Module 5: Ansible Assignment - 3

Assignment Submitted By:-Hitesh Chauhan
Course Offered: -Advanced Cloud Computing and Devops
Assignment By: -Intellipaat
Trainer: -Kumar
Date Of Submission: -10/03/2025

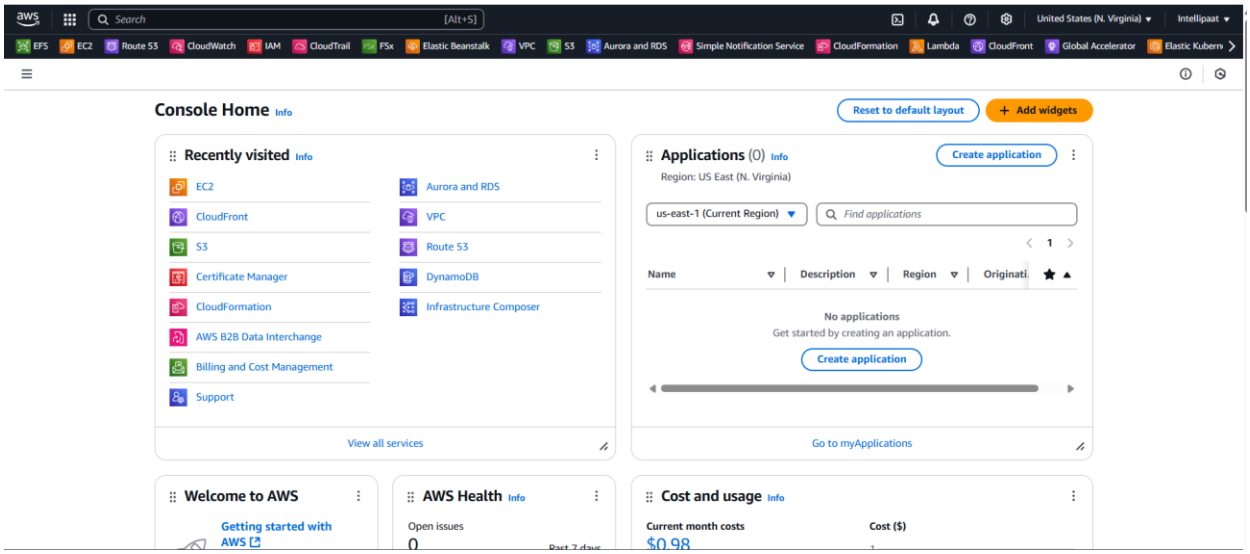
Tasks To Be Performed:

1. Create 2 Ansible roles
2. Install Apache2 on slave1 using one role and NGINX on slave2 using the other role
3. Above should be implemented using different Ansible roles

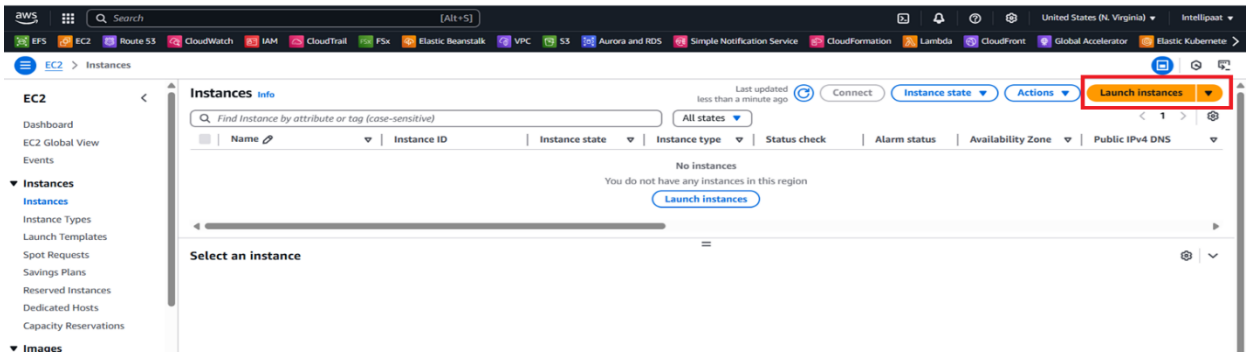
SOLUTION

Go To AWS Management Comsole And create 3 ec2 instances 1 is master node and 2 is slave node.

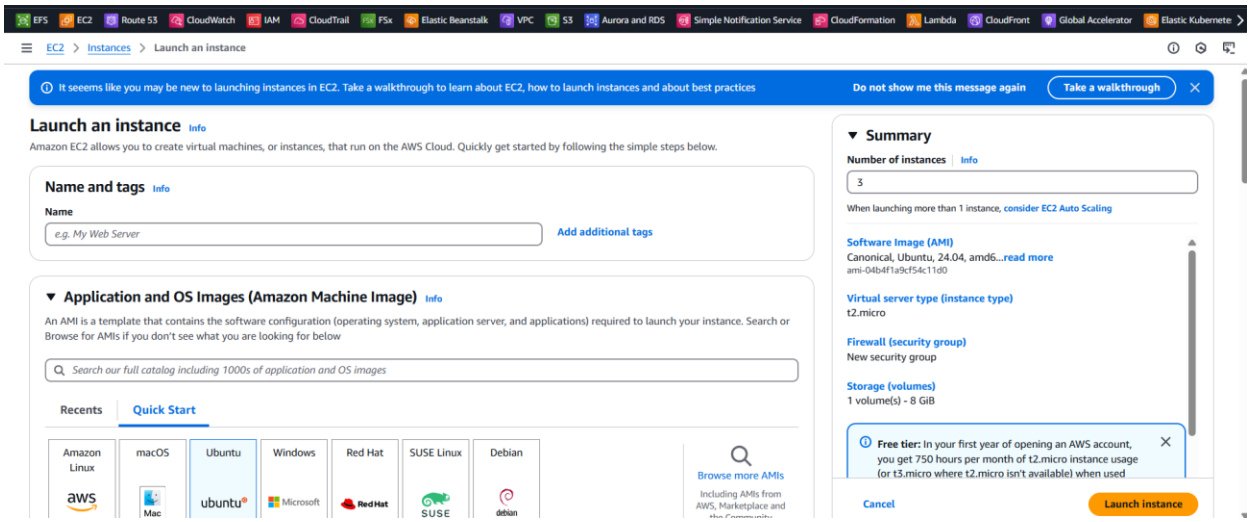
After Login the aws console you will see like this screen.



Then Click EC2 then click the instances and click the launch instance

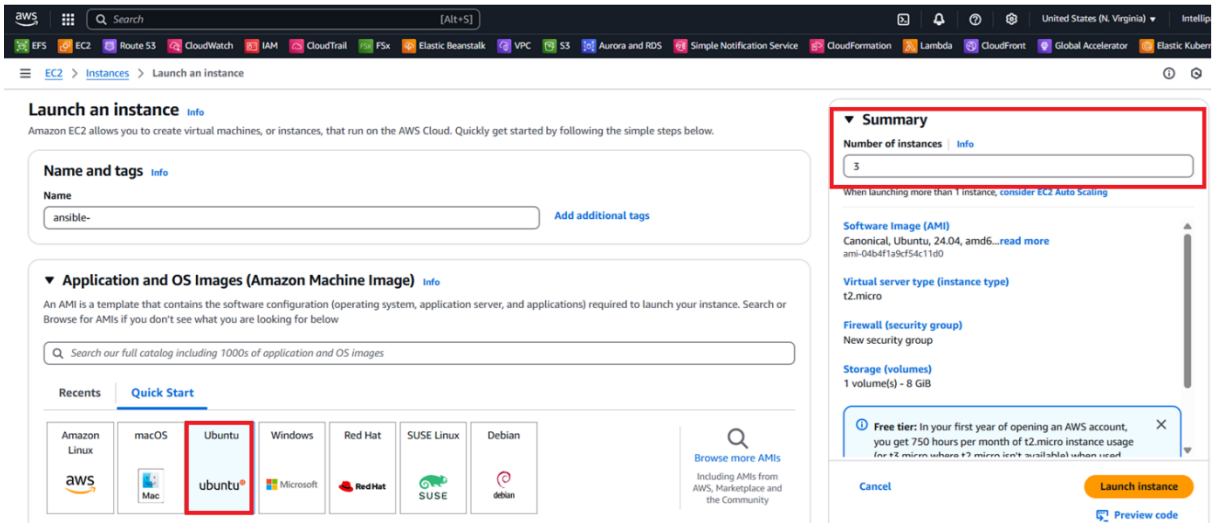


After Click the launch instance you will see like this page.

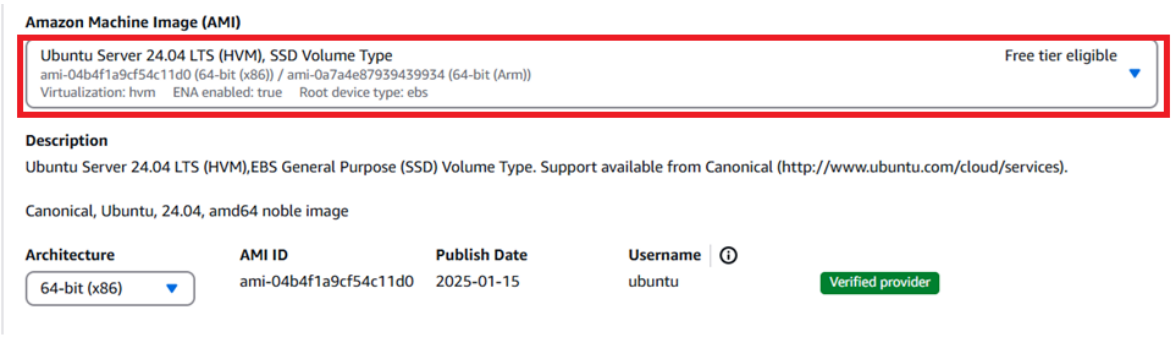


Assign the name of instance

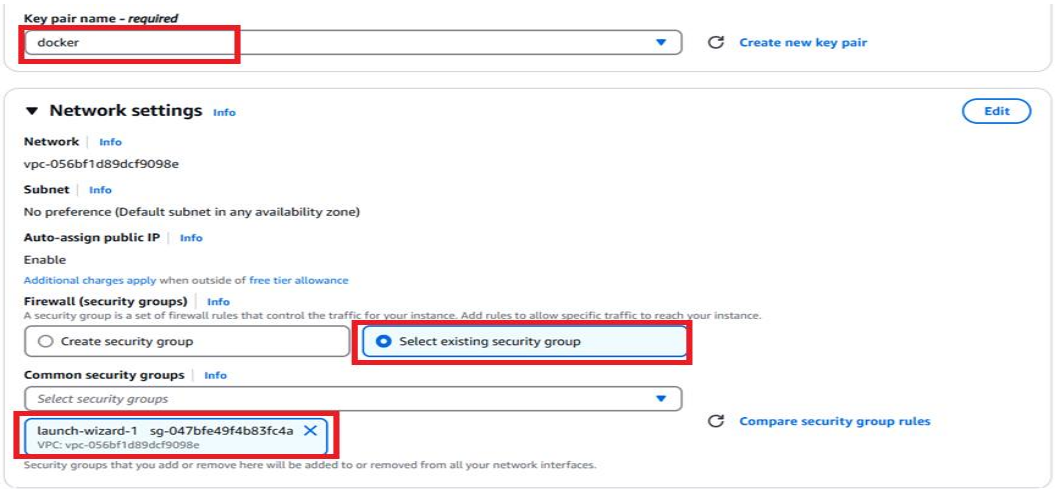
Select AMI is ubuntu



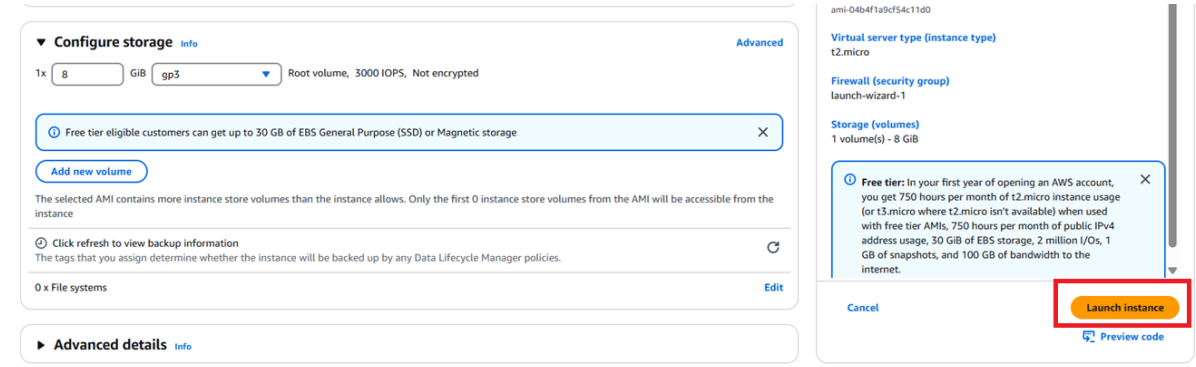
Select the Amazon Machine Image(AMI) as a ubuntu with free tier.

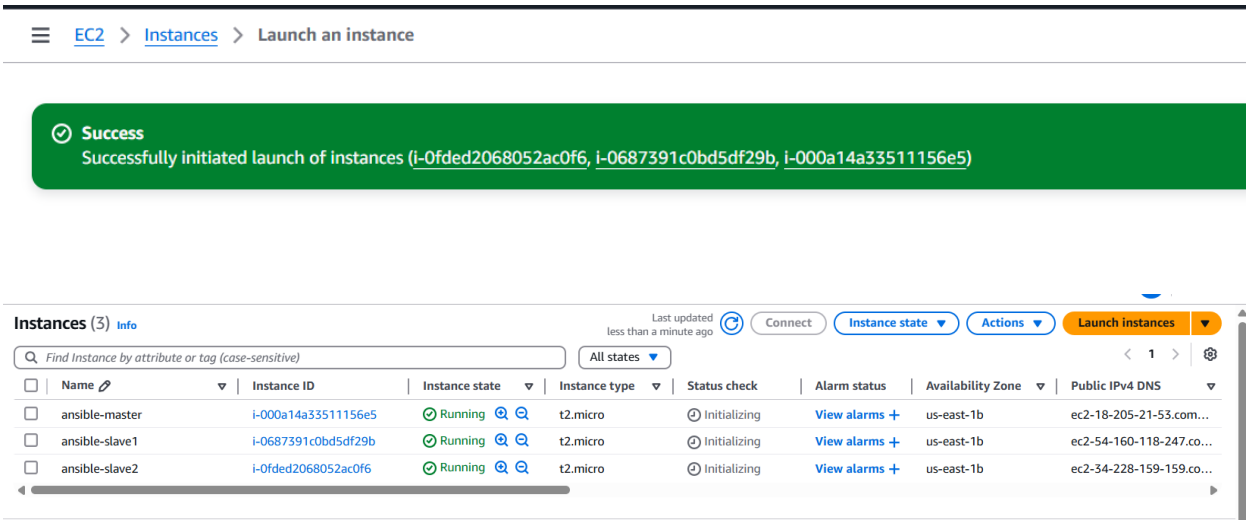


Now We need choose keypair and then select firewall I choose to select existing security group I have already created.

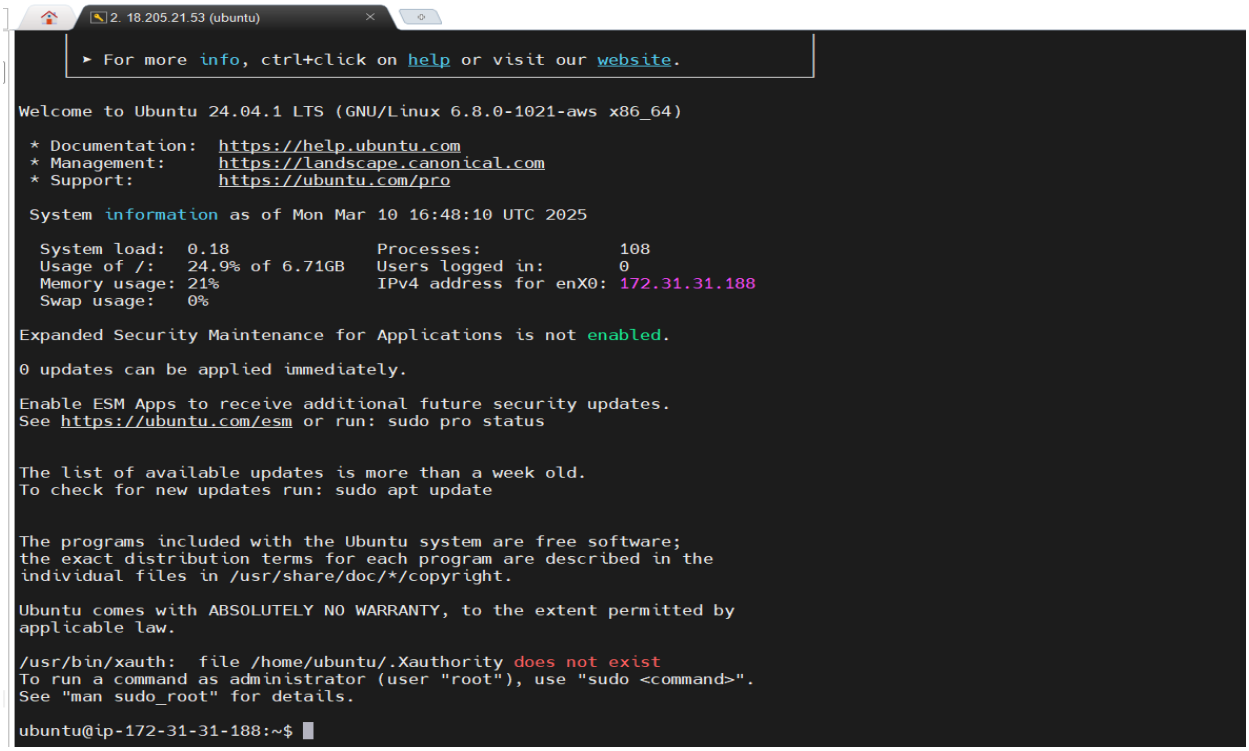


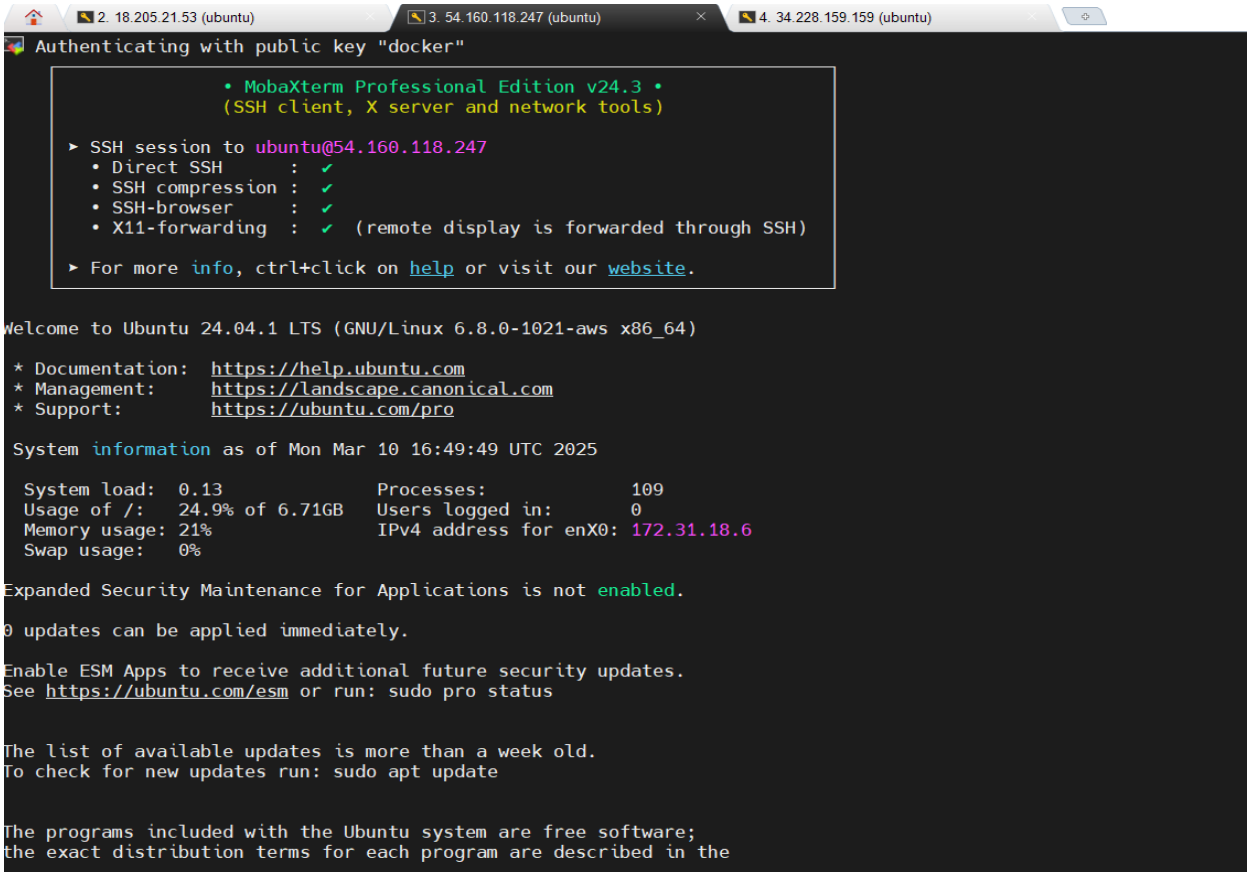
Now Click Launch the instance.

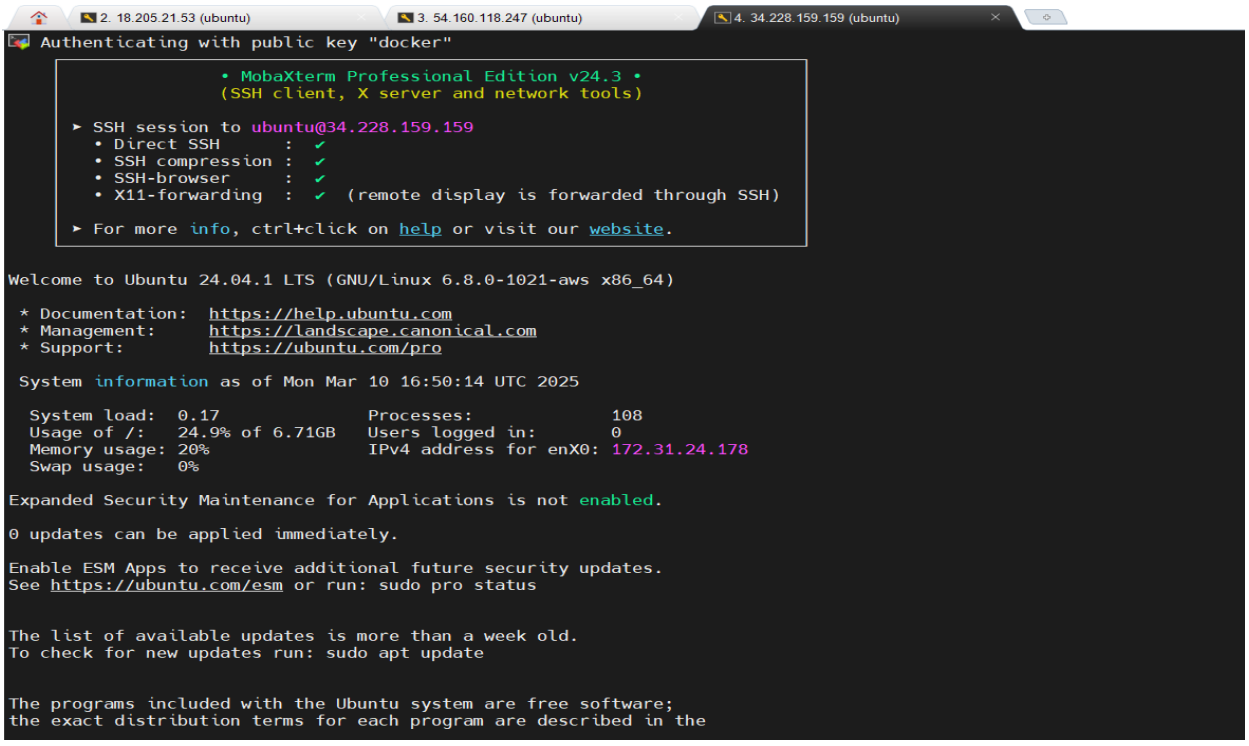




Now We need to connect the all instances one by one




2. 18.205.21.53 (ubuntu)
3. 54.160.118.247 (ubuntu)
4. 34.228.159.159 (ubuntu)
Authenticating with public key "docker"
• MobaXterm Professional Edition v24.3 •
(SSH client, X server and network tools)
➤ SSH session to ubuntu@54.160.118.247
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✔ (remote display is forwarded through SSH)
➤ For more info, ctrl+click on help or visit our website.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1021-aws x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
System information as of Mon Mar 10 16:49:49 UTC 2025
System load: 0.13 Processes: 109
Usage of /: 24.9% of 6.71GB Users logged in: 0
Memory usage: 21% IPv4 address for enX0: 172.31.18.6
Swap usage: 0%
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the


2. 18.205.21.53 (ubuntu)
3. 54.160.118.247 (ubuntu)
4. 34.228.159.159 (ubuntu)
Authenticating with public key "docker"
• MobaXterm Professional Edition v24.3 •
(SSH client, X server and network tools)
➤ SSH session to ubuntu@34.228.159.159
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✔ (remote display is forwarded through SSH)
➤ For more info, ctrl+click on help or visit our website.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1021-aws x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
System information as of Mon Mar 10 16:50:14 UTC 2025
System load: 0.17 Processes: 108
Usage of /: 24.9% of 6.71GB Users logged in: 0
Memory usage: 20% IPv4 address for enX0: 172.31.24.178
Swap usage: 0%
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the

1. Create 2 Ansible roles

To create ansible roles:
sudo ansible-galaxy init apache
sudo ansible-galaxy init nginx

```
ubuntu@ip-172-31-31-188:/etc/ansible$ sudo ansible-galaxy init apache
sudo ansible-galaxy init nginx
- Role apache was created successfully
- Role nginx was created successfully
ubuntu@ip-172-31-31-188:/etc/ansible$
```

2. Install Apache2 on slave1 using one role and NGINX on slave2 using the other role

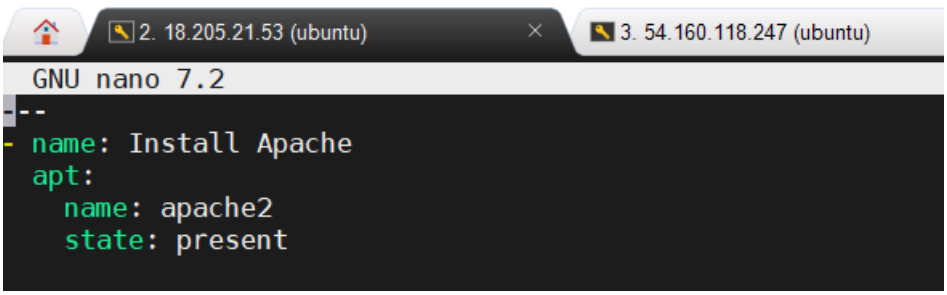
path of Ansible Apache role
/etc/ansible/roles/apache/tasks/
path of Ansible nginx role
/etc/ansible/roles/nginx/tasks/
add the yaml playbook files inside tasks

First need to set the apache task

So to this path /etc/ansible/roles/apache/tasks/ here You need to create the file name is install.yaml

sudo nano install.yaml write this code and save it then exit this file

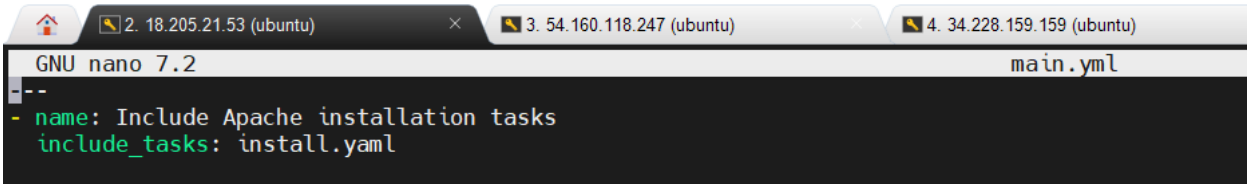
```
---
-   name: install apache
    apt:
     name: apache2
      state: present
```



Then after you will main.yaml file open this file

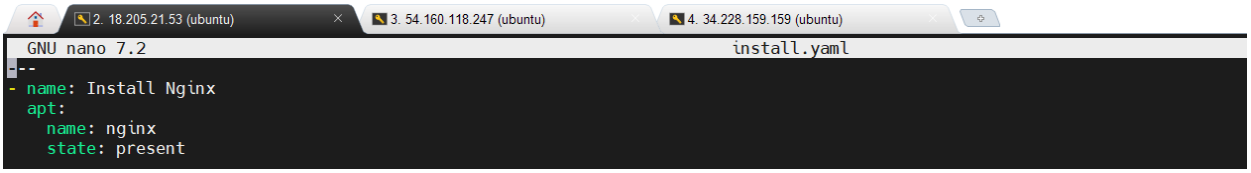
Sudo nano main.yaml.write this code in main.yaml and save it this and exit from file.

```
---
- name: include apache installation tasks
  include_tasks: install.yaml
```



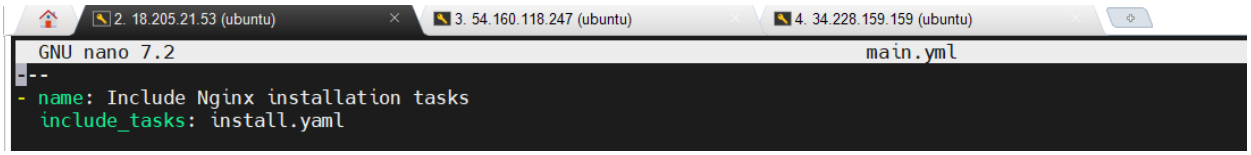
Then go to /etc/ansible/roles/nginx/tasks/ path
Create one file like install.yaml.write this code

```
---
- name: Install Nginx
  apt:
    name: nginx
    state: present
```



Sudo nano main.yaml.write this code in main.yaml and save it this and exit from file.

```
---
- name: include Nginx installation tasks
  include_tasks: install.yaml
```

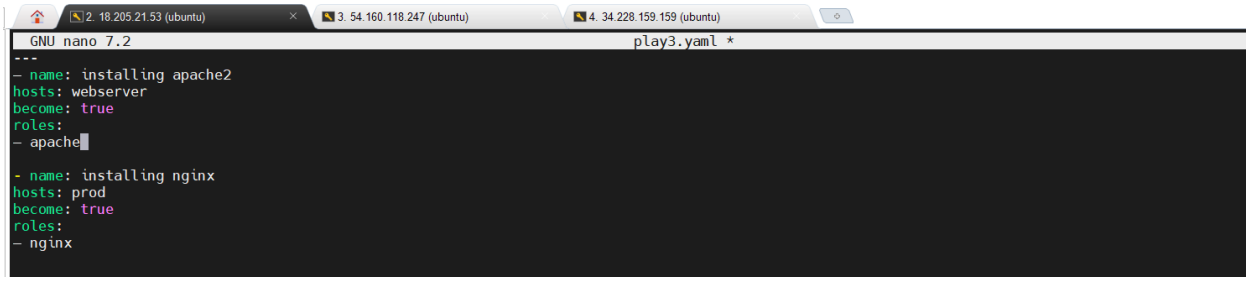


Then go to this path cd /etc/ansible and create one more file for installing Apache and nginx like name is play.yaml

finally create a playbook to execute the tasks of the role and write this below code in play.yaml

```
---
— name: installing apache2
hosts: webserver
become: true
roles:
— apache

- name: installing nginx
hosts: prod
become: true
roles:
— nginx
```

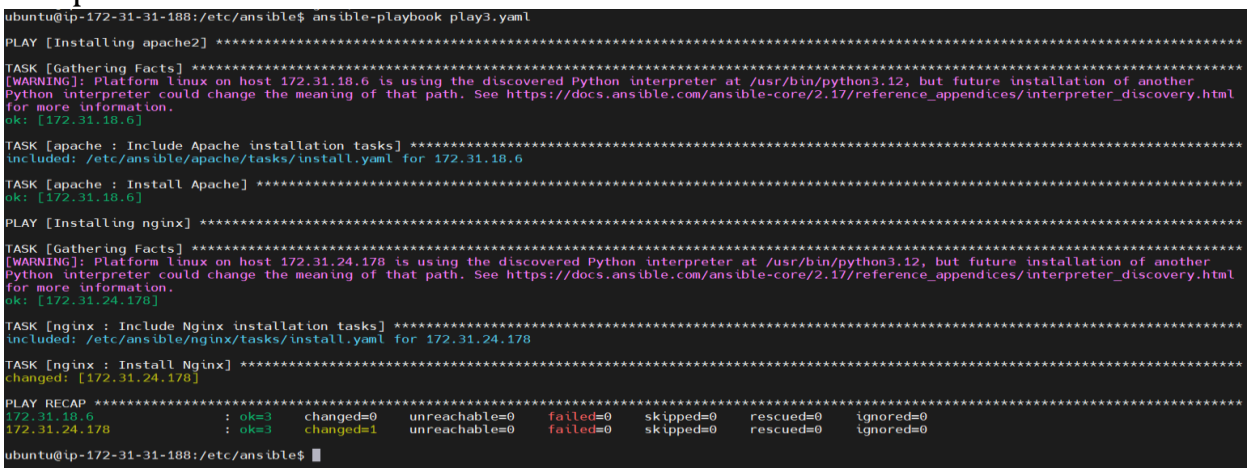


Now Save it this yaml.we need to deploy the both apache and nginx through role based.

Now Run this command.the command is

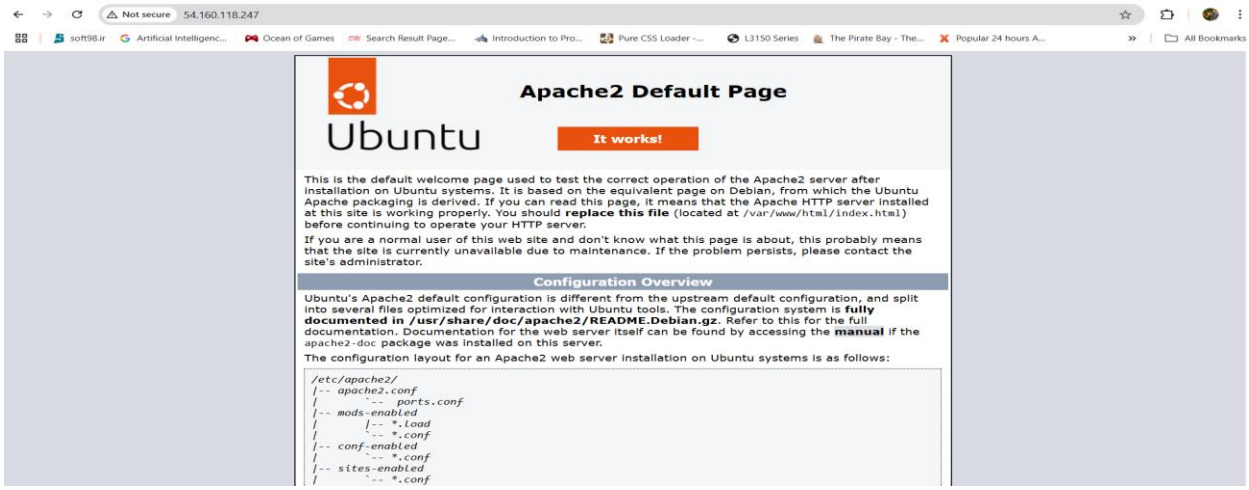
ansible-playbook play3.yaml

After complete the deployment go to aws instance and copy the public ip and paste it to browser.



Now we need to see the output in both server.

Ansible Slave 1



Ansible Slave 2

CODE:

APACHE ROLE

/etc/ansible/roles/apache/tasks/

Install.yaml

```
---
- name: Install Apache
  apt:
    name: apache2
    state: present
```

This file created by default when you create the role.

main.yaml

```
---
- name: Include Apache installation tasks
  include_tasks: install.yaml
```

NGINX ROLE

/etc/ansible/roles/nginx/tasks/

Install.yaml

```
---
- name: Install Nginx
  apt:
    name: nginx
    state: present
```

main.yaml

```
---
- name: Include Nginx installation tasks
  include_tasks: install.yaml
```

play3.yaml

```
---
- name: Installing apache2
  hosts: webserver
  become: yes
  roles:
    - apache

- name: Installing nginx
  hosts: prod
  become: yes
  roles:
    - nginx
```