

Module 5: Ansible Assignment - 1

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Course Offered: -Advanced Cloud Computing and Devops

Assignment By: -Intellipaat

Trainer: -Kumar

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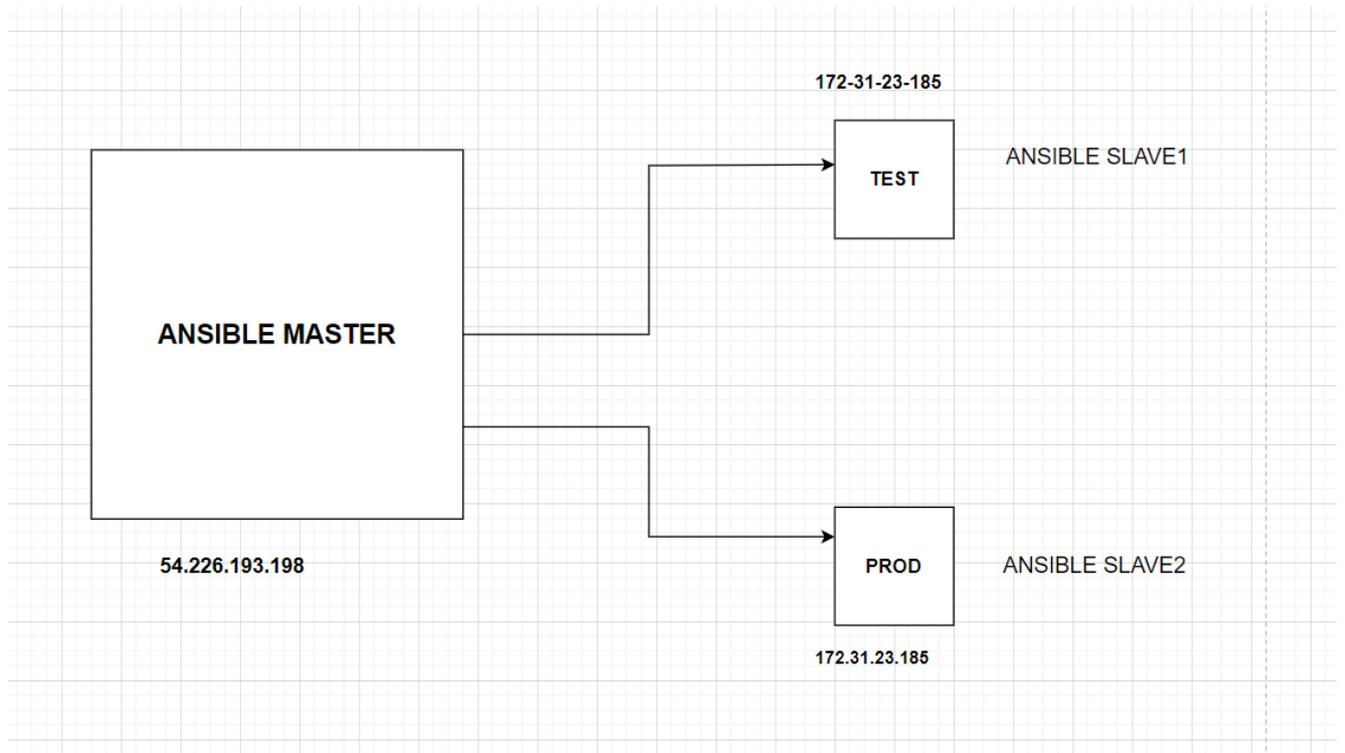
Tasks To Be Performed:

1. Setup Ansible cluster with 3 nodes
2. On slave 1 install Java
3. On slave 2 install MySQL server

Do the above tasks using Ansible Playbooks

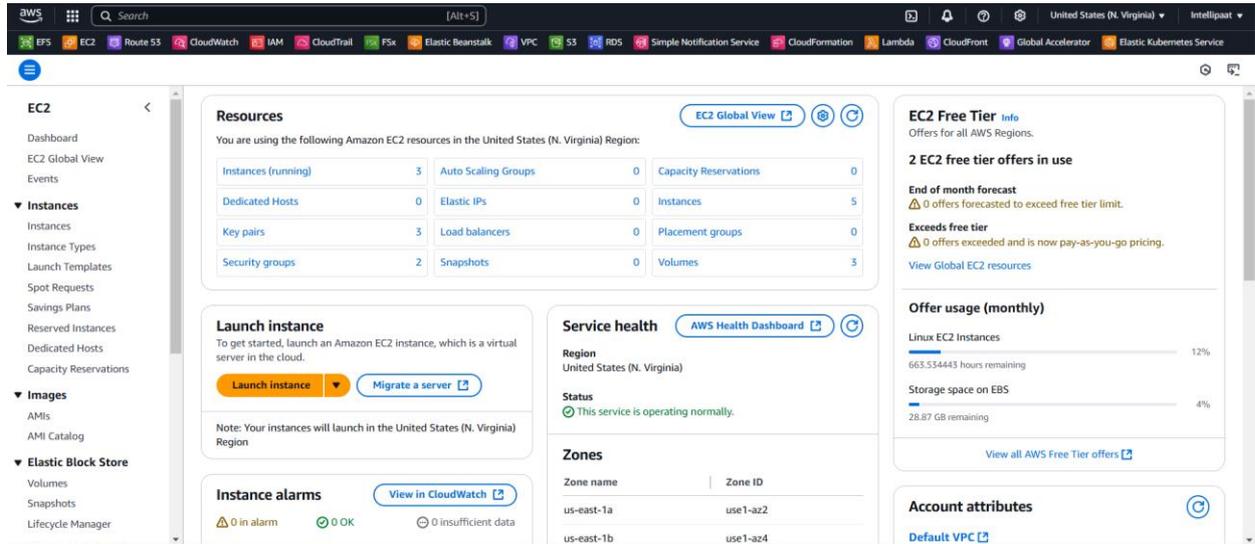
SOLUTION

ARCHITECTURE OF ANSIBLE

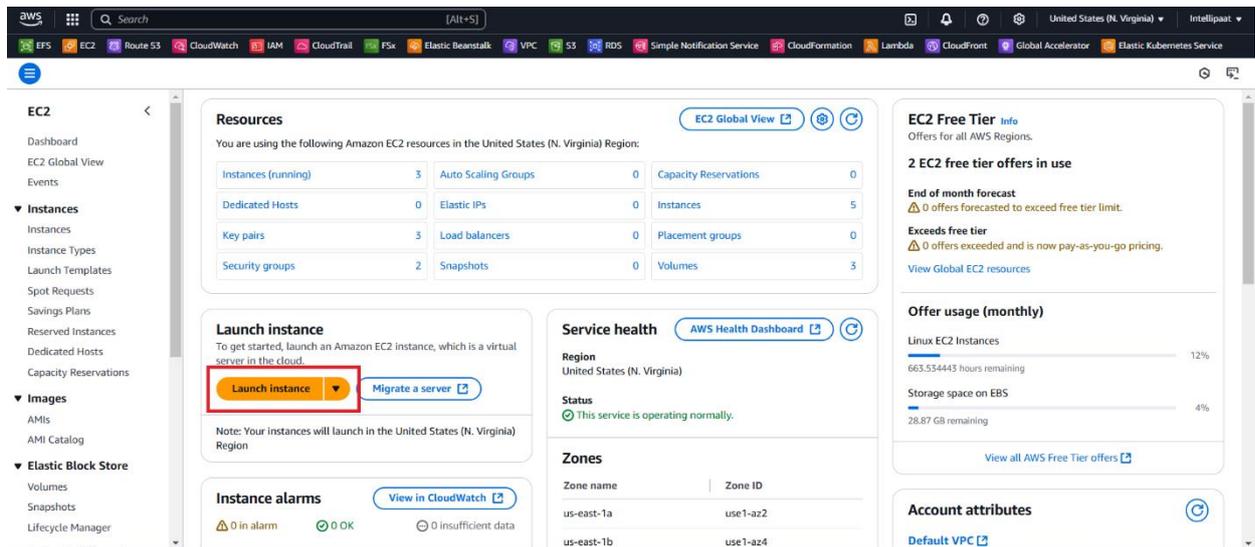


1. Setup Ansible cluster with 3 nodes

Launch 3 Instances in AWS and add Tags as Ansible-M, Ansible-S1, Ansible-S2



Click the Launch Instance and Launch 3 Instance



After Launch the instances Rename the instances.

1.ansible master

2.ansible slave 1

3.ansible slave 2

Instances (1/3) Info Last updated less than a minute ago [Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive) Running

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	ansible-master	i-076df37982c401a0b	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-54-226-193-198.co...
<input type="checkbox"/>	ansible-slave1	i-0e3509f90a5056e87	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-3-91-0-65.compute...
<input checked="" type="checkbox"/>	ansible-slave2	i-06bf56610c8918d29	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-34-228-37-130.co...

Connect with all the three Instances.

This is my master node.

```

16. 54.226.193.198 (ubuntu) x 14. 3.91.0.65 (ubuntu) 15. 34.228.37.130 (ubuntu)
Authenticating with public key "docker"

• MobaXterm Professional Edition v24.3 •
  (SSH client, X server and network tools)

▶ SSH session to ubuntu@54.226.193.198
  • 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 Wed Feb 26 08:37:29 UTC 2025

System load:  0.28          Processes:            109
Usage of /:   24.9% of 6.71GB Users logged in:     0
Memory usage: 20%          IPv4 address for enX0: 172.31.18.74
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
individual files in /usr/share/doc/*/copyright.

```

This is my ansible slave 1 node

```
Authenticating with public key "docker"

• MobaXterm Professional Edition v24.3 •
  (SSH client, X server and network tools)

▶ SSH session to ubuntu@3.91.0.65
  • 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 Wed Feb 26 08:36:32 UTC 2025

System load: 0.61 Processes: 107
Usage of /: 24.9% of 6.71GB Users logged in: 0
Memory usage: 21% IPv4 address for enX0: 172.31.23.185
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
individual files in /usr/share/doc/*/copyright.
```

This is my ansible slave 2 node

```
Authenticating with public key "docker"

• MobaXterm Professional Edition v24.3 •
  (SSH client, X server and network tools)

▶ SSH session to ubuntu@34.228.37.130
  • 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 Wed Feb 26 08:37:01 UTC 2025

System load: 0.73 Processes: 108
Usage of /: 24.9% of 6.71GB Users logged in: 0
Memory usage: 20% IPv4 address for enX0: 172.31.25.172
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
individual files in /usr/share/doc/*/copyright.
```

Now We need to Install Ansible on Master Instance (ansible master)

sudo apt update

```

ubuntu@ip-172-31-18-74:~/ssh$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [634 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [881 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [199 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1025 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [256 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [363 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [19.9 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [680 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [135 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [23.4 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [5308 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [552 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [112 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [14.2 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [12.1 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [20.0 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1104 B]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:38 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [121 kB]
Get:39 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8948 B]
Get:40 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [815 kB]

```

sudo apt install software-properties-common

```

ubuntu@ip-172-31-18-74:~/ssh$ sudo apt install software-properties-common
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.49.1).
software-properties-common set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 186 not upgraded.
ubuntu@ip-172-31-18-74:~/ssh$ sudo add-apt-repository --yes --update ppa:ansible/ansible
Repository: 'Types: deb
URIs: https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/
Suites: noble
Components: main
'
Description:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or custom code to deploy and update your applications-- automate in a language that approaches plain English, using SSH, with no agents to install on remote systems.

http://ansible.com/

If you face any issues while installing Ansible PPA, file an issue here:
https://github.com/ansible-community/ppa/issues
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Adding repository.
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble InRelease [17.8 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main amd64 Packages [776 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main Translation-en [472 B]
Fetched 19.1 kB in 1s (19.8 kB/s)
Reading package lists... Done

```

sudo add-apt-repository --yes --update ppa:ansible/ansible

```

ubuntu@ip-172-31-18-74:~/ssh$ sudo add-apt-repository --yes --update ppa:ansible/ansible
Repository: 'Types: deb
URIs: https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/
Suites: noble
Components: main
'
Description:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or custom code to deploy and update your applications-- automate in a language that approaches plain English, using SSH, with no agents to install on remote systems.

http://ansible.com/

If you face any issues while installing Ansible PPA, file an issue here:
https://github.com/ansible-community/ppa/issues
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Adding repository.
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble InRelease [17.8 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main amd64 Packages [776 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main Translation-en [472 B]
Fetched 19.1 kB in 1s (19.8 kB/s)
Reading package lists... Done

```

sudo apt install ansible

```

ubuntu@ip-172-31-18-74:~/ssh$ sudo apt install ansible
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  ansible-core python3-kerberos python3-nacl python3-ntlm-auth python3-paramiko python3-requests-ntlm python3-resolvelib python3-winrm python3-xmldict sshpass
Suggested packages:
  python-nacl-doc python3-gssapi python3-invoke
The following NEW packages will be installed:
  ansible ansible-core python3-kerberos python3-nacl python3-ntlm-auth python3-paramiko python3-requests-ntlm python3-resolvelib python3-winrm python3-xmldict
  sshpass
0 upgraded, 11 newly installed, 0 to remove and 106 not upgraded.
Need to get 19.2 MB of archives.
After this operation, 213 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 python3-resolvelib all 1.0.1-1 [25.7 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 python3-kerberos amd64 1.1.14-3.1build9 [21.2 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 python3-nacl amd64 1.5.0-4build1 [57.9 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 python3-ntlm-auth all 1.5.0-1 [21.3 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 python3-paramiko all 2.12.0-2ubuntu4.1 [137 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 python3-requests-ntlm all 1.1.0-3 [6388 B]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 python3-xmldict all 0.13.0-1 [13.4 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 python3-winrm all 0.4.3-2 [31.9 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 sshpass amd64 1.09-1 [11.7 kB]
Get:10 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main amd64 ansible-core all 2.17.9-1ppa-noble [1016 kB]
Get:11 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main amd64 ansible all 10.7.0-1ppa-noble [17.8 MB]
Fetched 19.2 MB in 41s (465 kB/s)
Selecting previously unselected package python3-resolvelib.
(Reading database ... 70610 files and directories currently installed.)
Preparing to unpack .../00-python3-resolvelib_1.0.1-1_all.deb ...
Unpacking python3-resolvelib (1.0.1-1) ...
Selecting previously unselected package ansible-core.
Preparing to unpack .../01-ansible-core_2.17.9-1ppa-noble_all.deb ...
Unpacking ansible-core (2.17.9-1ppa-noble) ...
Selecting previously unselected package ansible.
Preparing to unpack .../02-ansible_10.7.0-1ppa-noble_all.deb ...
Unpacking ansible (10.7.0-1ppa-noble) ...
Selecting previously unselected package python3-kerberos.
Preparing to unpack .../03-python3-kerberos_1.1.14-3.1build9_amd64.deb ...
Unpacking python3-kerberos (1.1.14-3.1build9) ...

```

After install the ansible we need to check the version.

ansible --version

```

ubuntu@ip-172-31-18-74:~/ssh$ ansible --version
ansible [core 2.17.9]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Nov 6 2024, 18:32:19) [GCC 13.2.0] (/usr/bin/python3)
  jinja version = 3.1.2
  libyaml = True
ubuntu@ip-172-31-18-74:~/ssh$ █

```

Now we need to create a connection b/w master and slaves1,slave2

for the connection, we need to generate a keypair in master and pasting the keypair will help us to connect with slave1,slave2

ssh-keygen (ansible master)

key will be saved in :

/home/ubuntu/.ssh/id_rsa.pub

```
ubuntu@ip-172-31-18-74:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:tI6et//SmZdMIcEhtVeixZJp0GcXblJFWXgx8K95gig ubuntu@ip-172-31-18-74
The key's randomart image is:
+---[RSA 3072]---+
|
|.o+==+X%|
|.o+X**|
|. . o+oB.|
|. . . .+ .|
|. S . . .|
|. o . . .0|
|. E . . .+=+..|
|. . . . . + +0|
|. o . . o . .|
+---[SHA256]-----+
```

Ansible Master

```
ubuntu@ip-172-31-18-74:~/.ssh$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQg0DCu+81J7S1wWwq4z0JV7dbr7ITxdmDw1WqaYw/bfZKvJ/8WBFkaK+oGPy6sH9qME+Rz63BdRlMjPyYPkCy2jyx4bqd3Ki/pv05uENs0Y0yKLL+CZKdkc6ChgUXXbGMGa
VyrbEDmbIoI+LUDY1jtz0P8TnxU8k3duleeL0CXzWShSgQJLJxJ0BAu++71AvC4RtC/ac1tHZb85NjCdY3Feu/LnZEY0eDp0d9XksrhsQowYf6SUDjwVRPZLPHfL6m23lVdPLlg+o04qPmL92BPFVMSX5S1BccTgk6zyG2
E98vc68K3b14xTs3pz09y2mX2lWdm57fmUt0qnm+FdpZnMSuTydxa4upAbzq5Sa0A40LB8Fr1wXk2v6oUcypz03124Rj eXth190EA+XtCUCH6k02FtuPF9mwHGHPfshqm/0zE117Yw2gKUUTYMQ0k05PLw+8ur9MLHPmo
3/H8Pcp1Q10sdt0qNVL6e3qg5VNIpXAC0lQPZ2r3t817tu= ubuntu@ip-172-31-18-74
```

Ansible Slave 1

```
ubuntu@ip-172-31-23-185:~/ssh$ cat authorized_keys
```

Ansible Slave 2

```
ubuntu@ip-172-31-25-172:~/ssh$ cat authorized_keys
```

we need to add the slave Private-IP into the ansible host file

path of the ansible host file: cd /etc/ansible/

```
master $ cd /etc/ansible/
master $ ll
total 20
drwxr-xr-x 3 root root 4096 Feb 26 06:51 ./
drwxr-xr-x 109 root root 4096 Feb 26 06:51 ../
-rw-r--r-- 1 root root 614 Feb 25 16:59 ansible.cfg
-rw-r--r-- 1 root root 1175 Feb 25 16:59 hosts
drwxr-xr-x 2 root root 4096 Feb 25 16:59 roles/
master $
```

After Run This Command

sudo nano hosts.We need to grouping the server.

[prod]

172.31.23.185

[test]

172.31.25.172

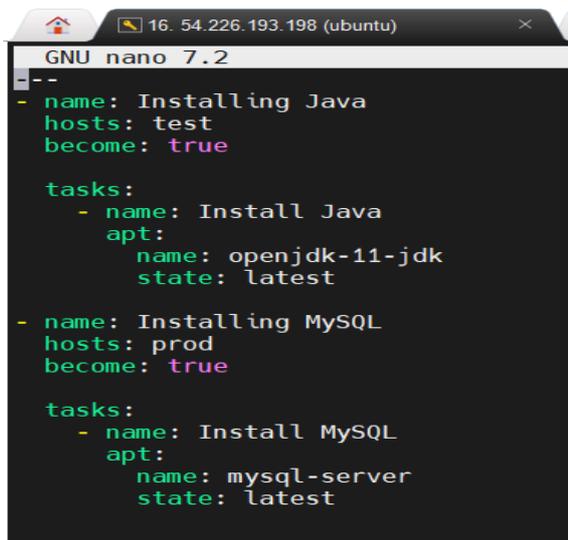
NOTE:-If you want to add more any of server in this prod and test section just add the ip address.

```
GNU nano 7.2 hosts
# 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:
[prod]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
172.31.23.185
[test]
172.31.25.172
# If you have multiple hosts following a pattern, you can specify
# them like this:
## www[001:006].example.com
#
# You can also use ranges for multiple hosts:
## db-[99:101]-node.example.com
#
# Ex 3: A collection of database servers in the 'bservers' group:
```

to check whether the connection is successful or not

```
ubuntu@ip-172-31-18-74:/etc/ansible$ ansible -m ping all
[WARNING]: Platform linux on host 172.31.23.185 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.23.185 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.12"
  },
  "changed": false,
  "ping": "pong"
}
[WARNING]: Platform linux on host 172.31.25.172 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.25.172 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.12"
  },
  "changed": false,
  "ping": "pong"
}
```

After Done we need to create the one yml file so this yml file helps to install java and my sql server.we need to mention what need to be give task.so in my case I want to install java in test and install mysql in prod so need to define in yml file like this.



```
GNU nano 7.2
---
- name: Installing Java
  hosts: test
  become: true

  tasks:
    - name: Install Java
      apt:
        name: openjdk-11-jdk
        state: latest
- name: Installing MySQL
  hosts: prod
  become: true

  tasks:
    - name: Install MySQL
      apt:
        name: mysql-server
        state: latest
```

Sudo nano play1.yml

In Yaml File when writing we need to define first line like this ---

This is the Ansible Basic Templates yaml written like this.

- name:

hosts:

become:

tasks:

- name:

apt:

name:

state:

- name:

hosts:

become:

tasks:

- name:

apt:
name:
state:

So this is the assigned as per above mentioned task to ansible below.this is yaml file I have mentioned 2 task.

- 1.Install java in test machine
- 2.install mysql in prod machine

- name: Installing Java

hosts: test

become: true

tasks:

- name: Install Java

apt:

name: openjdk-11-jdk

state: latest

- name: Installing MySQL

hosts: prod

become: true

tasks:

- name: Install MySQL

apt:

name: mysql-server

state: latest

Now Need To save code in play1.yaml

this file is used for installing Java in Slave 1 which is test as the group name and MySQL and Slave 2 which is prod as the group name.

```
ubuntu@ip-172-31-18-74:/etc/ansible$ ansible-playbook play1.yaml
PLAY [Installing Java] *****
TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.25.172 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.25.172]
TASK [Install Java] *****
changed: [172.31.25.172]
PLAY [Installing MySQL] *****
TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.23.185 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.23.185]
TASK [Install MySQL] *****
changed: [172.31.23.185]
PLAY RECAP *****
172.31.23.185      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.25.172    : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
ubuntu@ip-172-31-18-74:/etc/ansible$
```

2. On slave 1 install Java

```
ubuntu@ip-172-31-25-172:~/ssh$ java --version
openjdk 11.0.26 2025-01-21
OpenJDK Runtime Environment (build 11.0.26+4-post-Ubuntu-1ubuntu124.04)
OpenJDK 64-Bit Server VM (build 11.0.26+4-post-Ubuntu-1ubuntu124.04, mixed mode, sharing)
ubuntu@ip-172-31-25-172:~/ssh$
```

3. On slave 2 install mysql

```
ubuntu@ip-172-31-23-185:~/ssh$ mysql --version
mysql Ver 8.0.41-0ubuntu0.24.04.1 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-23-185:~/ssh$
```