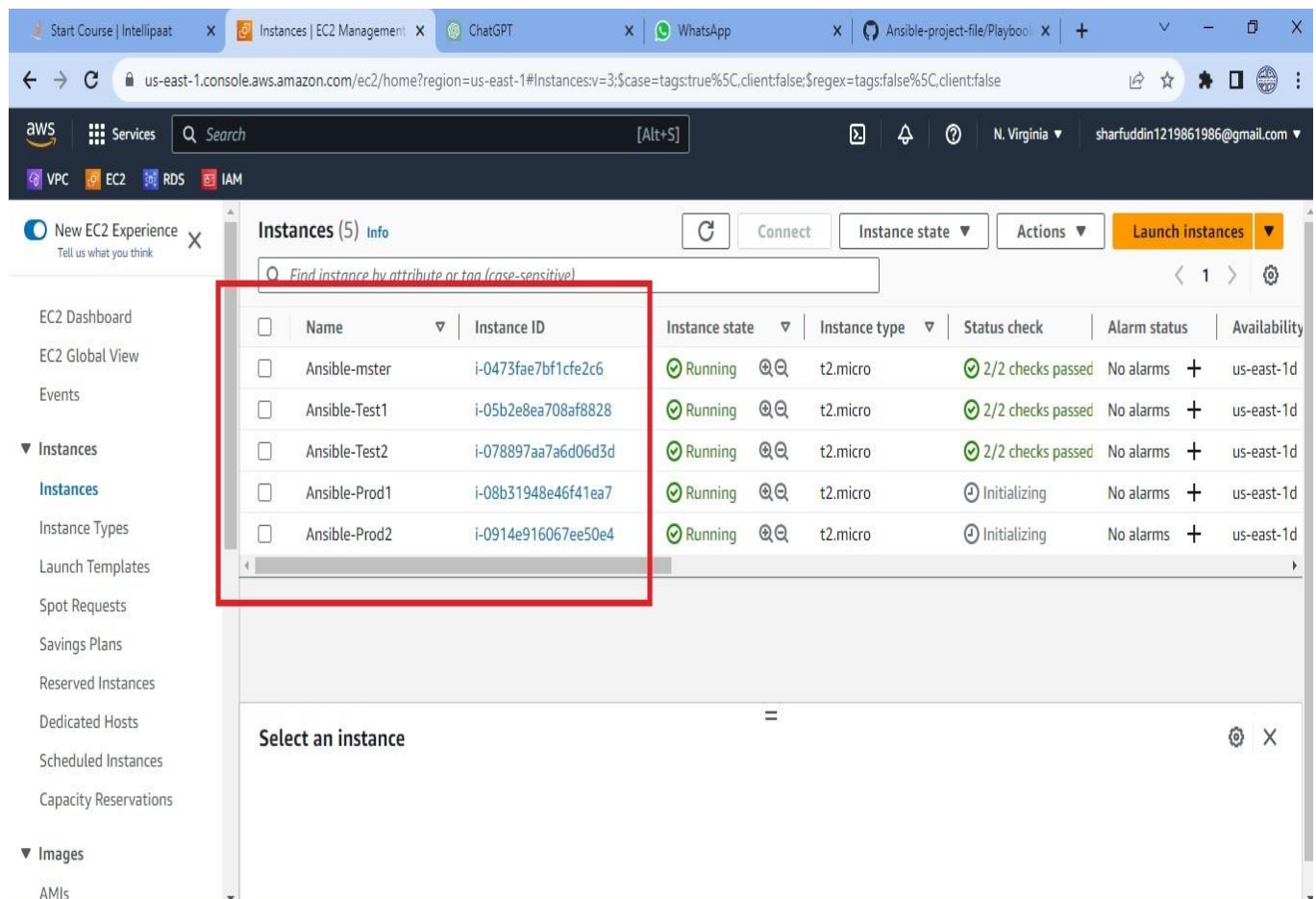


Tasks To Be Performed:

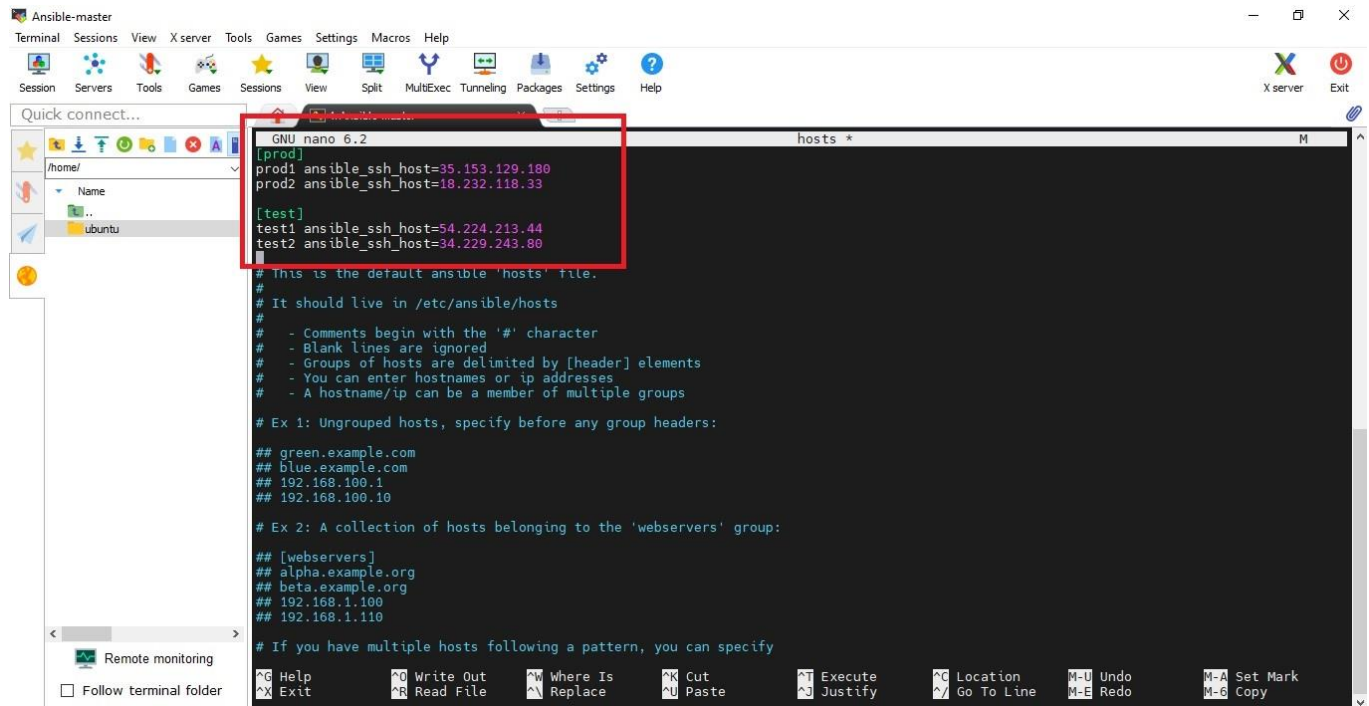
1. Create a new deployment of Ansible cluster of 5 nodes
2. Label 2 nodes as test and other 2 as prod
3. Install Java on test nodes
4. Install MySQL server on prod nodes

Use Ansible roles for the above and group the hosts under test and prod.

1) Create five instance with one Ansible master and Two prod ,2 test node.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
Ansible-mster	i-0473fae7bf1cfe2c6	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d
Ansible-Test1	i-05b2e8ea708af8828	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d
Ansible-Test2	i-078897aa7a6d06d3d	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d
Ansible-Prod1	i-08b31948e46f41ea7	Initializing	t2.micro	Initializing	No alarms	us-east-1d
Ansible-Prod2	i-0914e916067ee50e4	Initializing	t2.micro	Initializing	No alarms	us-east-1d

2)Host file entry.

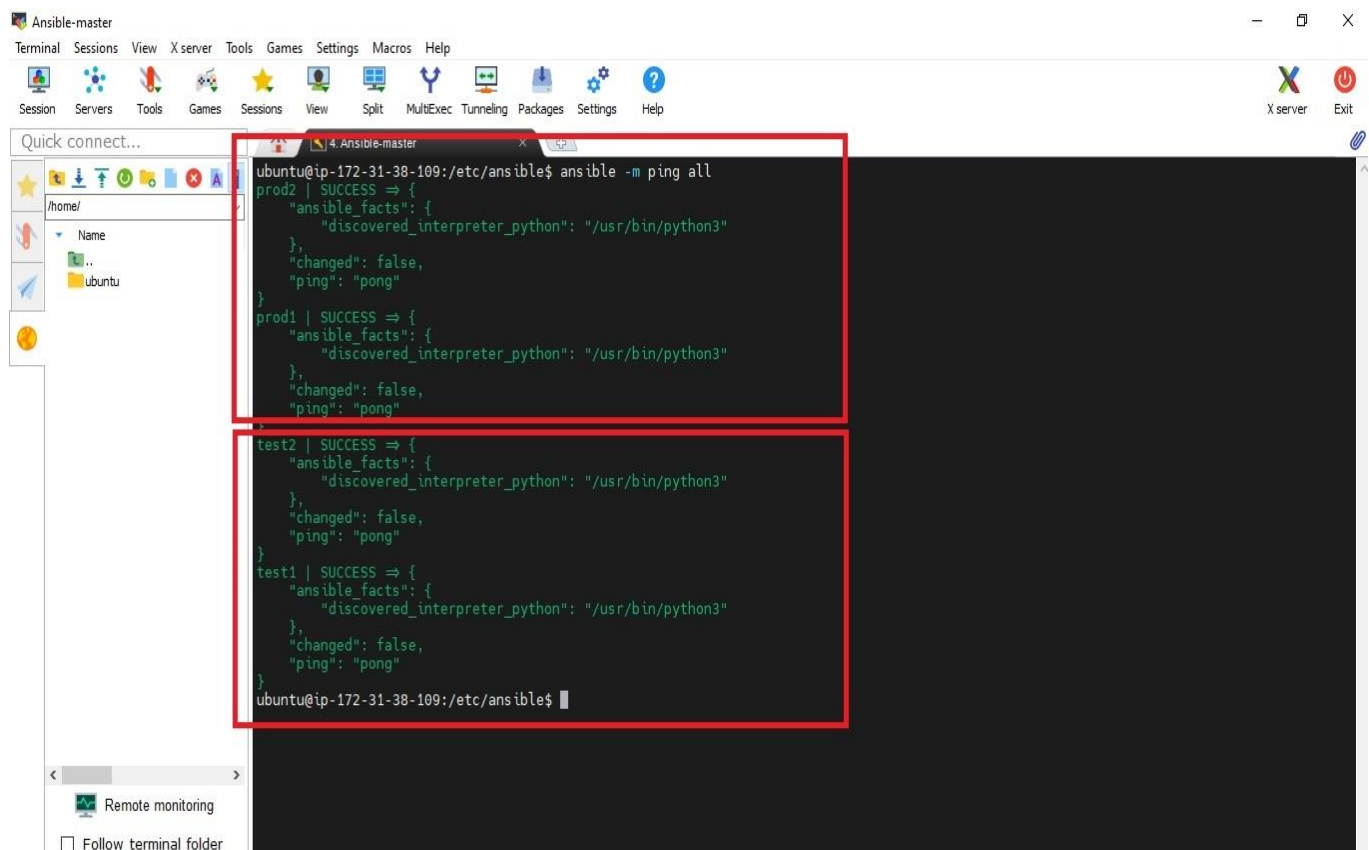


```
GNU nano 6.2 hosts *
[prod]
prod1 ansible_ssh_host=35.153.129.180
prod2 ansible_ssh_host=18.232.118.33

[test]
test1 ansible_ssh_host=54.224.213.44
test2 ansible_ssh_host=34.229.243.80

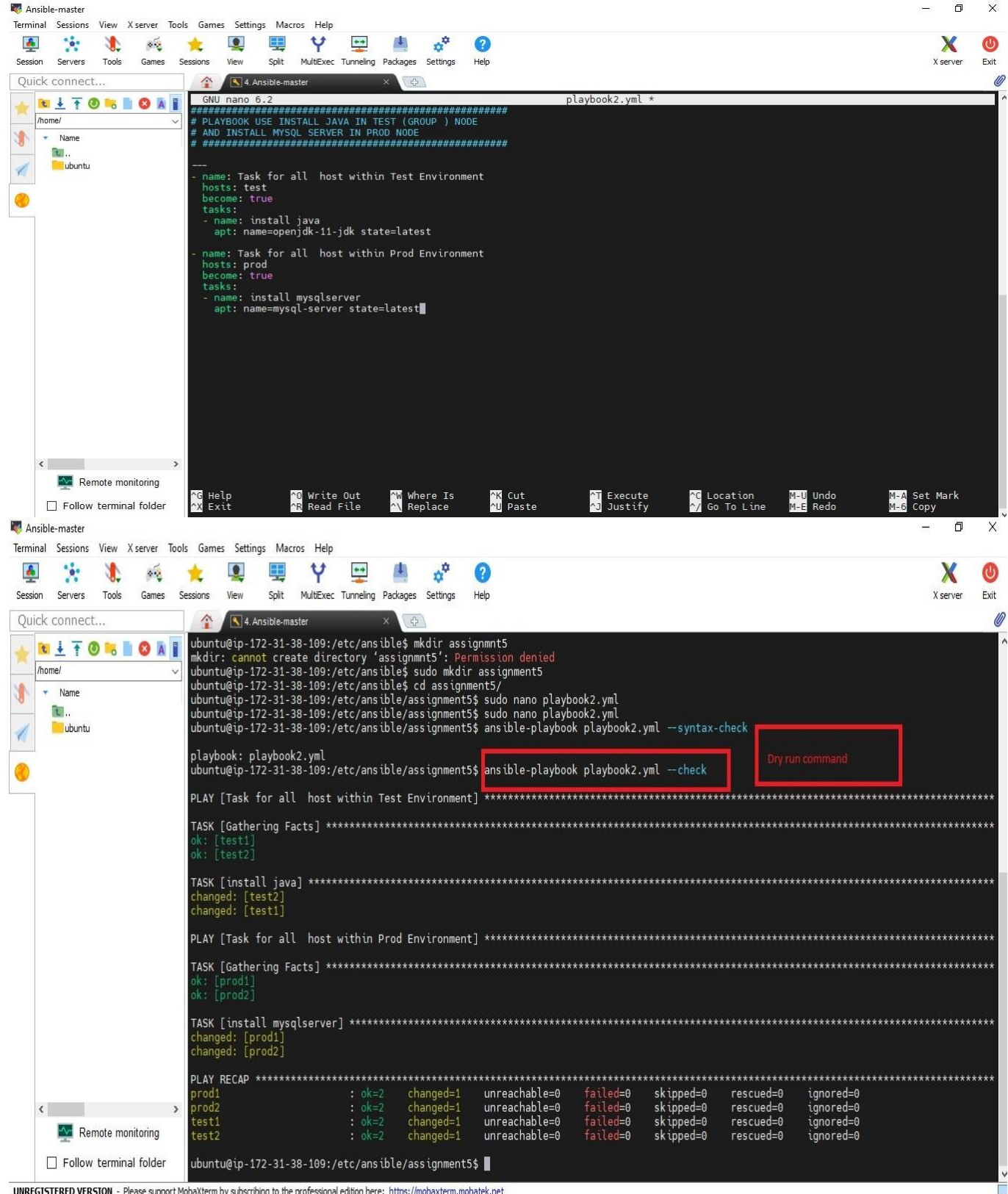
# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
# - Comments begin with the '#' character
# - Blank lines are ignored
# - Groups of hosts are delimited by [header] elements
# - You can enter hostnames or ip addresses
# - A hostname/ip can be a member of multiple groups
#
# Ex 1: Ungrouped hosts, specify before any group headers:
## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10
#
# Ex 2: A collection of hosts belonging to the 'webservers' group:
## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
#
# If you have multiple hosts following a pattern, you can specify
```

3)All node is connected with ansible master.



```
ubuntu@ip-172-31-38-109:/etc/ansible$ ansible -m ping all
prod2 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
prod1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
test2 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
test1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-38-109:/etc/ansible$
```

4) Create a playbook check syntax and dry run.



The image shows two screenshots of a MobaXterm window. The top screenshot shows the 'playbook2.yml' file being edited in nano. The bottom screenshot shows the terminal output of running 'ansible-playbook --syntax-check' and 'ansible-playbook --check'.

playbook2.yml

```
#####
# PLAYBOOK USE INSTALL JAVA IN TEST (GROUP ) NODE
# AND INSTALL MYSQL SERVER IN PROD NODE
#####

- name: Task for all host within Test Environment
  hosts: test
  become: true
  tasks:
    - name: install java
      apt: name=openjdk-11-jdk state=latest

- name: Task for all host within Prod Environment
  hosts: prod
  become: true
  tasks:
    - name: install mysqlserver
      apt: name=mysql-server state=latest
```

Terminal Output:

```
ubuntu@ip-172-31-38-109:/etc/ansible$ mkdir assignment5
mkdir: cannot create directory 'assignment5': Permission denied
ubuntu@ip-172-31-38-109:/etc/ansible$ sudo mkdir assignment5
ubuntu@ip-172-31-38-109:/etc/ansible$ cd assignment5/
ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$ sudo nano playbook2.yml
ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$ sudo nano playbook2.yml
ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$ ansible-playbook playbook2.yml --syntax-check

playbook: playbook2.yml
ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$ ansible-playbook playbook2.yml --check

PLAY [Task for all host within Test Environment] *****

TASK [Gathering Facts] *****
ok: [test1]
ok: [test2]

TASK [install java] *****
changed: [test2]
changed: [test1]

PLAY [Task for all host within Prod Environment] *****

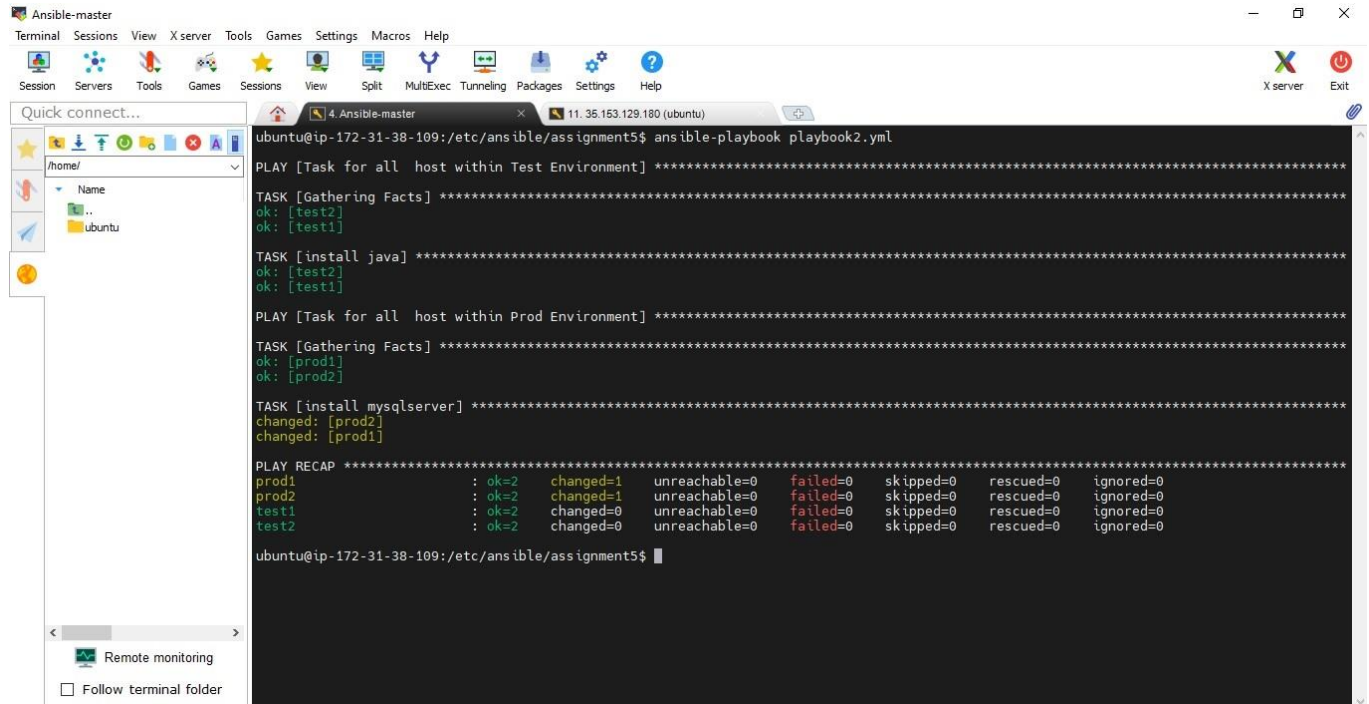
TASK [Gathering Facts] *****
ok: [prod1]
ok: [prod2]

TASK [install mysqlserver] *****
changed: [prod1]
changed: [prod2]

PLAY RECAP *****
prod1      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
prod2      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
test1      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
test2      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$
```

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```

Ansible-master
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...
/home/
  Name
  ..
  ubuntu

PLAY [Task for all host within Test Environment] *****

TASK [Gathering Facts] *****
ok: [test2]
ok: [test1]

TASK [install java] *****
ok: [test2]
ok: [test1]

PLAY [Task for all host within Prod Environment] *****

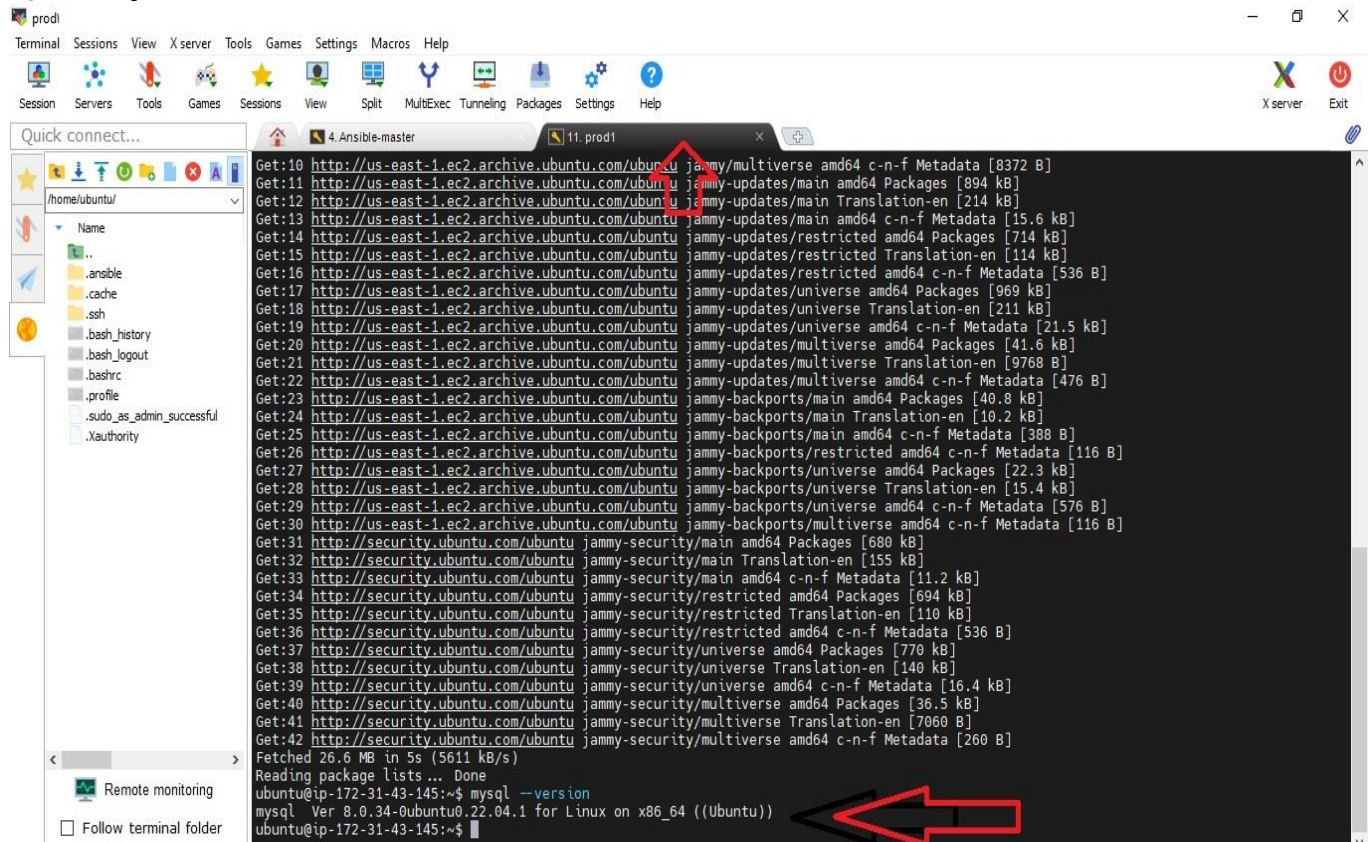
TASK [Gathering Facts] *****
ok: [prod1]
ok: [prod2]

TASK [install mysqlserver] *****
changed: [prod2]
changed: [prod1]

PLAY RECAP *****
prod1      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
prod2      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
test1      : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
test2      : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-38-109:/etc/ansible/assignment5$
  
```

5) Verify the node.

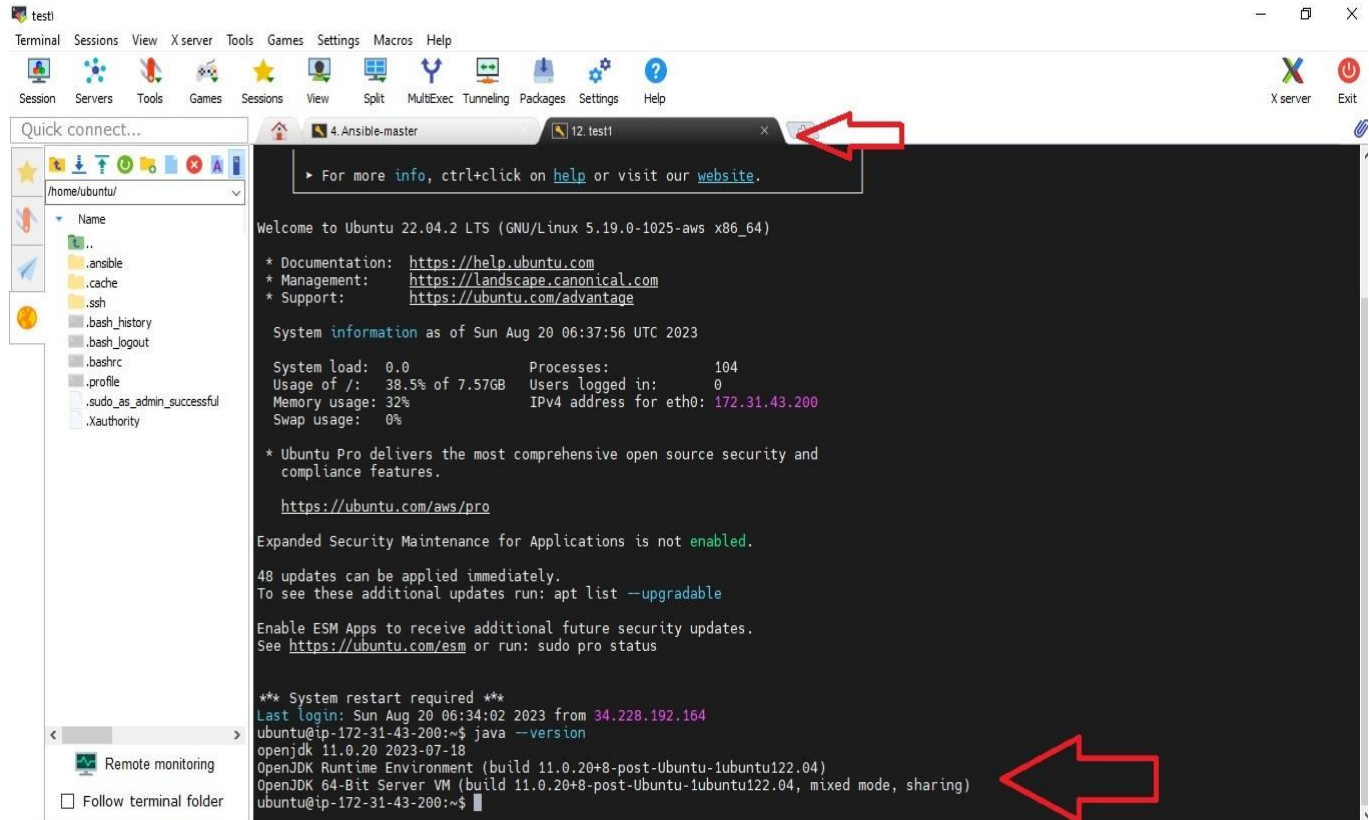


```

prod1
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...
/home/ubuntu/
  Name
  ..
  .ansible
  .cache
  .ssh
  .bash_history
  .bash_logout
  .bashrc
  .profile
  .sudo_as_admin_successful
  .xauthority

Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [894 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [214 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [15.6 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [714 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [114 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [536 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [969 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [211 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [21.5 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [41.6 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [9768 B]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [476 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [40.8 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.2 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [22.3 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [15.4 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [576 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [680 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [155 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [11.2 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [694 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [110 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [536 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [770 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [140 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.4 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [36.5 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7060 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 26.6 MB in 5s (5611 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-43-145:~$ mysql --version
mysql Ver 8.0.34-0ubuntu0.22.04.1 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-43-145:~$
  
```



The screenshot shows a terminal window titled 'test1' with a menu bar (Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help) and a toolbar. The left sidebar shows a file explorer for '/home/ubuntu/' with various files and folders. The terminal output is as follows:

```
For more info, ctrl+click on help or visit our website.

Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-1025-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sun Aug 20 06:37:56 UTC 2023

System load:  0.0               Processes:    104
Usage of /:   38.5% of 7.57GB   Users logged in: 0
Memory usage: 32%              IPv4 address for eth0: 172.31.43.200
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
 * compliance features.
 * https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

48 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

** System restart required **
Last login: Sun Aug 20 06:34:02 2023 from 34.228.192.164
ubuntu@ip-172-31-43-200:~$ java -version
openjdk 11.0.20 2023-07-18
OpenJDK Runtime Environment (build 11.0.20+8-post-Ubuntu-1ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.20+8-post-Ubuntu-1ubuntu122.04, mixed mode, sharing)
ubuntu@ip-172-31-43-200:~$
```

All the steps completed and screenshot also attached, still if any thing requires, please email me or call me on my registered number and please share the obtained marks on my email.