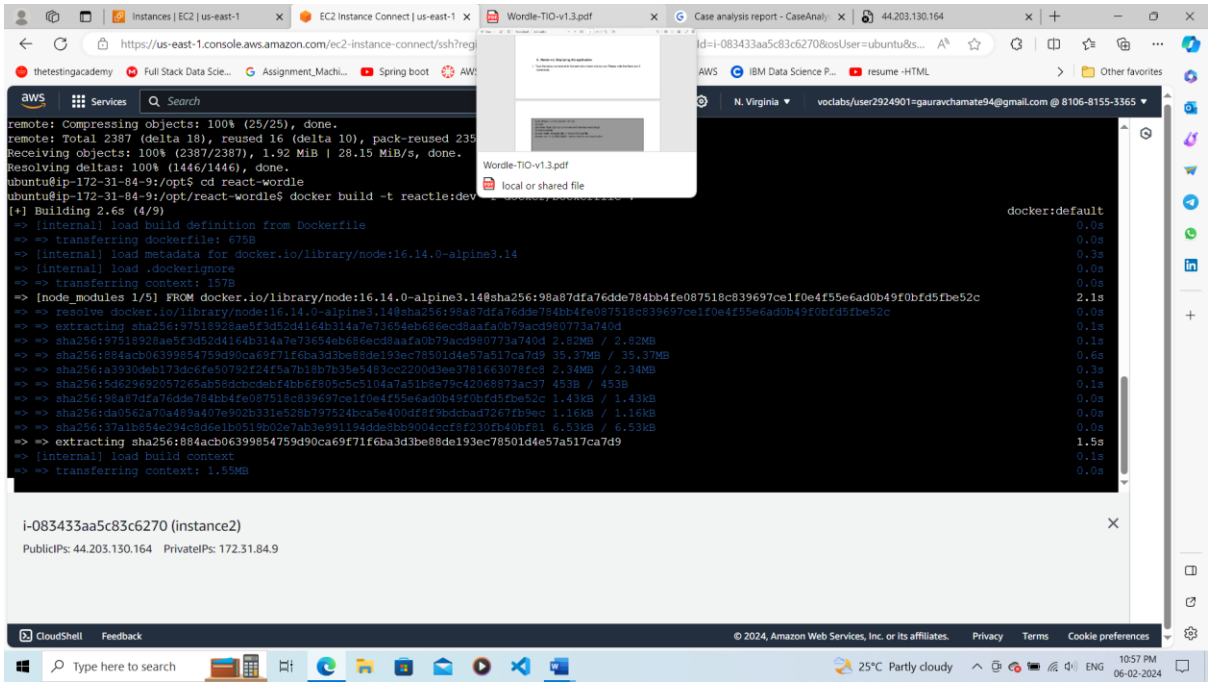
Privacy
Terms
Cookie preferences
Type here to search
25°C Partly cloudy
ENG
10:44 PM
06-02-2024


Instances | EC2 | us-east-1
EC2 Instance Connect | us-east-1
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Case analysis report - CaseAnaly
44.203.130.164
Wordle-TIO-v1.3.pdf
local or shared file
aws
Services
Search
N. Virginia
voclabs/user2924901=gauravchamate94@gmail.com @ 8106-8155-3365
remote: Compressing objects: 100% (25/25), done.
remote: Total 2387 (delta 18), reused 16 (delta 10), pack-reused 235
Receiving objects: 100% (2387/2387), 1.92 MiB | 28.15 MiB/s, done.
Resolving deltas: 100% (1446/1446), done.
ubuntu@ip-172-31-84-9:/opt$ cd react-wordle
ubuntu@ip-172-31-84-9:/opt/react-wordle$ docker build -t reactle:dev
[+] Building 2.6s (4/9) docker:default
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 675B 0.0s
=> [internal] load metadata for docker.io/library/node:16.14.0-alpine3.14 0.3s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 157B 0.0s
=> [node_modules 1/5] FROM docker.io/library/node:16.14.0-alpine3.14@sha256:98a87dfa76dde784bb4fe087518c839697ce1f0e4f55e6ad0b49f0bfd5fbe52c 2.1s
=> => resolve docker.io/library/node:16.14.0-alpine3.14@sha256:98a87dfa76dde784bb4fe087518c839697ce1f0e4f55e6ad0b49f0bfd5fbe52c 0.0s
=> => extracting sha256:97518928ae5f3d52d4164b314a7e73654eb686ecd8aafa0b79acd980773a740d 0.1s
=> => sha256:97518928ae5f3d52d4164b314a7e73654eb686ecd8aafa0b79acd980773a740d 2.82MB / 2.82MB 0.1s
=> => sha256:884acb06399854759d90ca69f71f6ba3d3be88de193ec78501d4e57a517ca7d9 35.37MB / 35.37MB 0.6s
=> => sha256:a3930deb173dc6fe50792f24f5a7b18b7b35e5483cc2200d3ee3781663078fc8 2.34MB / 2.34MB 0.3s
=> => sha256:5d629692057265ab58dcbcdebf4bb6f805c5c5104a7a51b8e79c42068873ac37 453B / 453B 0.1s
=> => sha256:98a87dfa76dde784bb4fe087518c839697ce1f0e4f55e6ad0b49f0bfd5fbe52c 1.43kB / 1.43kB 0.0s
=> => sha256:da0562a70a489a407e902b331e528b797524bca5e400df8f9bdcbad7267fb9ec 1.16kB / 1.16kB 0.0s
=> => sha256:37a1b854e294c8d6e1b0519b02e7ab3e991194dde8bb9004ccf8f230fb40bf81 6.53kB / 6.53kB 0.0s
=> => extracting sha256:884acb06399854759d90ca69f71f6ba3d3be88de193ec78501d4e57a517ca7d9 1.5s
=> [internal] load build context 0.1s
=> => transferring context: 1.55MB 0.0s
i-083433aa5c83c6270 (instance2)
PublicIPs: 44.203.130.164 PrivateIPs: 172.31.84.9
CloudShell
Feedback
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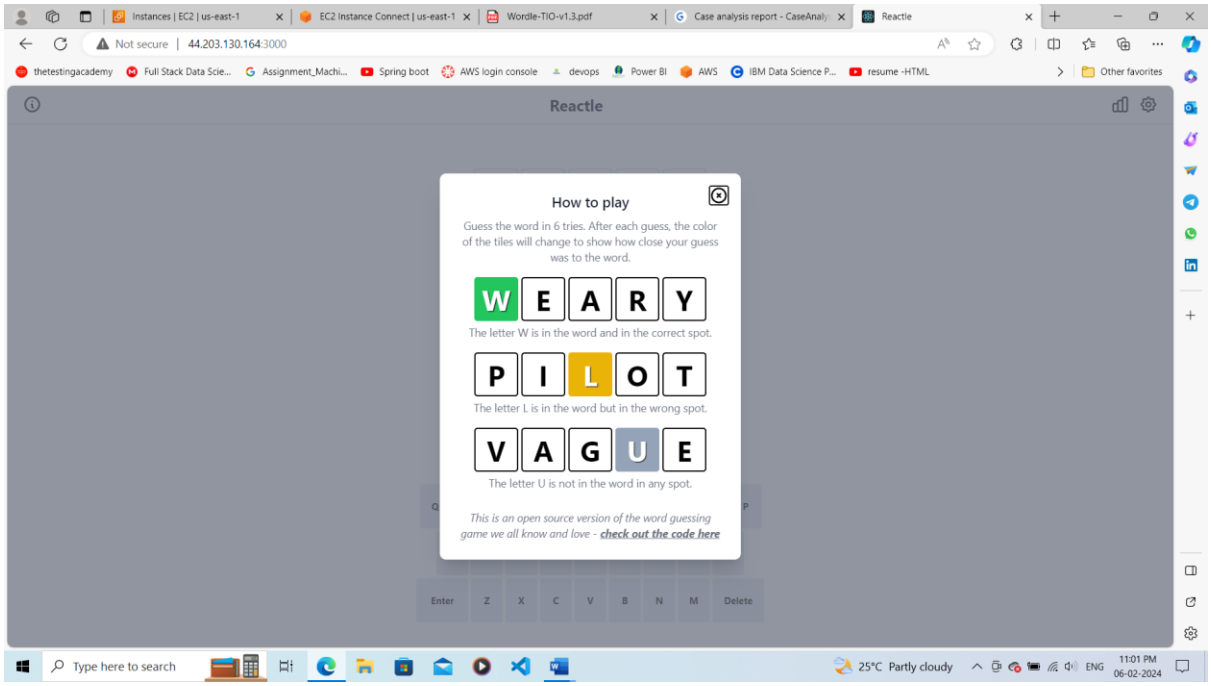
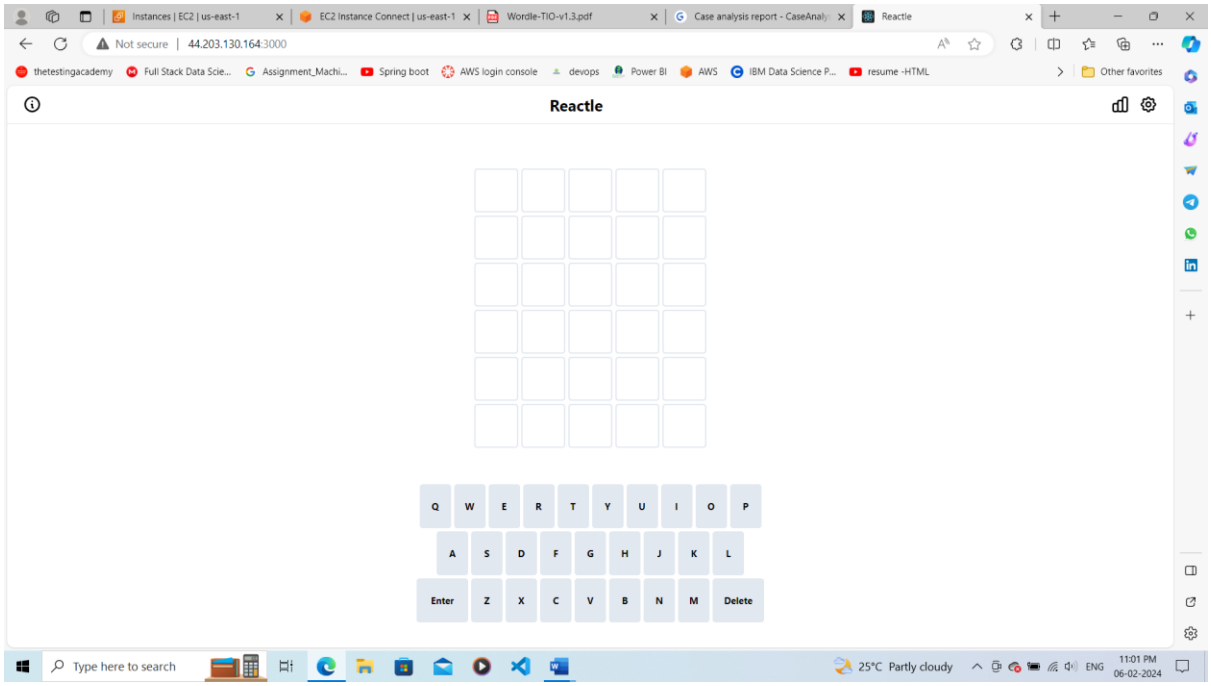
Type here to search
25°C Partly cloudy
ENG
10:57 PM
06-02-2024



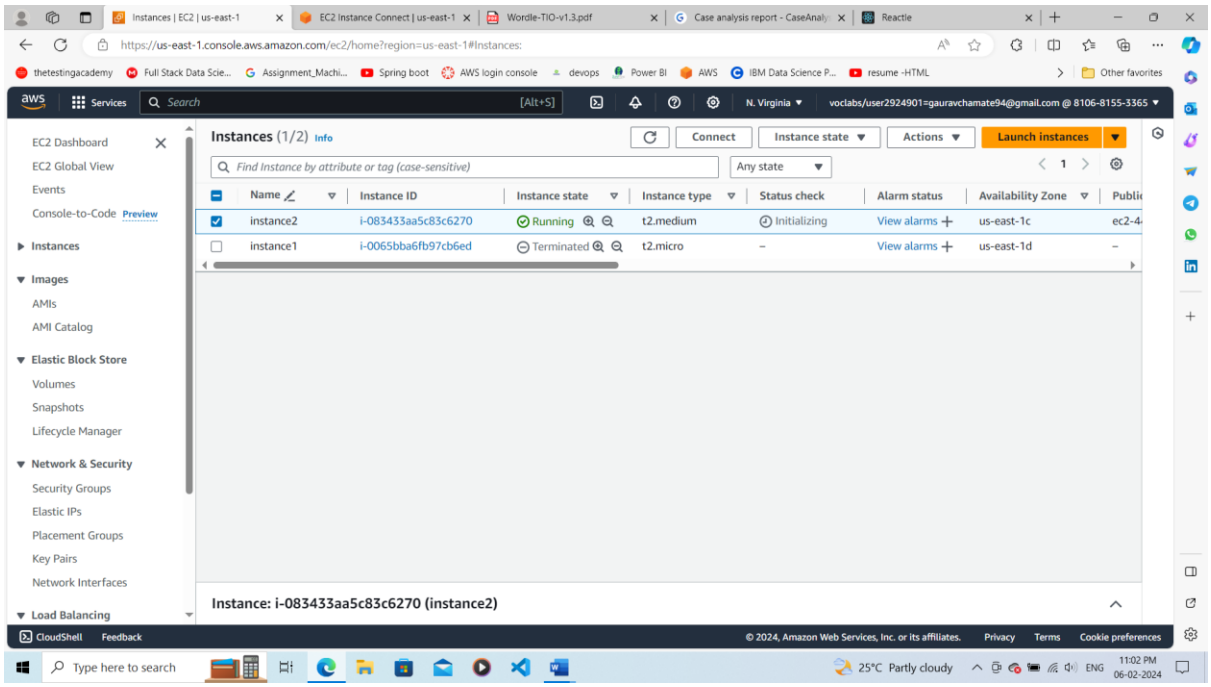


C. Hands-on: Deploying the application

1. Type the below commands in the terminal window one by one. Please note that there are 8 commands. sudo chown ubuntu:ubuntu-R /opt cd /opt git clone https://github.com/cwackerfuss/react-wordle.git cd react-wordle docker build-t reactle:dev-f docker/Dockerfile . docker run-d-p 3000:3000--name reactle-dev reactle:dev

2. Navigate to the public IP address of the running instance on a new web browser tab to see the application using the following format :3000 D. Hands-on: Terminating / deleting an instance

1. Go back to the browser tab EC2 management console

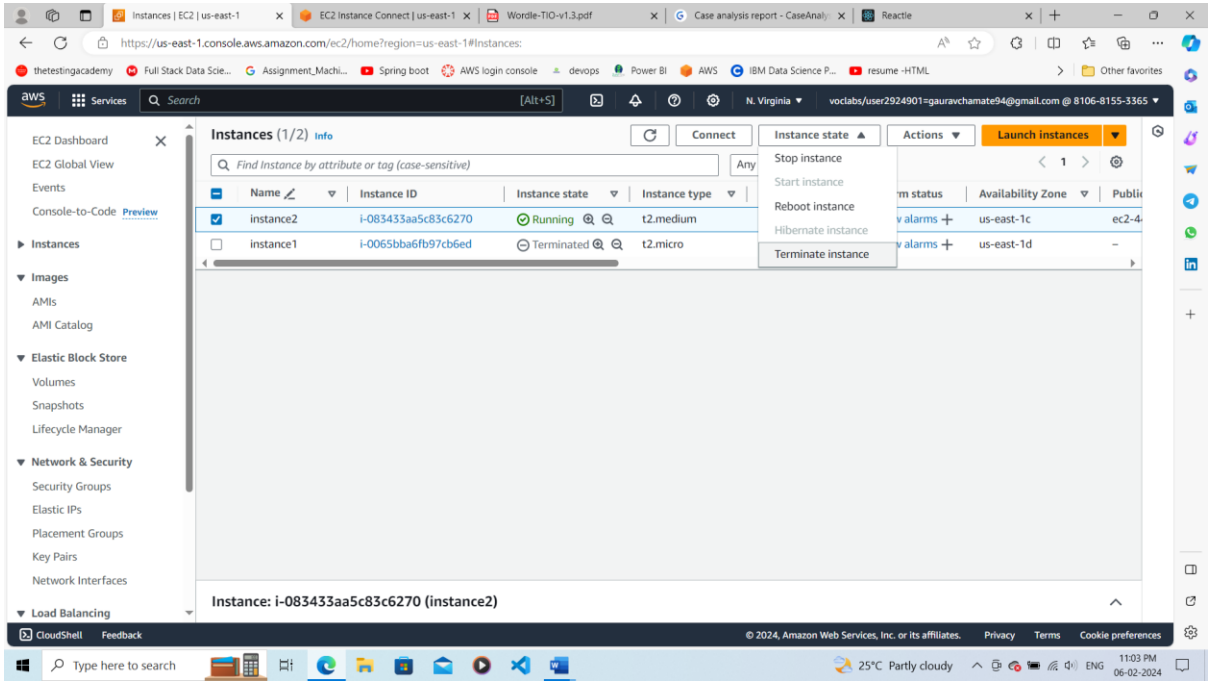


2. Click on Instances in the left navigation

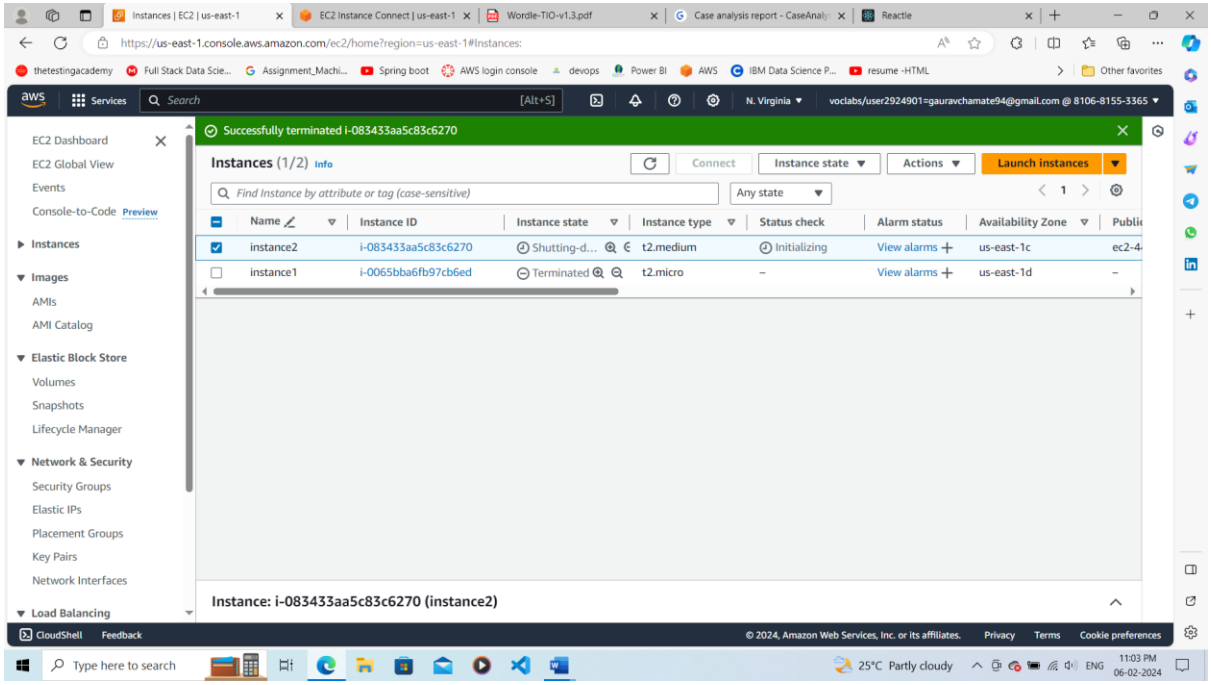
3. Click on the checkbox to the left of your running instance (no action is necessary if the checkbox is already selected)

4. Click on the Instance state dropdown towards the top right side of the screen

5. Select Terminate instance option



6. Click on the Terminate button on the confirmation popup window



7. The instance will show in Shutting down status and a few moments later will show as Terminated

8. Terminated instances do not attract any costs and will be auto removed from the instance listing in about 2 hours (or less)

9. Go back to the Lab environment and reset the Lab work area using the reset button in the top right of the screen to avoid any unintended credit charges