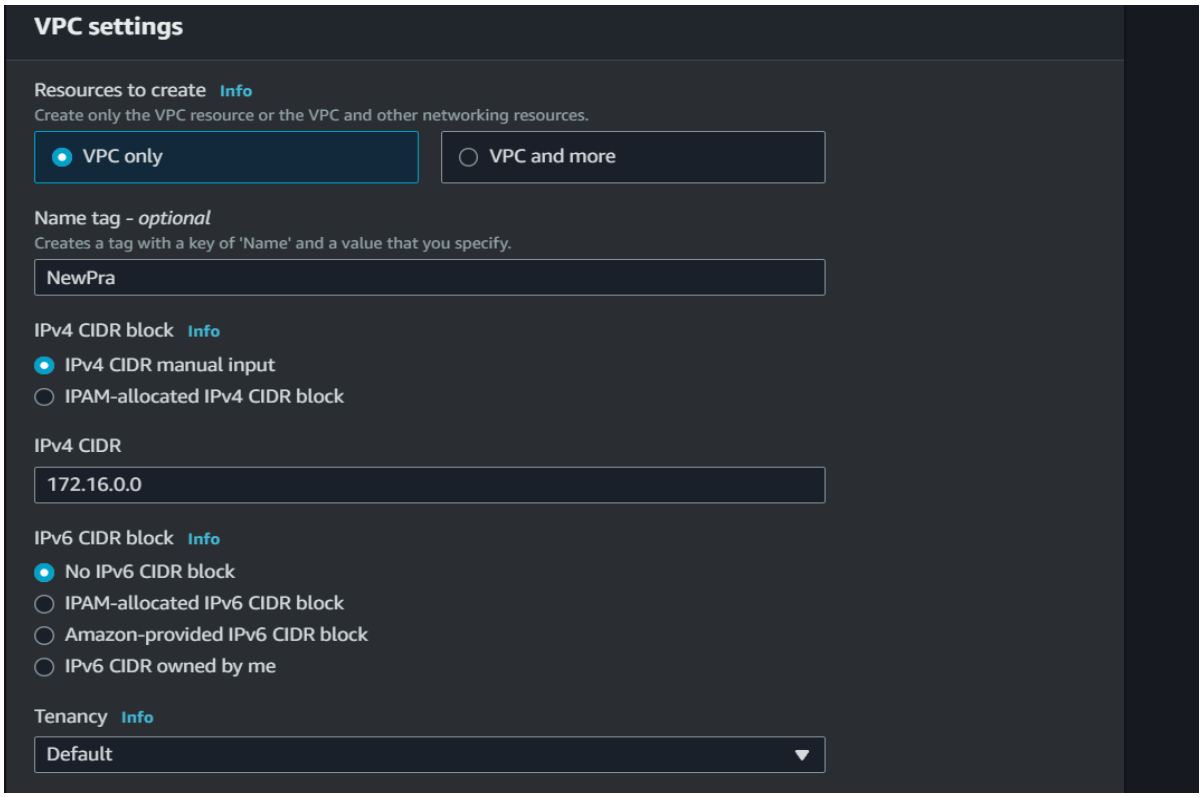
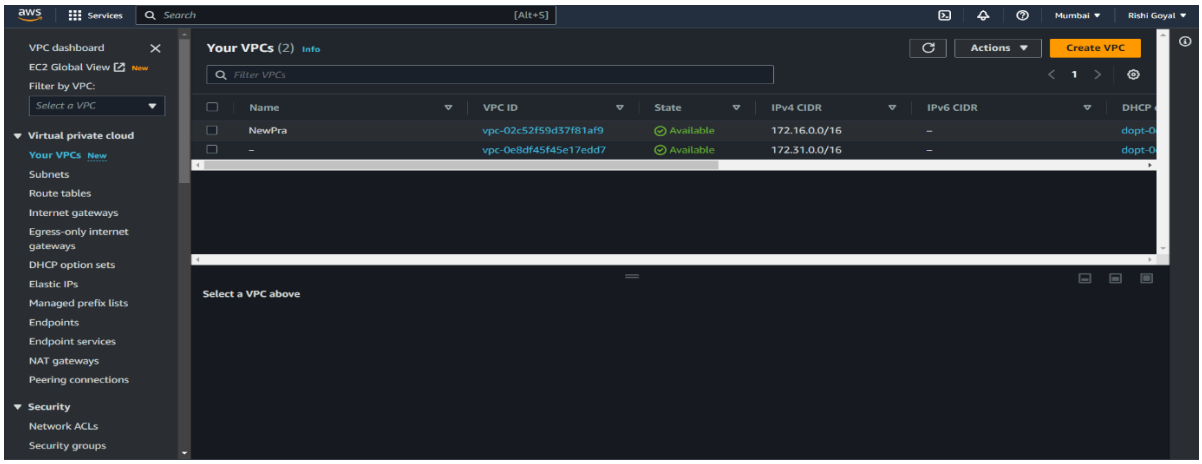
Project – Efficient Web Page Deployment on AWS with Jenkins CI/CD Pipeline

Objective – The objective of the project was to deploy a webpage on a public IP address using AWS and establish continuous deployment on a public server through the utilization of Jenkins' CI/CD pipeline.

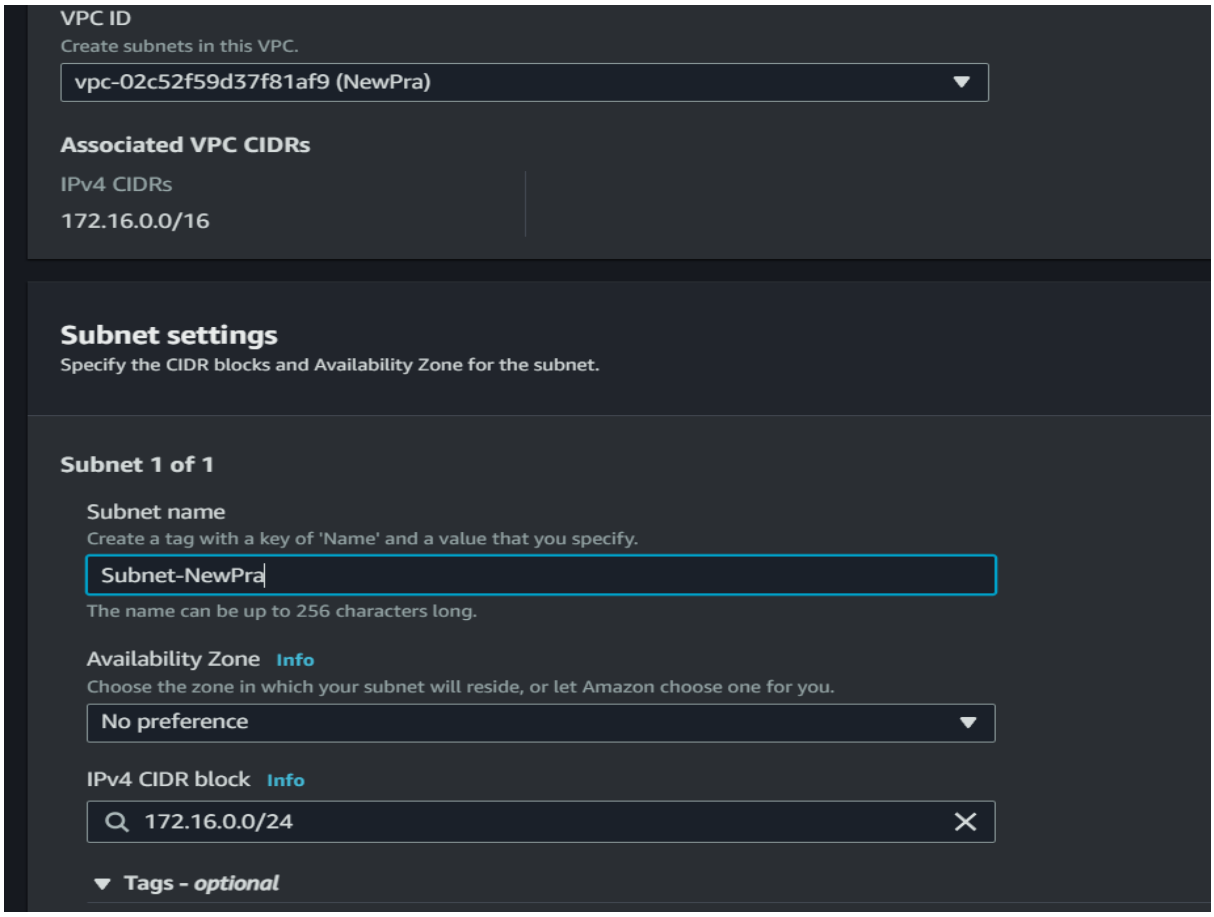
Step 1 – A Virtual Private Cloud (VPC) was created on AWS to facilitate network isolation and provide a secure and scalable environment for the project.

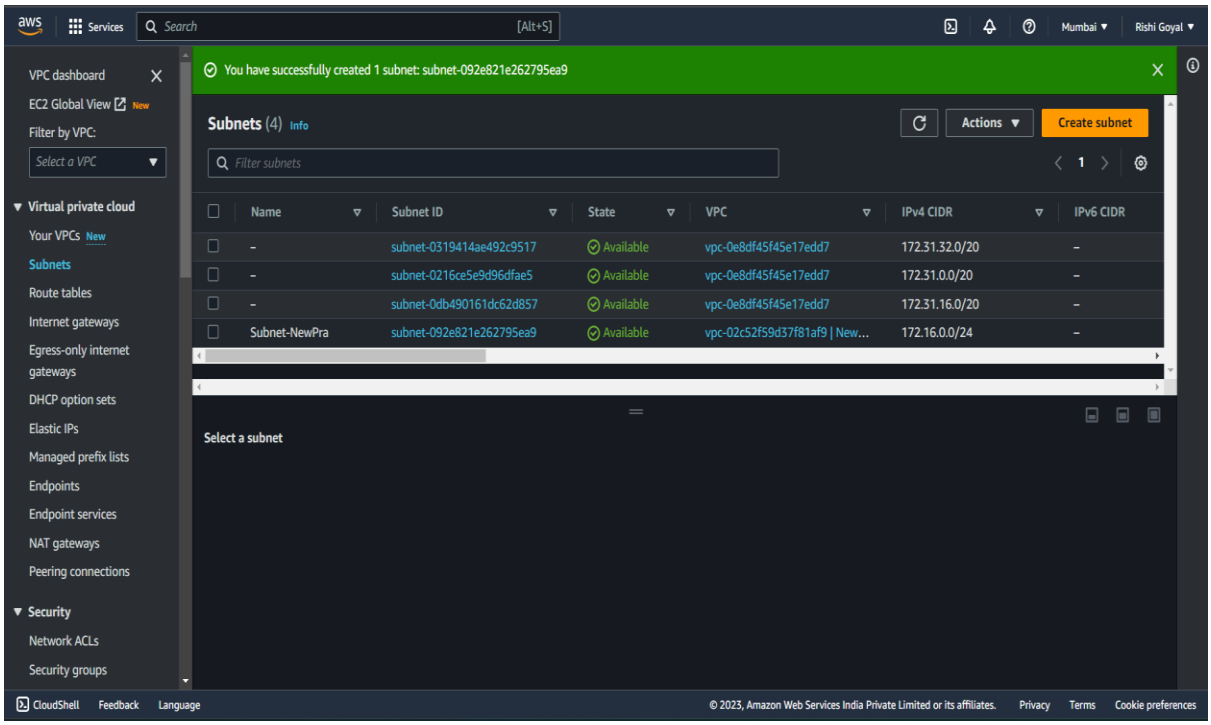
- Created VPC



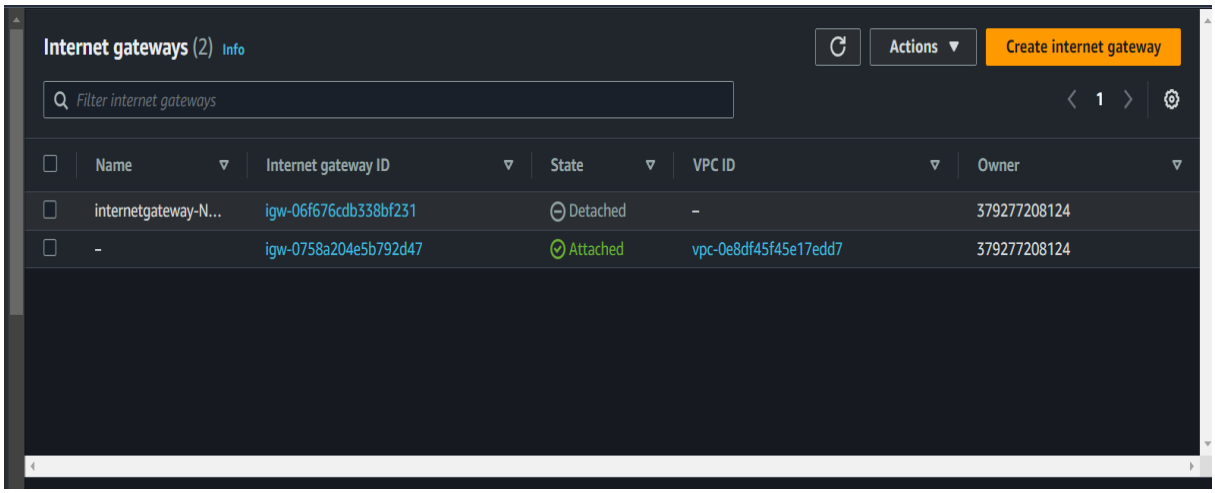


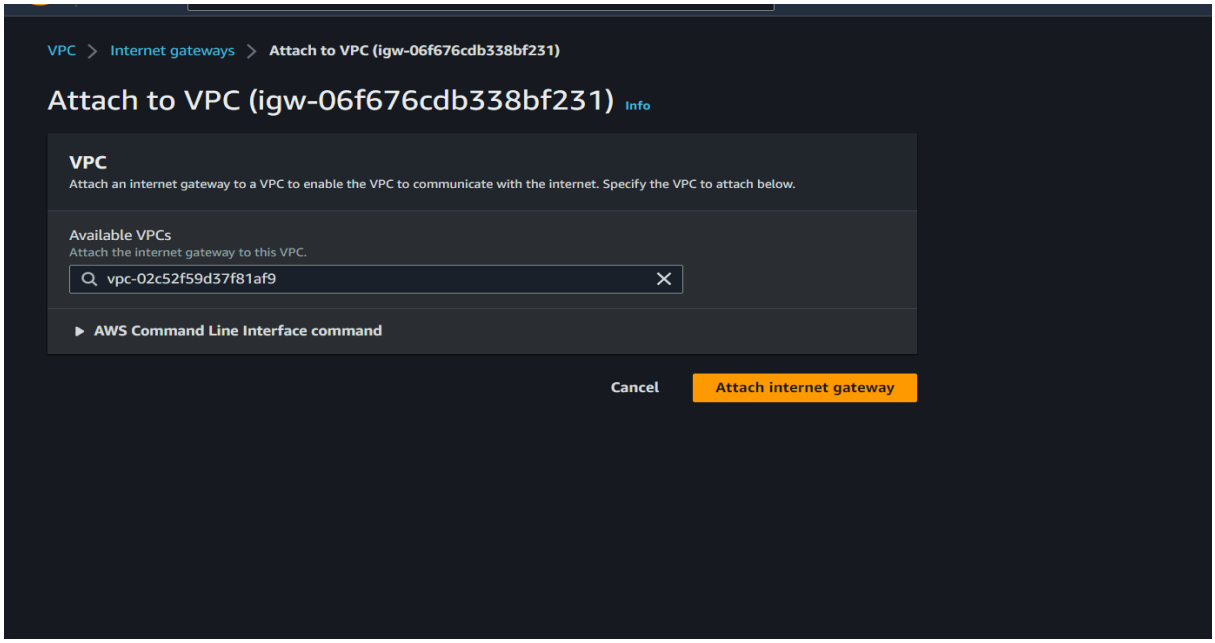
- Created Subnet



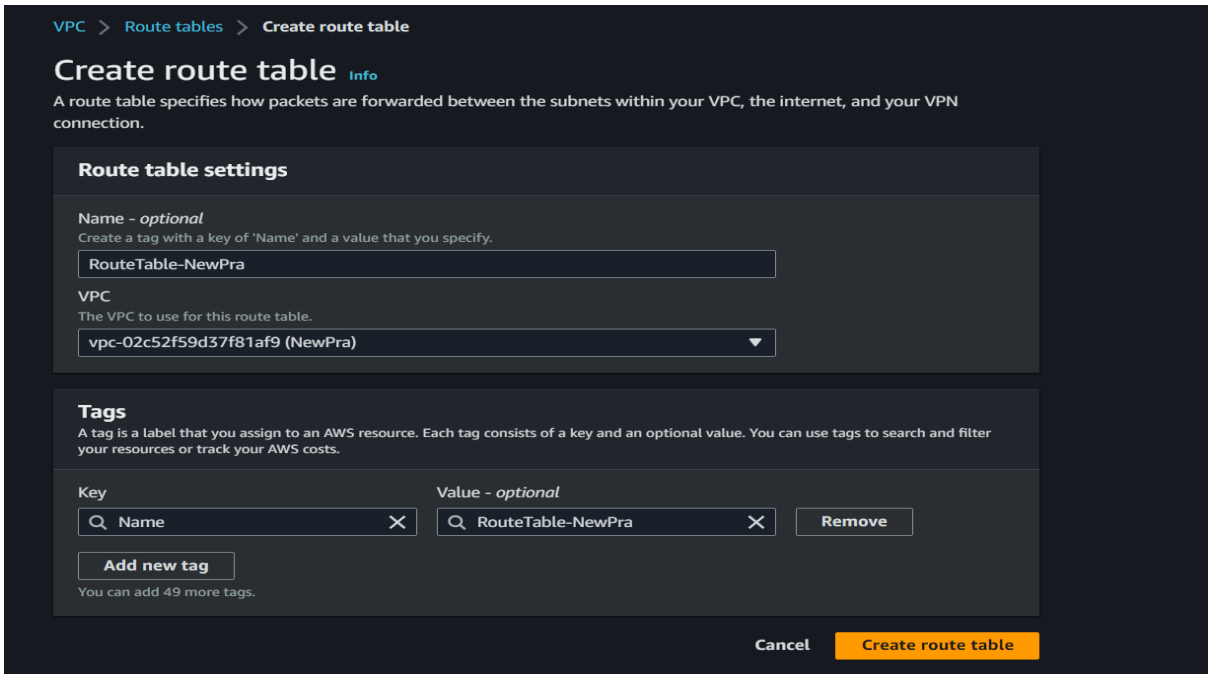


- Created Internet gateway

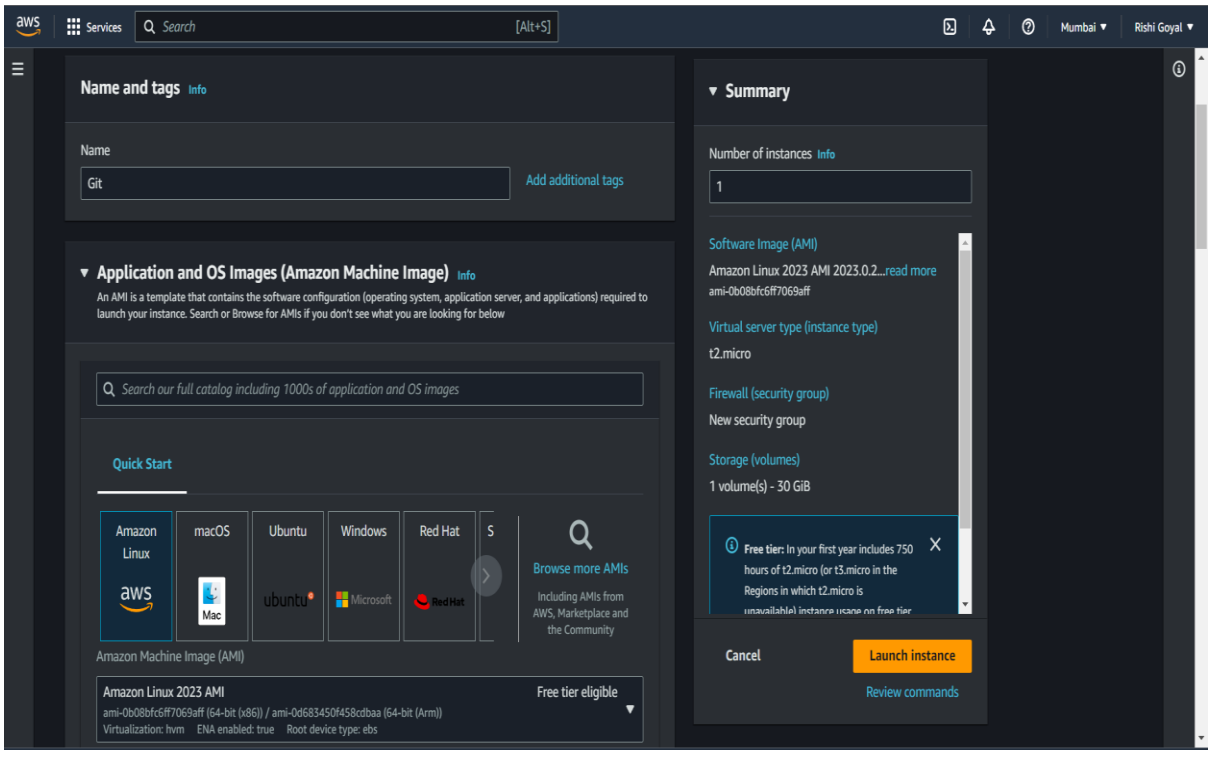


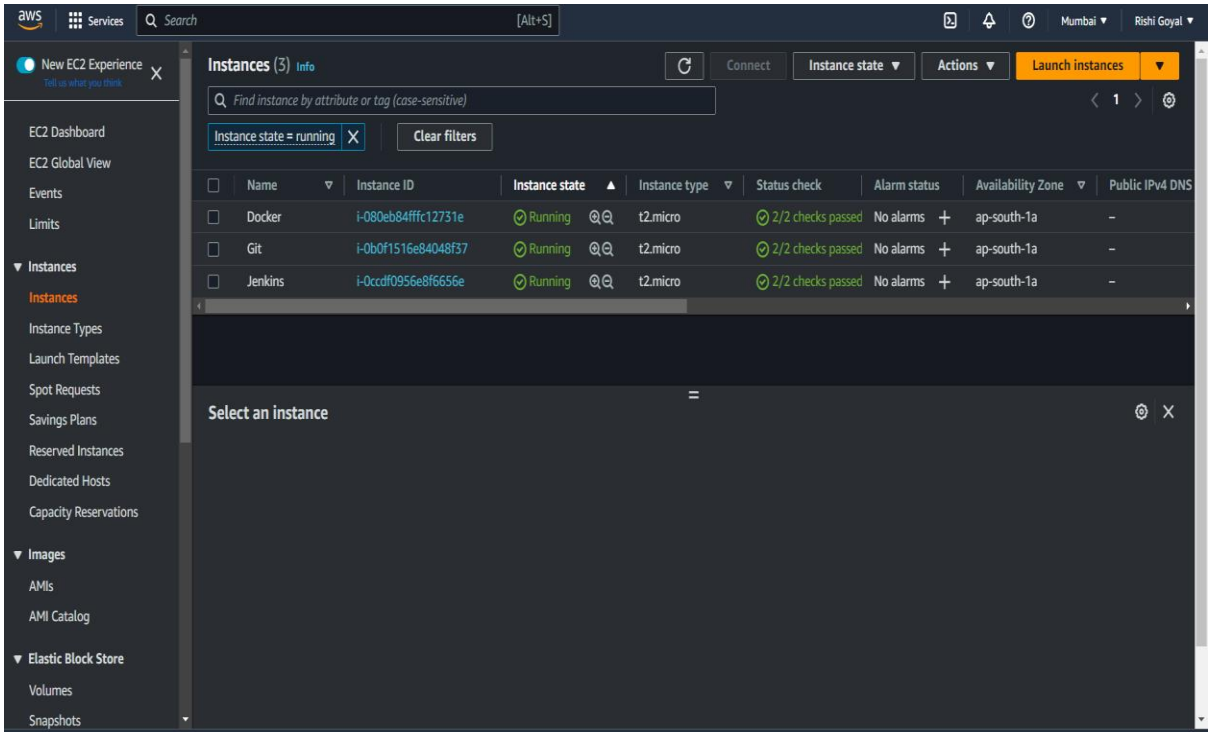


- Created Route Table



Step 2 – Three instances were created for different purposes: one for Git, another for Docker, and the third for Jenkins, and attached instances with the created VPC.

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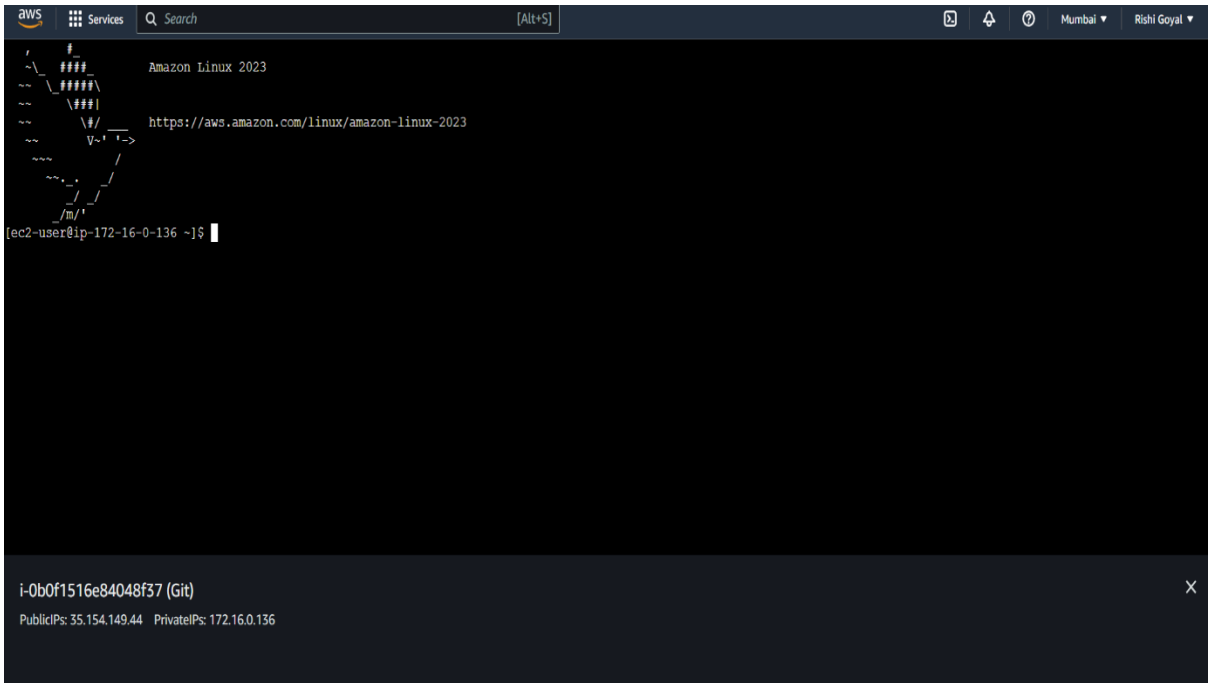
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Instances (3) Info
Connect
Instance state
Actions
Launch instances
Find instance by attribute or tag (case-sensitive)
Instance state = running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 DNS
Docker
i-080eb84fffc12731e
Running
t2.micro
2/2 checks passed
No alarms
ap-south-1a
Git
i-0b0f1516e84048f37
Running
t2.micro
2/2 checks passed
No alarms
ap-south-1a
Jenkins
i-0ccdf0956e8f6656e
Running
t2.micro
2/2 checks passed
No alarms
ap-south-1a
Select an instance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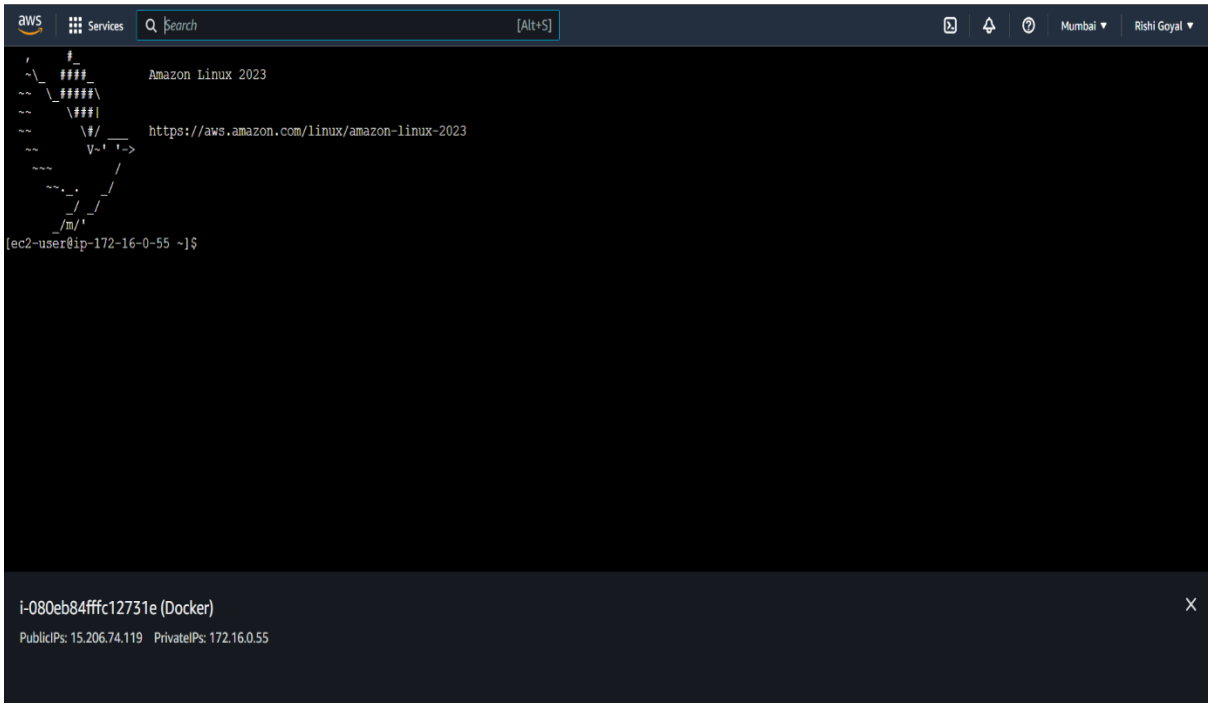
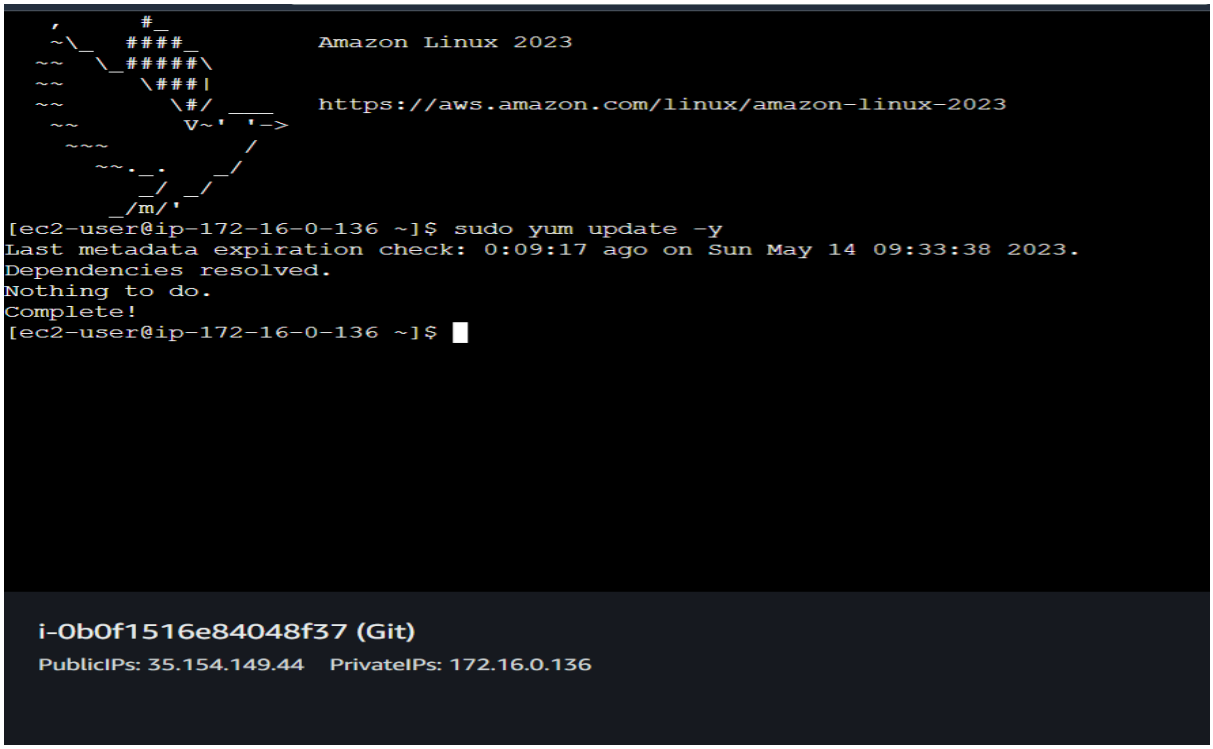
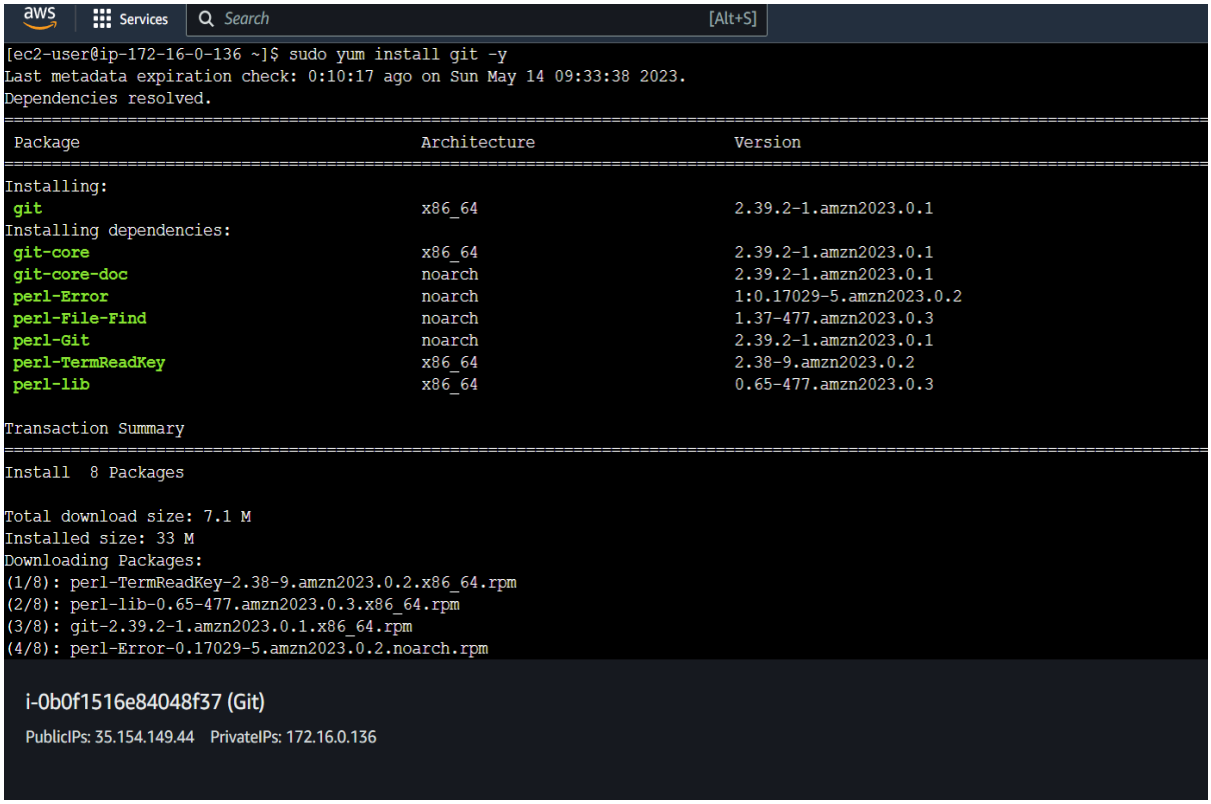
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-16-0-136 ~]$
i-0b0f1516e84048f37 (Git)
PublicIPs: 35.154.149.44 PrivateIPs: 172.16.0.136

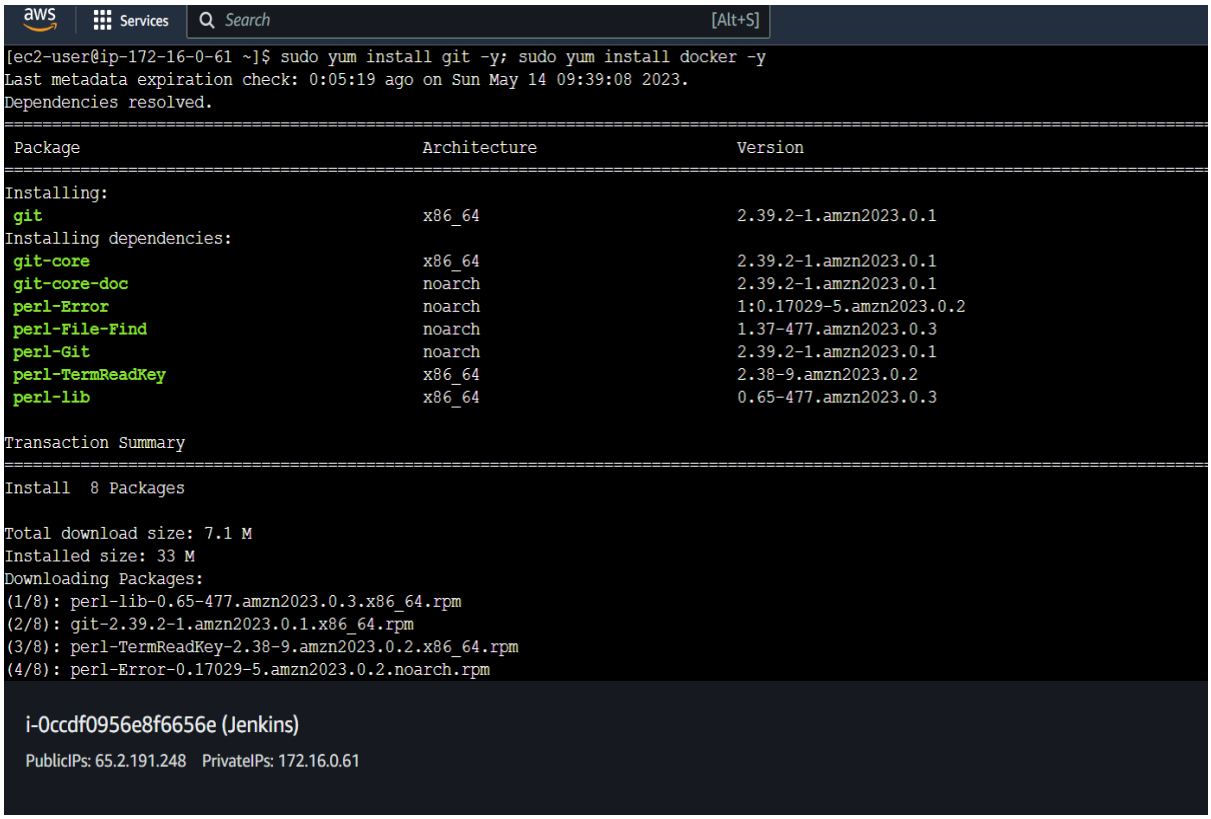


Step 3 – All the necessary configurations were performed on the instances to ensure proper functionality and alignment with project requirements.

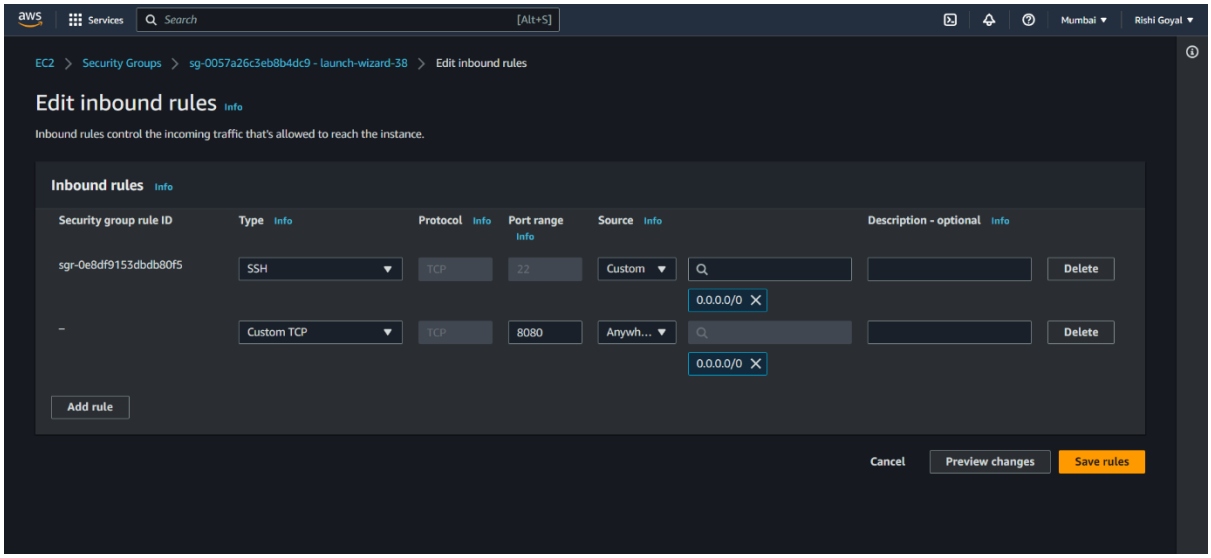


- Installed Git, Docker and Jenkins on instances according to the Requirements

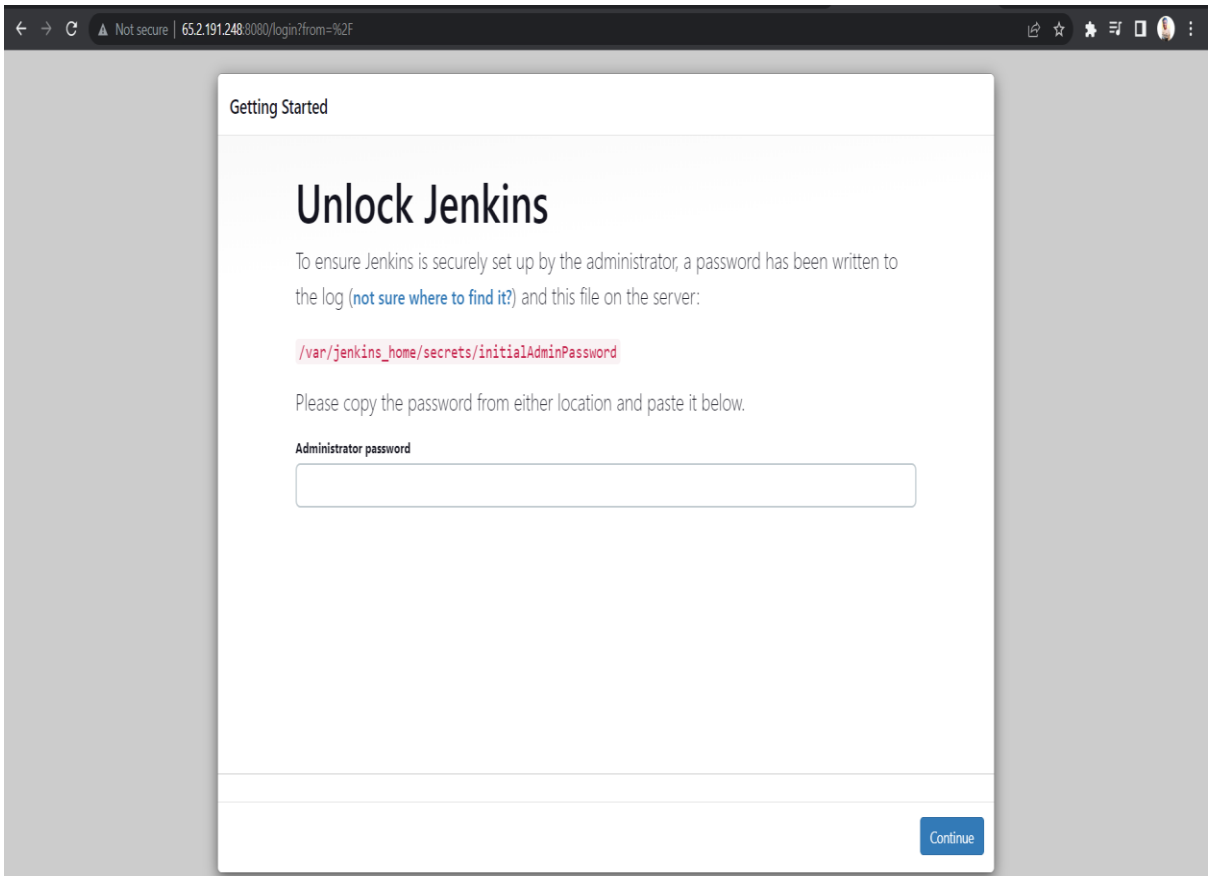




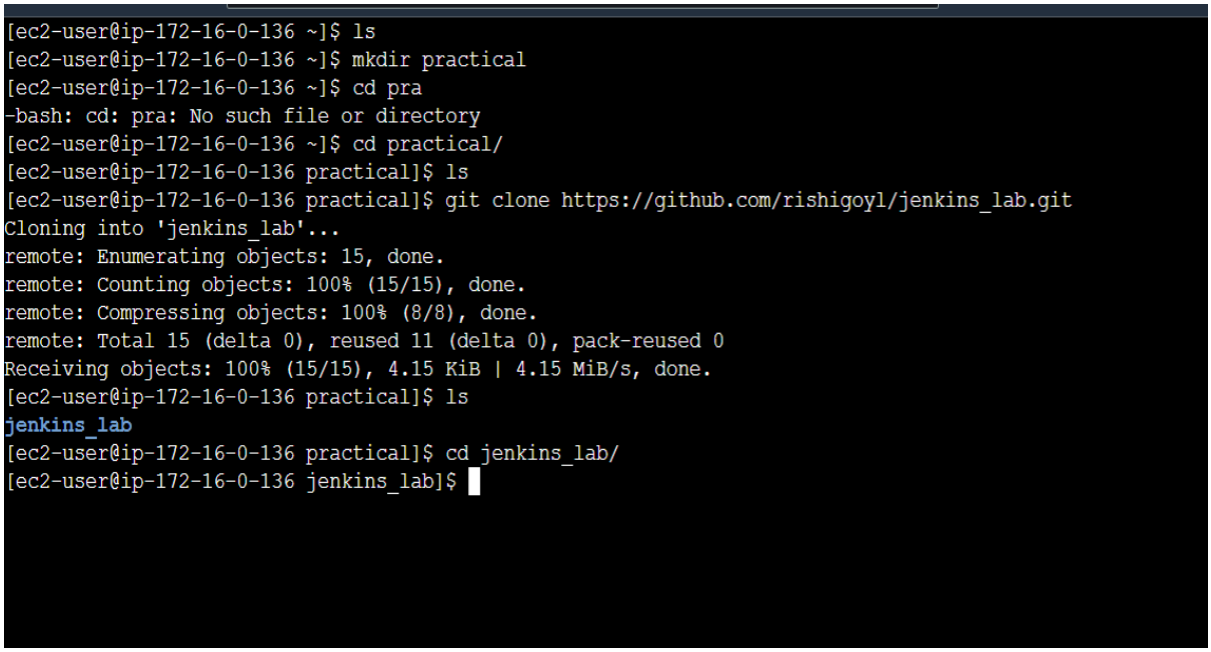
- Add the inbound rule on Jenkins instance

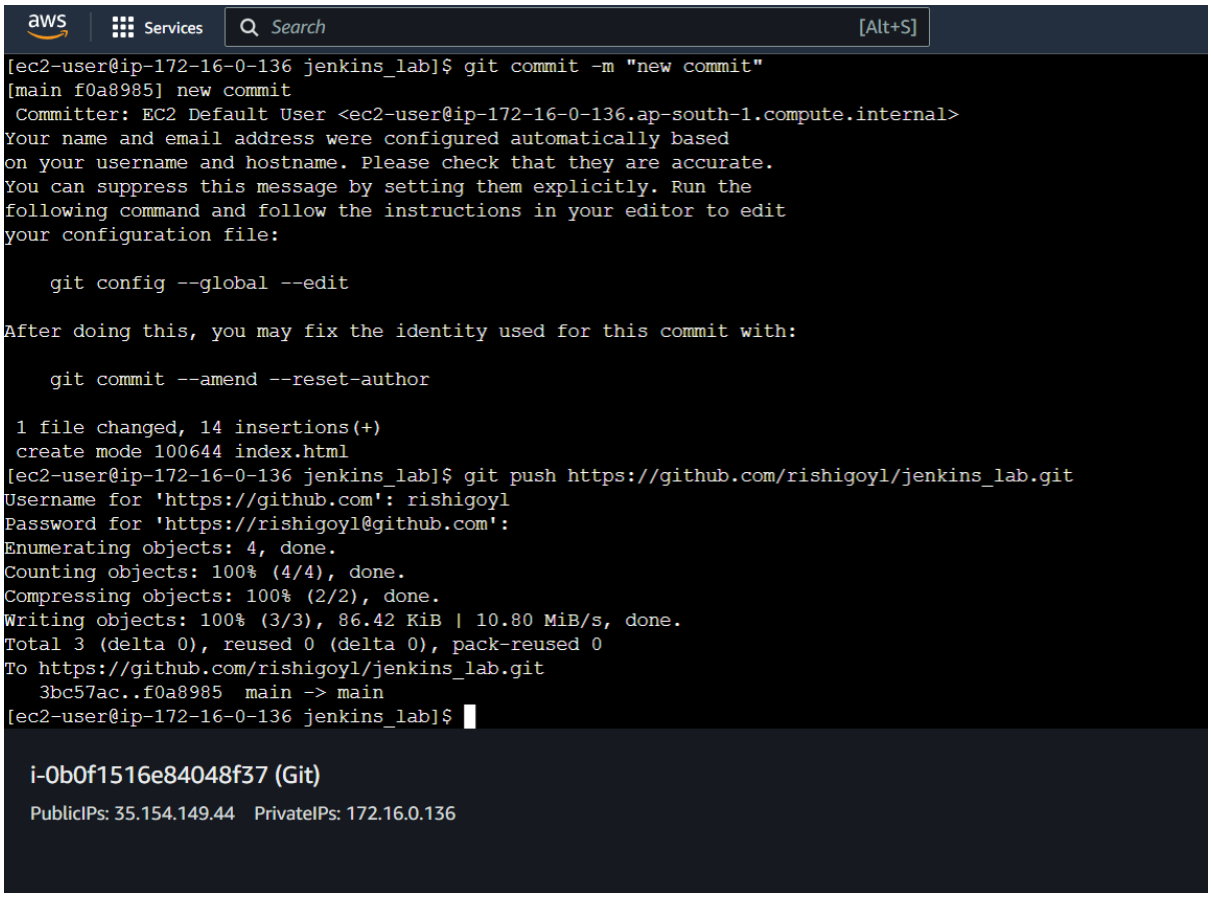


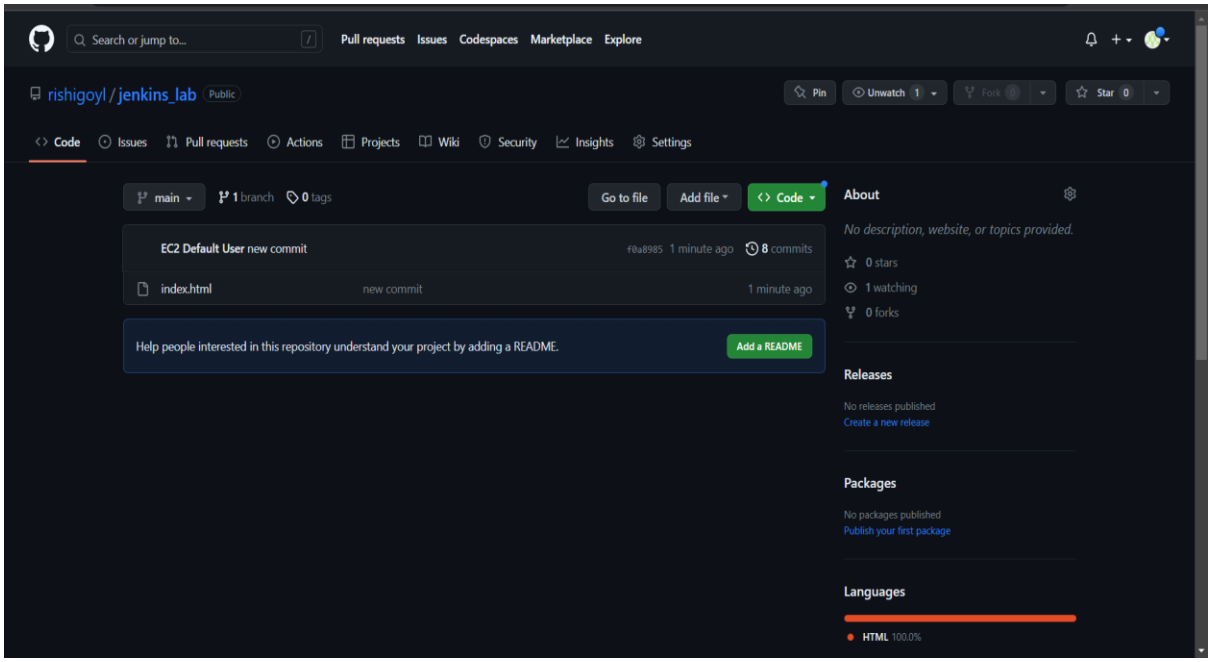
- Reach out the Jenkins webpage



- A central repository was created on GitHub, and the webpage was pushed to the repository.





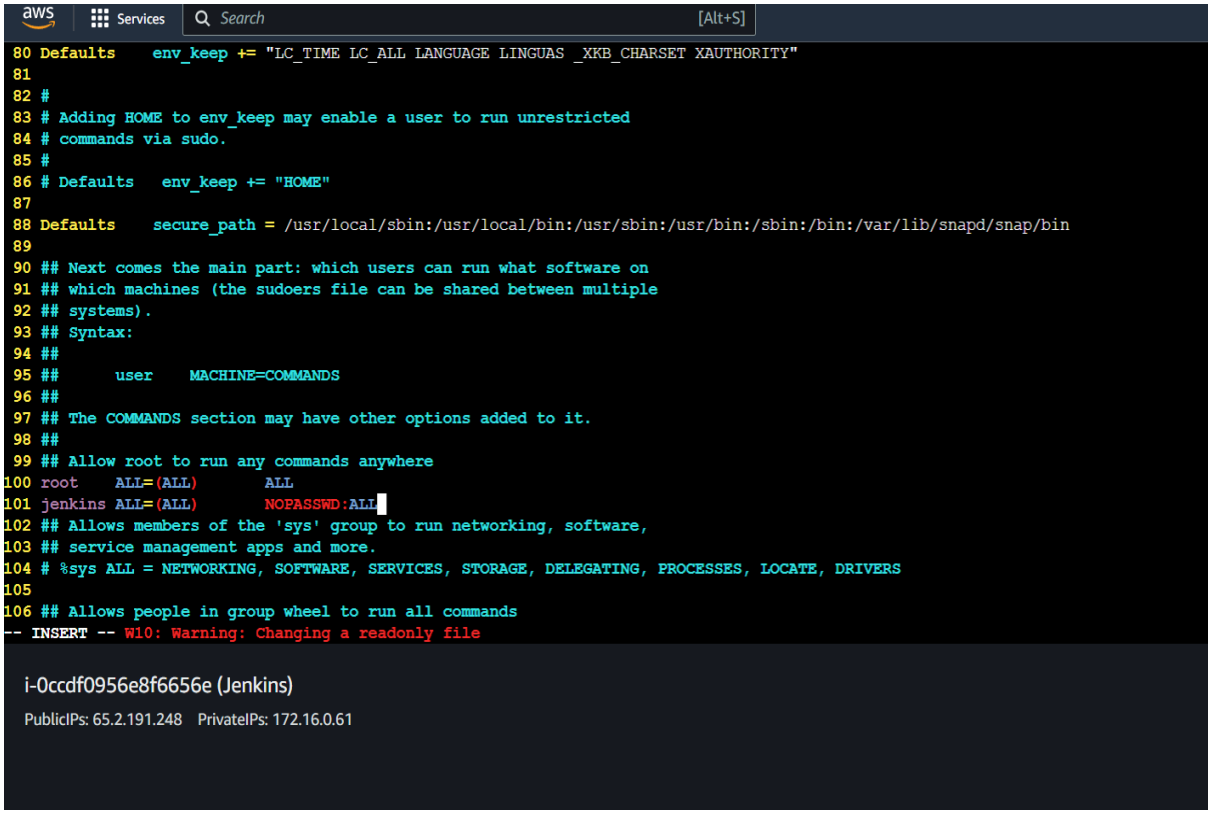


- The configuration files on both the Docker and Jenkins instances were edited to establish seamless communication and enable effective coordination between the two instances.

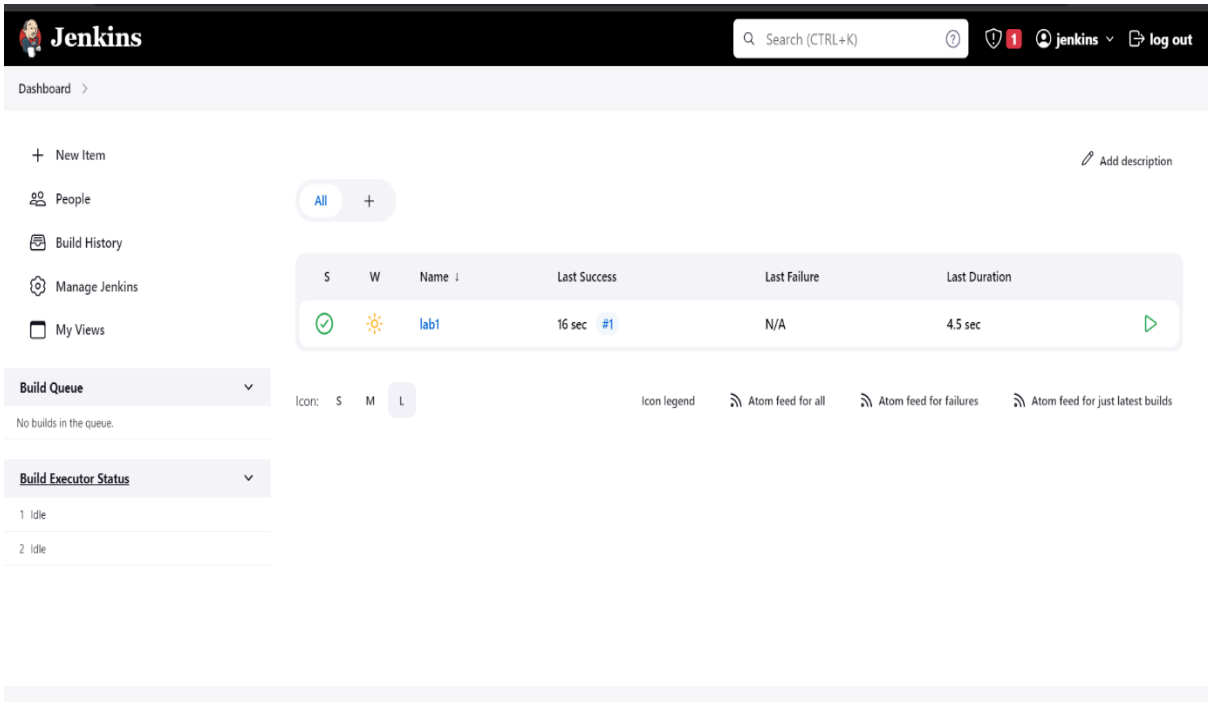
```
#PubkeyAuthentication yes

# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2
# but this is overridden so installations will only check .ssh/authorized_keys
AuthorizedKeysFile      .ssh/authorized_keys

#AuthorizedPrincipalsFile none


# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# Explicitly disable PasswordAuthentication. By presetting it, we
# avoid the cloud-init set_passwords module modifying sshd_config and
# restarting sshd in the default instance launch configuration.
PasswordAuthentication yes
PermitEmptyPasswords no

# Change to no to disable s/key passwords
#KbdInteractiveAuthentication yes

# Kerberos options
-- INSERT --
```

i-080eb84fffc12731e (Docker)

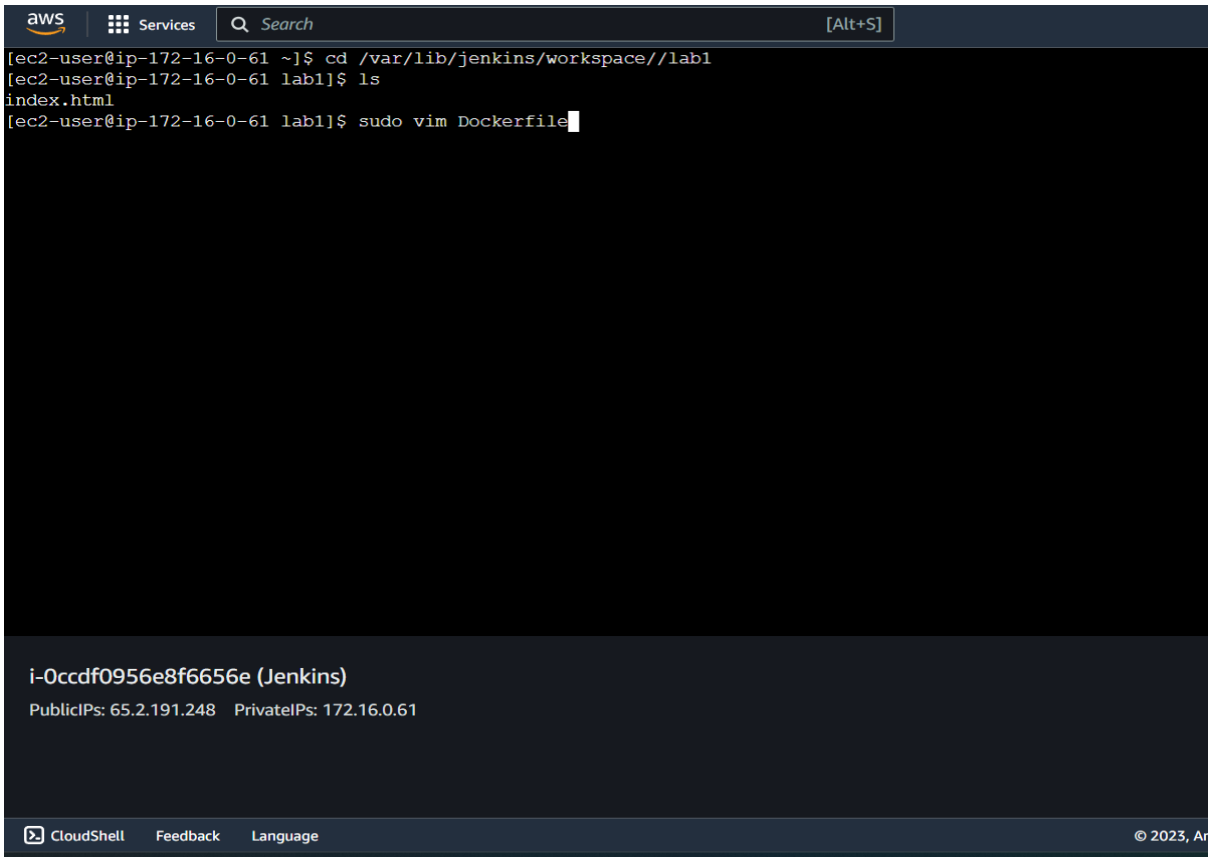
PublicIPs: 15.206.74.119 PrivateIPs: 172.16.0.55

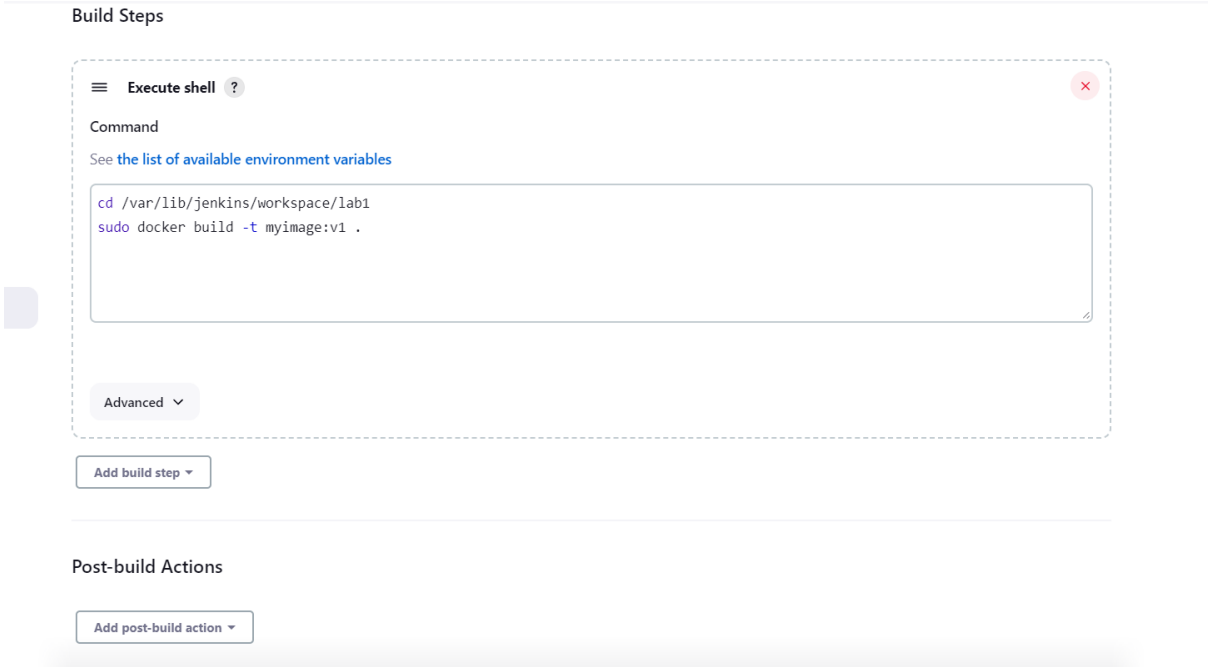


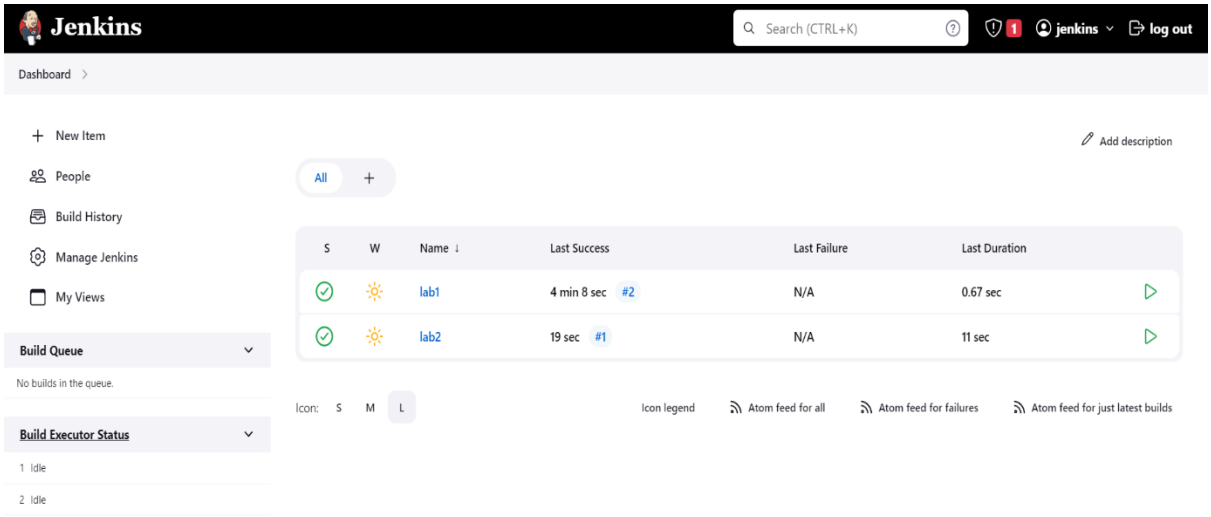
- A freestyle project was created on Jenkins and linked to the GitHub repository



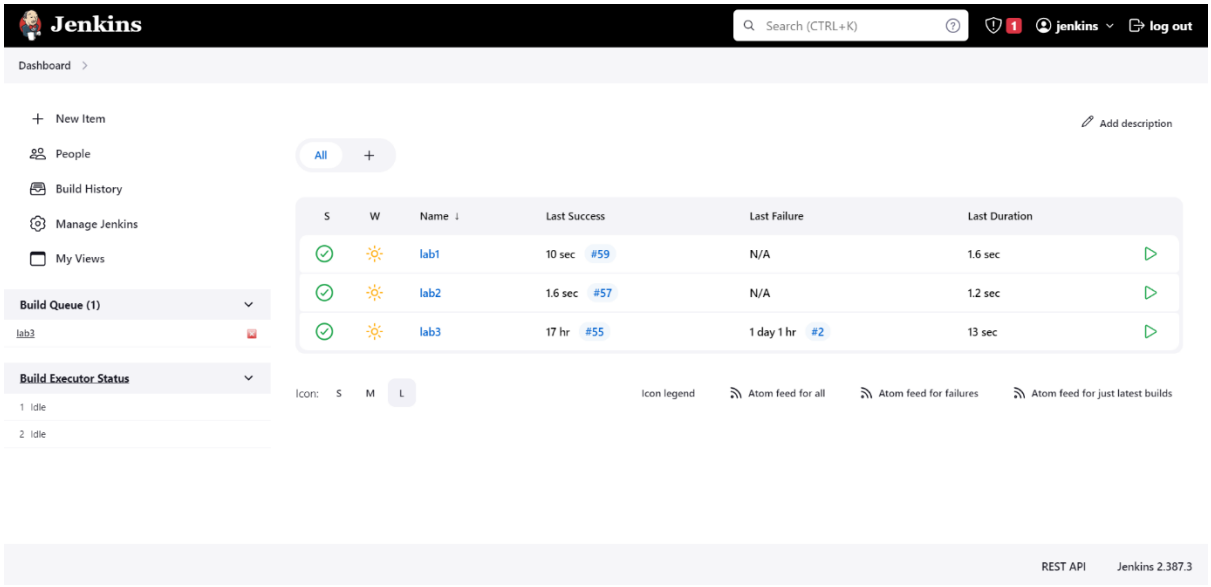
- A Dockerfile was created on the Jenkins instance, and subsequently, another freestyle project was set up and linked to the first project



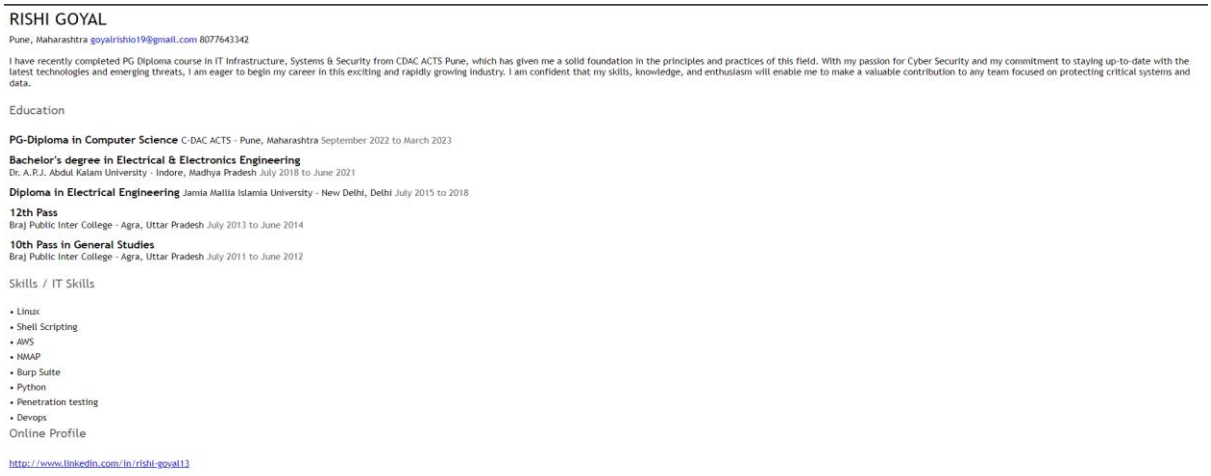




- A third freestyle project was created to create a Docker container and it was linked to the second build



- The webpage is now functioning seamlessly and can be accessed publicly without any issues



RISHI GOYAL

Pune, Maharashtra goyalrishio19@gmail.com 8077643342

I have recently completed PG Diploma course in IT Infrastructure, Systems & Security from CDAC ACTS Pune, which has given me a solid foundation in the principles and practices of this field. With my passion for Cyber Security and my commitment to staying up-to-date with the latest technologies and emerging threats, I am eager to begin my career in this exciting and rapidly growing industry. I am confident that my skills, knowledge, and enthusiasm will enable me to make a valuable contribution to any team focused on protecting critical systems and data.

Education

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12th Pass
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10th Pass in General Studies
Braj Public Inter College - Agra, Uttar Pradesh July 2011 to June 2012

Skills / IT Skills

- Linux
- Shell Scripting
- AWS
- NMAP
- Burp Suite
- Python
- Penetration testing
- Devops

Online Profile

http://www.linkedin.com/in/rishi-goyal13

- Modifications have been made to the HTML code

```
rmal; font-weight: normal; text-decoration: none; font-size: 17pt; }
normal; font-weight: normal; text-decoration: none; font-size: 9pt; margin:0pt; }
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l; font-weight: normal; text-decoration: underline; font-size: 9pt; }


ebuchet MS", sans-serif; font-style: normal; font-weight: normal; text-decoration: none; font-s
t;text-indent: 0pt;text-align: left;">RISHI GOYAL Resume</p><p class="s3" style="padding-top: 6
```

- The webpage has been successfully updated with the modified content, reflecting the changes made to the HTML code

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RISHI GOYAL Resume

Pune, Maharashtra goyalrishio19@gmail.com 8077643342

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