

## Module-6: Ansible Assignment - 5

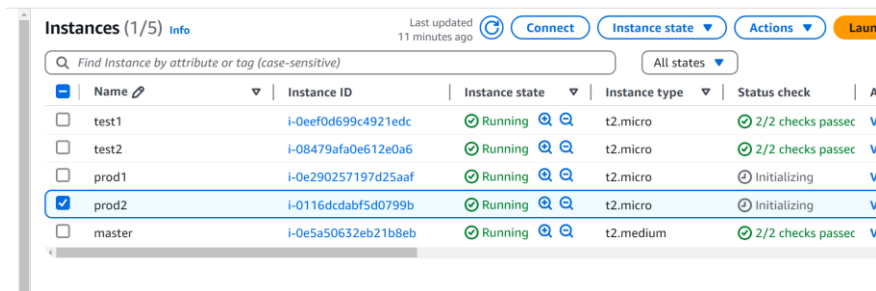
You have been asked to:

- Create a new deployment of ansible cluster of 5 nodes
- Label 2 nodes as test and other 2 as prod
- Install java on test nodes
- Install mysql-server on prod nodes

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

## Solution:

1) Create 1 master and 4 slaves



	Name	Instance ID	Instance state	Instance type	Status check
<input type="checkbox"/>	test1	i-0eef0d699c4921edc	Running	t2.micro	2/2 checks passed
<input type="checkbox"/>	test2	i-08479afa0e612e0a6	Running	t2.micro	2/2 checks passed
<input type="checkbox"/>	prod1	i-0e290257197d25aaf	Running	t2.micro	Initializing
<input checked="" type="checkbox"/>	prod2	i-0116dcdabf5d0799b	Running	t2.micro	Initializing
<input type="checkbox"/>	master	i-0e5a50632eb21b8eb	Running	t2.medium	2/2 checks passed

2) In master add the private IP of slave machines as hosts

```
## Blue-Example.c
[all]
172.31.0.35
172.31.10.15
172.31.8.179
172.31.13.74
[test]
172.31.0.35
172.31.10.15
[prod]
172.31.8.179
172.31.13.74
```

**i-0e5a50632eb21b8eb (master)**

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 3) Check the connectivity between master and slaves .
- 4) In master go to `cd /etc/ansible > cd roles`

```
ubuntu@ip-172-31-34-58:/etc/ansible$ ls
ansible.cfg  hosts  roles
ubuntu@ip-172-31-34-58:/etc/ansible$ cd roles
ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

## i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 5) Create roles : sudo ansible-galaxy init java

sudo ansible-galaxy init mysql

```
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ sudo ansible-galaxy init java
- Role java was created successfully
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ sudo ansible-galaxy init mysql
- Role mysql was created successfully
ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

## i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 6) Edit the Java Role:

In the roles/java/tasks/main.yml file, add the tasks to install Java:

```
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ ls
apache2  assign3.yml  java  mysql  nginx
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ cd java
ubuntu@ip-172-31-34-58:/etc/ansible/roles/java$ ls
README.md  defaults  files  handlers  meta  tasks  templates  tests  vars
ubuntu@ip-172-31-34-58:/etc/ansible/roles/java$ cd tasks
ubuntu@ip-172-31-34-58:/etc/ansible/roles/java/tasks$ ls
main.yml
ubuntu@ip-172-31-34-58:/etc/ansible/roles/java/tasks$ sudo vi main.yml
```

```
---
# tasks file for java
- name: Install Java
  apt:
    name: default-jdk
    state: present
~
~
~
~
```

- 7) Edit the MySQL Role:

In the roles/mysql/tasks/main.yml file, add the tasks to install MySQL server:

```

ubuntu@ip-172-31-34-58:/etc/ansible/roles$ cd mysql
ubuntu@ip-172-31-34-58:/etc/ansible/roles/mysql$ cd tasks
ubuntu@ip-172-31-34-58:/etc/ansible/roles/mysql/tasks$ sudo vi main.yml
ubuntu@ip-172-31-34-58:/etc/ansible/roles/mysql/tasks$

```

### i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

```

---
# tasks file for mysql
- name: Install MySQL server
  apt:
    name: mysql-server
    state: present
~
~

```

- 8) Create a playbook to run java on test nodes and mysql on prod nodes

```

---
- name: Setup Java on test nodes
  hosts: test
  become: yes
  roles:
    - java

- name: Setup MySQL server on prod nodes
  hosts: prod
  become: yes
  roles:
    - mysql
~
~
~
~

```

- 9) Check the syntax and run the playbook

```

ubuntu@ip-172-31-34-58:/etc/ansible/roles$ ansible-playbook assign5.yml --syntax -check
playbook: assign5.yml
ubuntu@ip-172-31-34-58:/etc/ansible/roles$

```

### i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

```

ubuntu@ip-172-31-34-58:/etc/ansible/roles$ ansible-playbook assign5.yml

```

```
PLAY RECAP *****
172.31.0.35      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    res
172.31.10.15    : ok=2    changed=1    unreachable=0    failed=0    skipped=0    res
172.31.13.74    : ok=2    changed=1    unreachable=0    failed=0    skipped=0    res
172.31.8.179    : ok=2    changed=1    unreachable=0    failed=0    skipped=0    res
ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

### i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

10) Go to test nodes :

Cd /etc > ls > we can see java installed

```
ubuntu@ip-172-31-0-35:/etc$ ls
ModemManager      debconf.conf      init.d            mke2fs.conf
PackageKit        debian_version    initramfs-tools  modprobe.d
l11               default          inputrc          modules
acpi              deluser.conf     iproute2         modules-log.d
adduser.conf      depmod.d         iscsi            mtab
alternatives     dhcp             issue            multipath
apache2           dhcpd.conf       issue.net        multipath.conf
apparmor          dpkg             kernel           nanorc
apparmor.d        e2scrub.conf     landscape        needrestart
appport          ec2_version      ld.so.cache      netconfig
apt              environment      ld.so.conf       netplan
bash.bashrc      environment.d     ld.so.conf.d     network
bash_completion  ethertypes       legal            networkd-d
bash_completion.d fstab            libaudit.conf   newt
bindresvport.blacklist fuse.conf         libblockdev      nftables.conf
binfmt.d         fwupd            libibverbs.d     nsswitch.conf
ca-certificates  gai.conf         libnl-3          os-release
ca-certificates.conf gnutls           locale.alias     overlayroot
chrony           group            locale.conf      overlayroot.cc
cloud            group-           locale.gen       pam.conf
console-setup    grub.d           localtime        pam.d
credstore        gshadow          logcheck         passwd
cron.d           gshadow-         login.defs       passwd-
```

### i-0eef0d699c4921edc (slave 1)

PublicIPs: 15.207.116.1 PrivateIPs: 172.31.0.35

```

ubuntu@ip-172-31-10-15:/etc$ ls
ModemManager          debian_version         initramfs-tools
PackageKit            default               inputrc
X11                   deluser.conf          iproute2
acpi                  depmod.d              iscsi
adduser.conf          dhcp                  issue
alternatives          dhcpd.conf             issue.net
apparmor              dpkg                  java-21-openjdk
apparmor.d            e2scrub.conf          kernel
appport              ec2_version           landscape
apt                  environment           ld.so.cache
bash.bashrc           environment.d          ld.so.conf
bash_completion       ethertypes            ld.so.conf.d
bash_completion.d     fonts                 ldap
bindresvport.blacklist fstab                 legal
binfmt.d              fuse.conf              libaudit.conf
bpyobu                fwupd                 libblockdev
ca-certificates       gai.conf              libibverbs.d
ca-certificates.conf  gnutils               libnl-3
chrony                groff                 locale.alias
cloud                 group                 locale.conf
console-setup         group-                locale.gen
credstore             grub.d                localtime
credstore.encrypted  gshadow               logcheck

```

### i-08479afa0e612e0a6 (slave 2)

PublicIPs: 35.154.202.235 PrivateIPs: 172.31.10.15

11) Go to prod nodes:

Cd /etc > ls > we can see mysql installed

```

ubuntu@ip-172-31-8-179:~$ cd /etc
ubuntu@ip-172-31-8-179:/etc$ ls
ModemManager          debian_version         inputrc          modprobe.d
PackageKit            default               iproute2         modules
X11                   deluser.conf          iscsi            modules-load
acpi                  depmod.d              issue            mtab
adduser.conf          dhcp                  issue.net        multipath
alternatives          dhcpd.conf            kernel           multipath.co
apparmor              dpkg                  landscape        mysql
apparmor.d            e2scrub.conf          ld.so.cache      nanorc
appport              ec2_version           ld.so.conf       needrestart
apt                  environment           ld.so.conf.d     netconfig
bash.bashrc           ethertypes            ldap             netplan
bash_completion       fstab                 legal            network
bash_completion.d     fuse.conf              libaudit.conf    networkd-dis
bindresvport.blacklist fwupd                 libblockdev      networks
binfmt.d              gai.conf              libibverbs.d     newt
bpyobu                gnutils               libnl-3           nftables.co
ca-certificates       groff                 locale.alias     nsswitch.co
ca-certificates.conf  group                 locale.conf      opt
chrony                group-                locale.gen       os-release
cloud                 grub.d                localtime        overlayroot
console-setup         gshadow               login.defs       overlayroot
credstore             gshadow-              pam.conf

```

### i-0e290257197d25aaf (prod1)

PublicIPs: 65.0.20.28 PrivateIPs: 172.31.8.179

```

alternatives      dhcpd.conf        kernel            multipath
apparmor          dpkg              landscape         mysql
apparmor.d        e2scrub.conf     ld.so.cache      nanoirc
appport           ec2_version       ld.so.conf       needresta
apt              environment       ld.so.conf.d     netconfig
bash.bashrc       ethertypes       ldap             netplan
bash_completion   fstab             legal            network
bash_completion.d fuse.conf         libaudit.conf    networkd-
bindresvport.blacklist fwupd            libblockdev       networks
binfmt.d          gai.conf          libibverbs.d     newt
pyobu             gnutls            libnl-3           nftables.
ca-certificates   groff             locale.alias      nsswitch.
ca-certificates.conf group             locale.conf       opt
chrony            group-            locale.gen        os-releas
cloud             grub.d            logcheck          overlayro
console-setup     gshadow           login.defs        overlayro
credstore         gshadow-         logrotate.conf    pam.conf
credstore.encrypted gss              logrotate.d       pam.d
cron.d            hdparm.conf       lsb-release       passwd
cron.daily        hibagent-config.cfg lvm               passwd-
cron.hourly       hibinit-config.cfg machine-id         perl
cron.monthly      host.conf         magic             pki
cron.weekly       hostname          magic.mime        plymouth
cron.yearly       hosts             manpath.config    pm
crontab           hosts.allow       mdadm             polkit-1
cryptsetup-initramfs hosts.deny         mecabrc           pollinate
crypttab          init              mime.types        ppp
dbus-1            init.d            mke2fs.conf       profile
debconf.conf      initramfs-tools  mke2fs.conf       profile.d
ubuntu@ip-172-31-13-74:/etc$

```

i-0116dcdabf5d0799b (prod2)

PublicIPs: 65.0.11.21 PrivateIPs: 172.31.13.74