Module-6: Ansible Assignment - 1

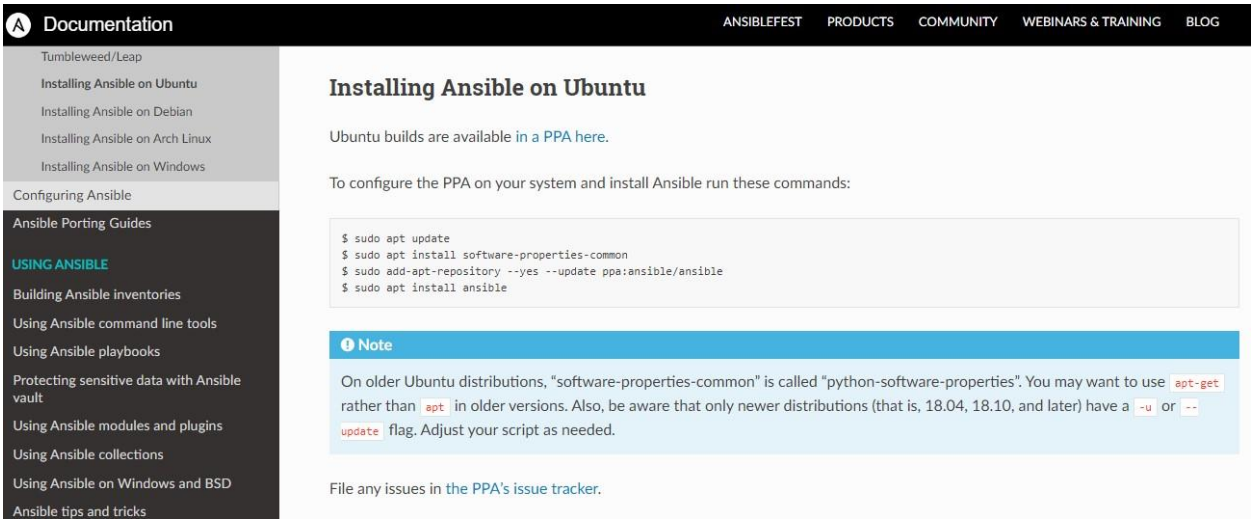
You have been asked to:

- **Setup Ansible cluster with 3 nodes**
- **On slave1 install java**
- **On slave 2 install mysql-server**

Do the above tasks using Ansible playbooks

The above task can be achieved as follows

- **We can perform above task on AWS login to the AWS management console and then create three instances with Ubuntu and enable ssh and http to allow internet traffic.**
- **Name the instances as Aansible_Master, Ansible_Slave1, Ansible_Slave2 and connect to all instances.**
- **Go to the Ansible documentation and apply commands as shown below.**



- **After installing ansible we need to make ssh connection cd .ssh/ then apply commands as shown below**
- **cd .ssh/**
- **ls**
- **ssh-keygen**
- **cat id_rsa.pub**
- **Copy the public key and paste it in two Slaves as shown below**

```
ubuntu@ip-172-31-91-133:~$ 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-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko python3-requests-kerberos
  python3-requests-ntlm python3-resolvelib python3-winrm python3-xmltodict sshpass
Suggested packages:
  python-nacl-doc python3-gssapi python3-invoke
The following NEW packages will be installed:
  ansible ansible-core python3-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko
  python3-requests-kerberos python3-requests-ntlm python3-resolvelib python3-winrm python3-xmltodict sshpass
0 upgraded, 14 newly installed, 0 to remove and 30 not upgraded.
Need to get 17.9 MB of archives.
After this operation, 300 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 jammy/main amd64 python3-packaging all 21.3-1 [30.7 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-resolvelib all 0.8.1-1 [23.6 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 python3-jmespath all 0.10.0-1 [21.7 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-kerberos amd64 1.1.14-3.1build5 [23.0 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 python3-nacl amd64 1.5.0-2 [63.1 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-ntlm-auth all 1.4.0-1 [20.4 kB]
```

i-012e927f278ab88c1 (Ansible_Master)

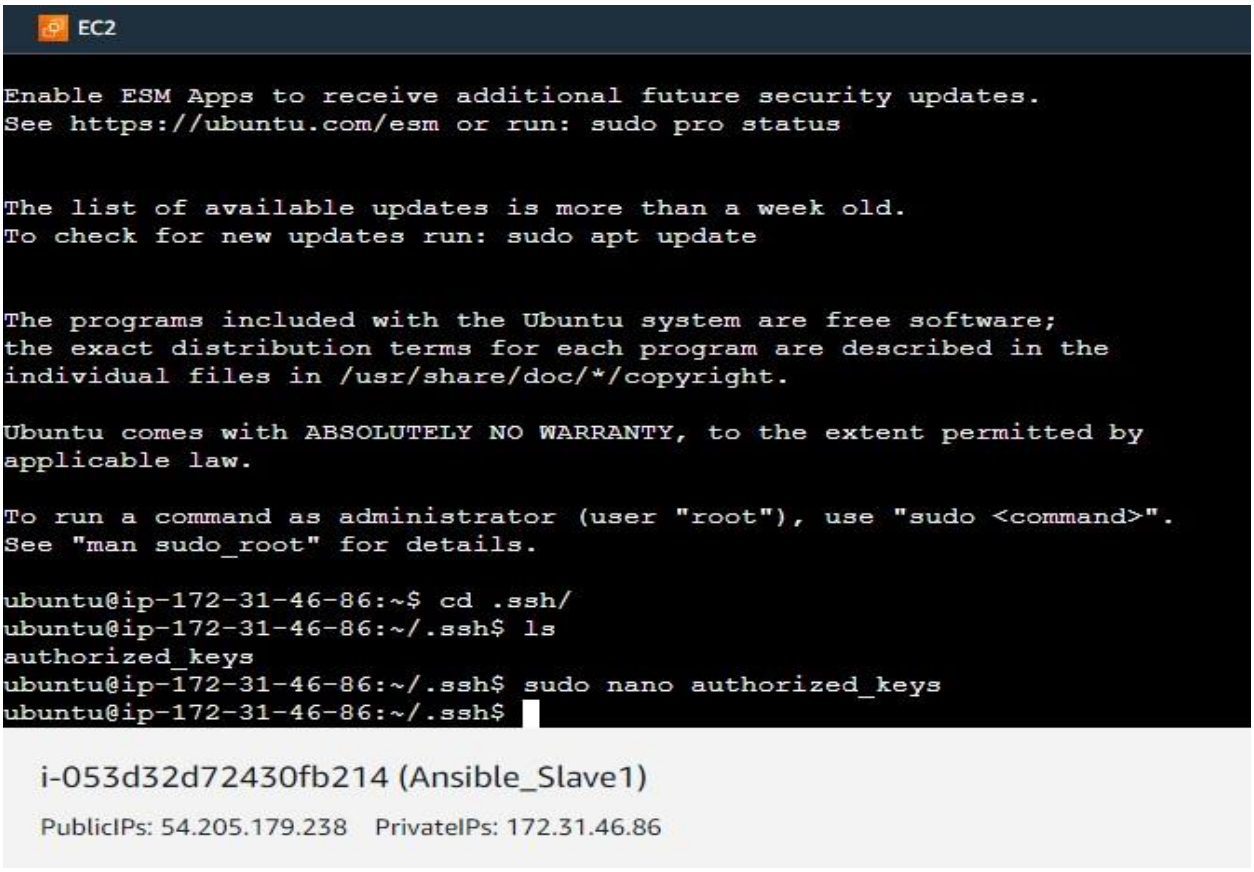
PublicIPs: 54.174.91.230 PrivateIPs: 172.31.91.133

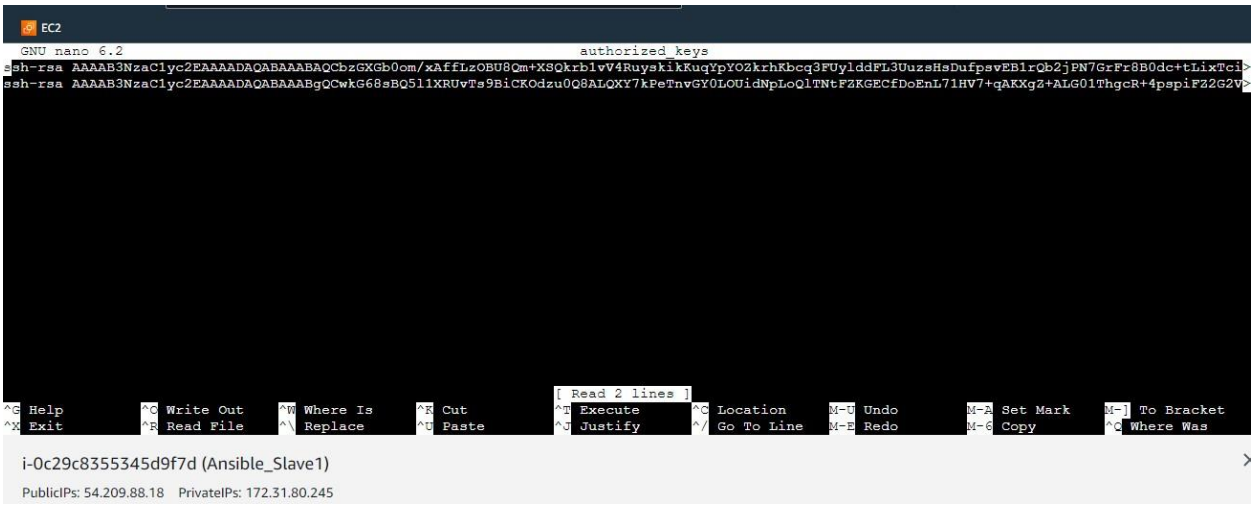
EC2

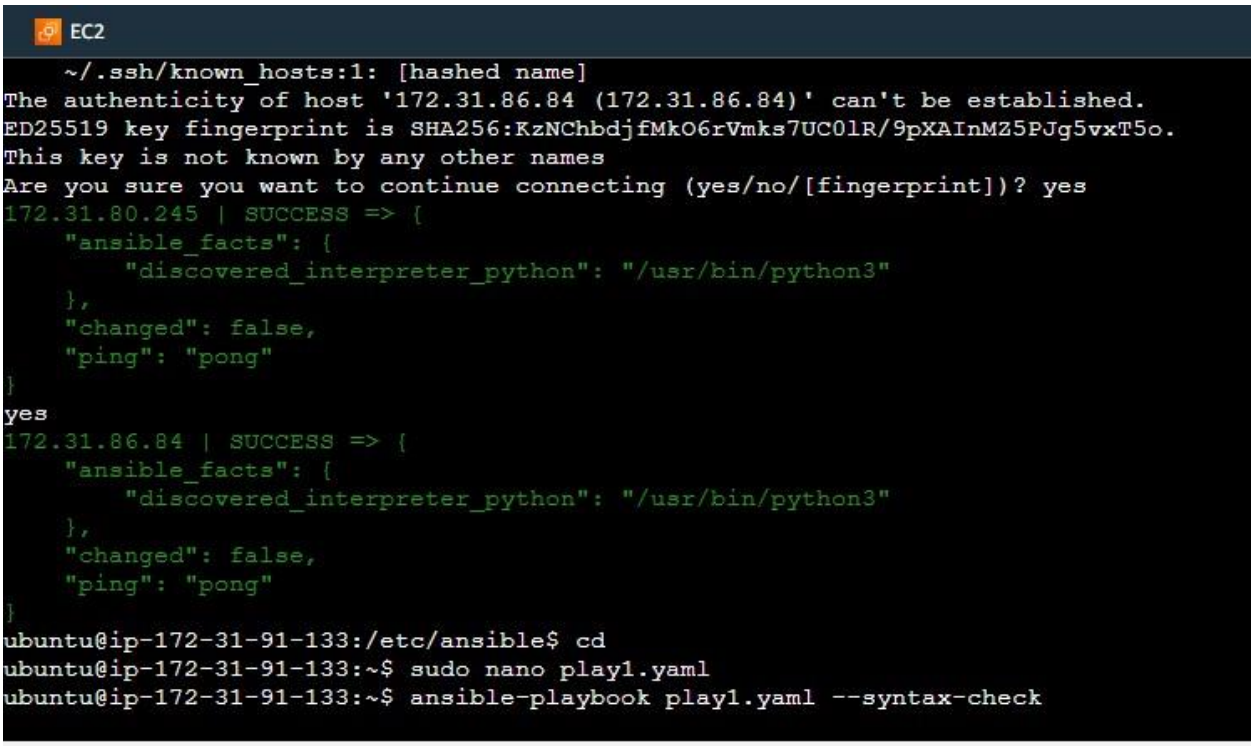
```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-91-133:~$ cd .ssh/
ubuntu@ip-172-31-91-133:~/.ssh$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
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:+KDyfIolpMURdgf8mM5+d63PPhMe0h3h74iml2uiaHc ubuntu@ip-172-31-91-133
The key's randomart image is:
+---[RSA 3072]----+
|  o.o..          |
| . o..         .  |
|  .  +        . . |
| . .o ..       o  |
|  +o  o S   . . o |
| +  o. o   . +.. .|
|. o.o    .  +o+ o |
|   B. +.o EoBo. .|
|  . +=.o.+oB*o   |
+----[SHA256]-----+
ubuntu@ip-172-31-91-133:~/.ssh$ ls
```

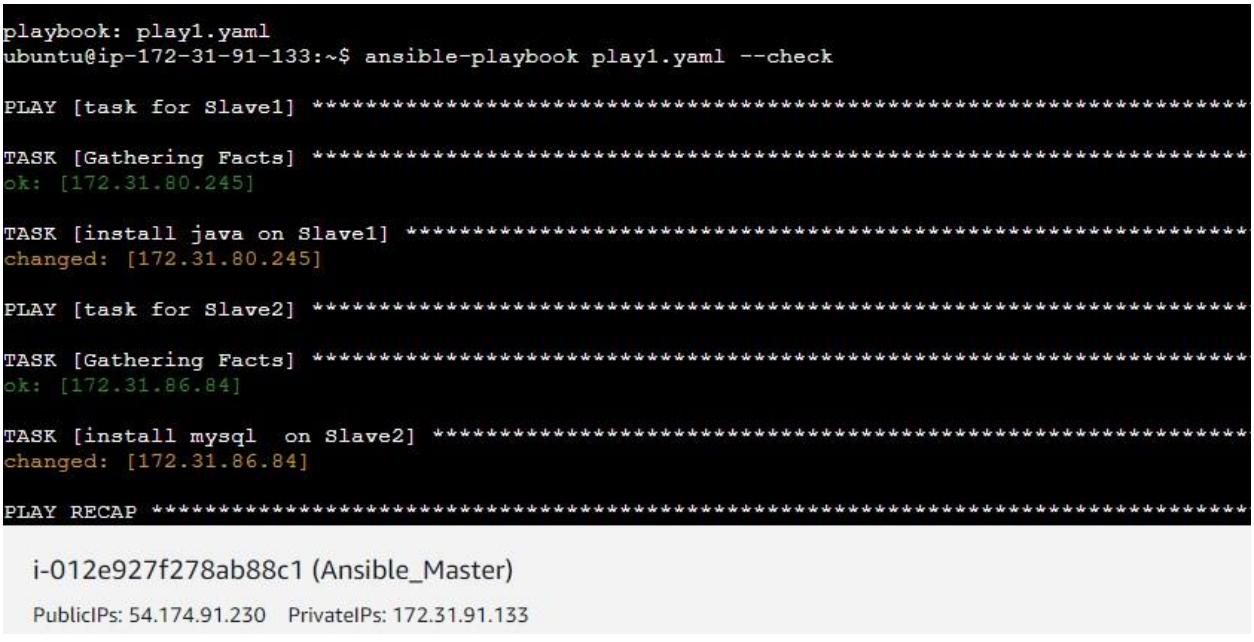
i-012e927f278ab88c1 (Ansible_Master)

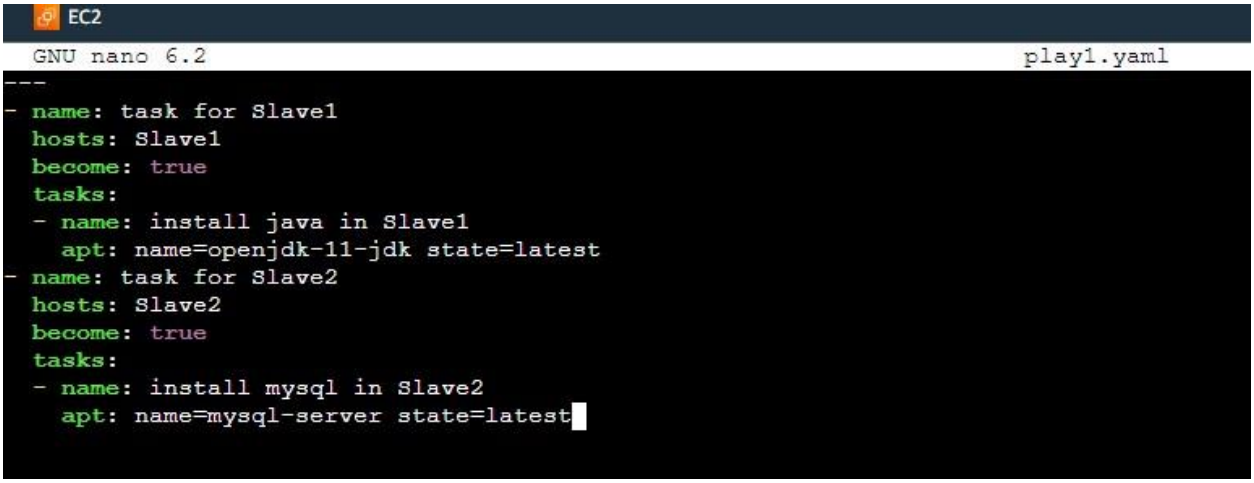
PublicIPs: 54.174.91.230 PrivateIPs: 172.31.91.133

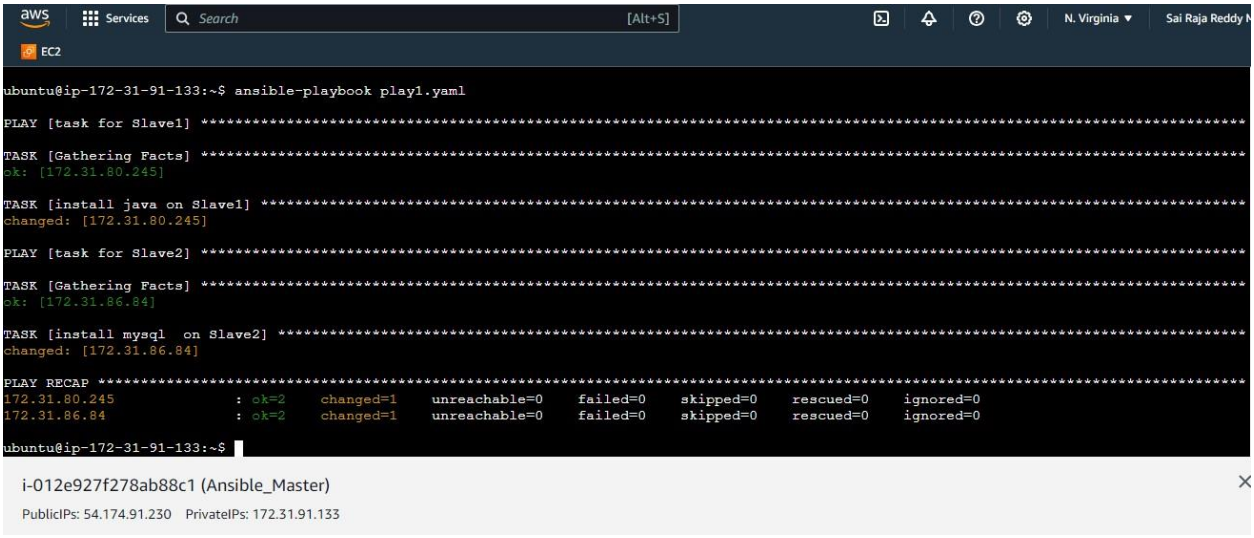

EC2
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-46-86:~$ cd .ssh/
ubuntu@ip-172-31-46-86:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-46-86:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-46-86:~/.ssh$
i-053d32d72430fb214 (Ansible_Slave1)
PublicIPs: 54.205.179.238 PrivateIPs: 172.31.46.86

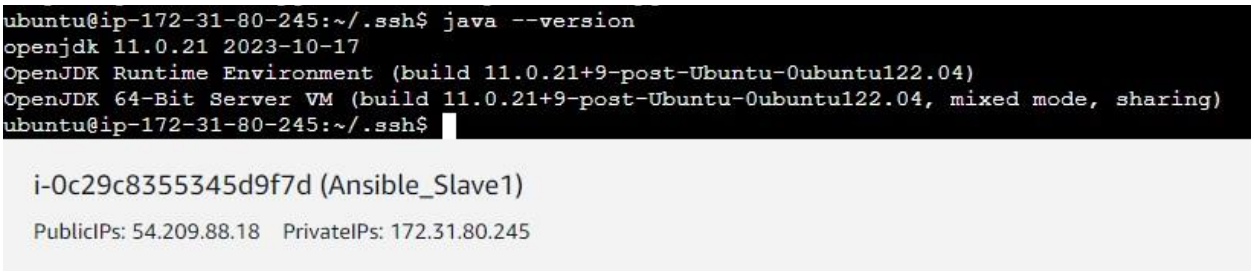

EC2
GNU nano 6.2 authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCbzGXGb0om/xAffLzOBU8Qm+XSQkrb1vV4RuyskikKuqYpYOZkrhKbcq3FUylddFL3UuzsHsDufpsvEB1rQb2jPN7GrFr8B0dc+tLixTci>
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCwkG68sBQ5l1XRUvTs9BiCKOdzu0Q8ALQXY7kPeTnvGY0LOUidNpLoQlTNtFZKGECfDoEnL71HV7+qAKXgZ+ALG01ThgcR+4pspiFZ2G2V>
[Read 2 lines]
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
i-0c29c8355345d9f7d (Ansible_Slave1)
PublicIPs: 54.209.88.18 PrivateIPs: 172.31.80.245

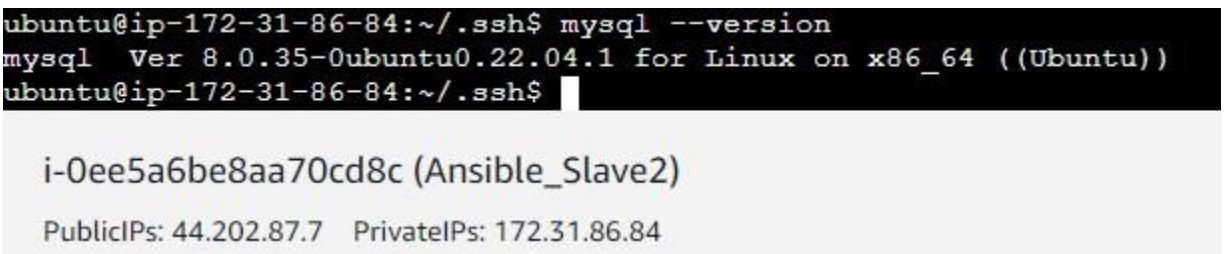

EC2
~/.ssh/known_hosts:1: [hashed name]
The authenticity of host '172.31.86.84 (172.31.86.84)' can't be established.
ED25519 key fingerprint is SHA256:KzNChbdjfMkO6rVmks7UC0lR/9pXAInMZ5PJg5vxT5o.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
172.31.80.245 | SUCCESS => {
"ansible_facts": {
"discovered_interpreter_python": "/usr/bin/python3"
},
"changed": false,
"ping": "pong"
}
yes
172.31.86.84 | SUCCESS => {
"ansible_facts": {
"discovered_interpreter_python": "/usr/bin/python3"
},
"changed": false,
"ping": "pong"
}
ubuntu@ip-172-31-91-133:/etc/ansible$ cd
ubuntu@ip-172-31-91-133:~$ sudo nano play1.yaml
ubuntu@ip-172-31-91-133:~$ ansible-playbook play1.yaml --syntax-check
i-012e927f278ab88c1 (Ansible_Master)
PublicIPs: 54.174.91.230 PrivateIPs: 172.31.91.133


playbook: play1.yaml
ubuntu@ip-172-31-91-133:~$ ansible-playbook play1.yaml --check
PLAY [task for Slave1] **********
TASK [Gathering Facts] **********
ok: [172.31.80.245]
TASK [install java on Slave1] **********
changed: [172.31.80.245]
PLAY [task for Slave2] **********
TASK [Gathering Facts] **********
ok: [172.31.86.84]
TASK [install mysql on Slave2] **********
changed: [172.31.86.84]
PLAY RECAP **********
i-012e927f278ab88c1 (Ansible_Master)
PublicIPs: 54.174.91.230 PrivateIPs: 172.31.91.133









We can get the versions as we were successfully installed java on Slave1 and mysql on Slave2.