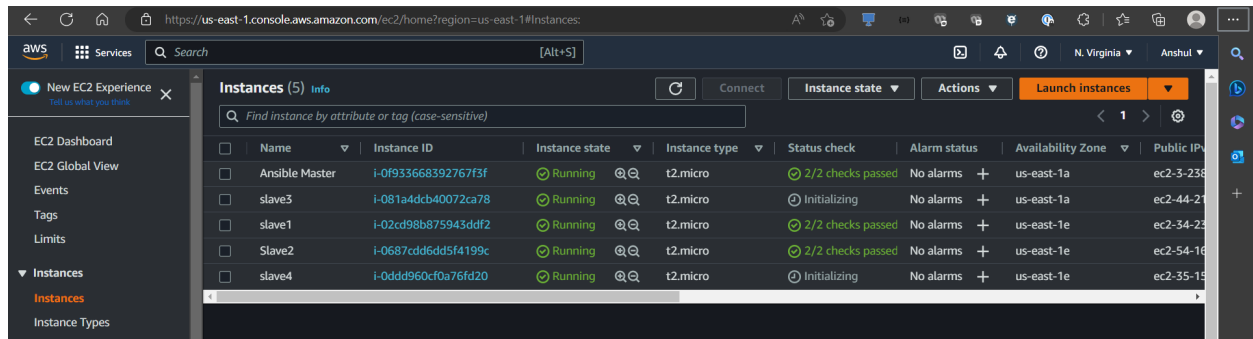


Ansible - 5

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 Playbook for the above

We already have a 3 node cluster. As per task lets create two more nodes and connect it to master under test and prod servers.

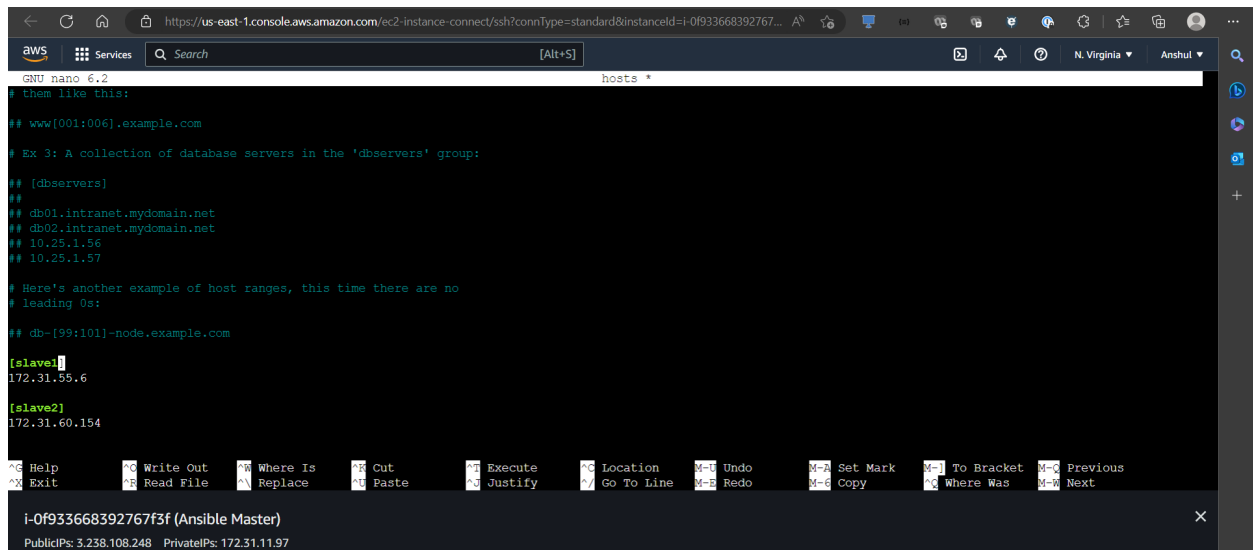


Let us register their private ip's under hosts in master.

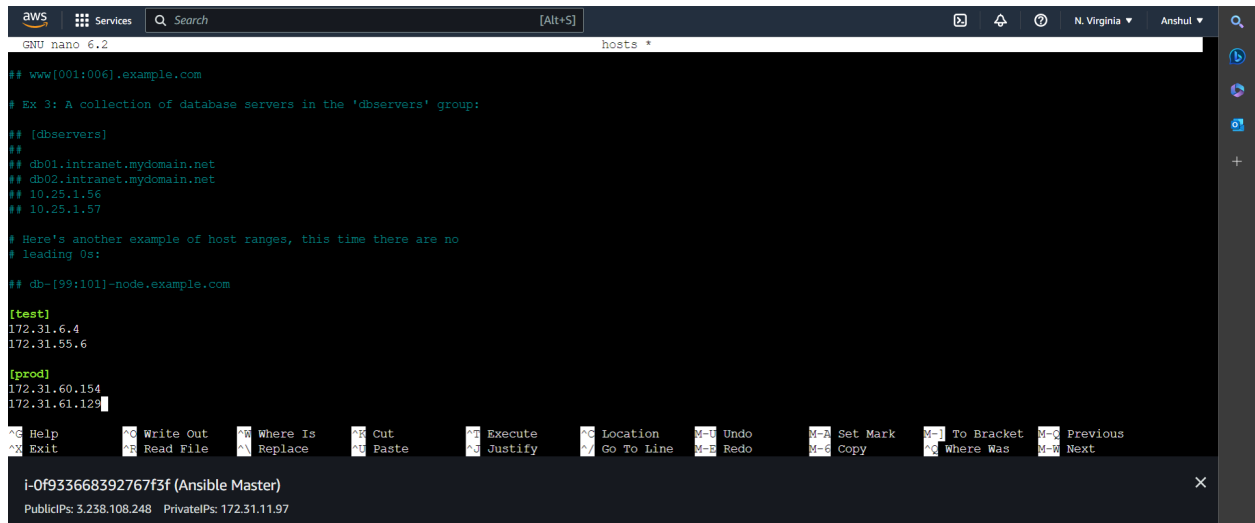
Ssh to master and cd /etc/ansible

Nano hosts

This is what we had before:



Let us distribute 2 as test and 2 as prod server as per mentioned task:



```
aws
Services
Search [Alt+S]
GNU nano 6.2 hosts *

## www[001:006].example.com

# Ex 3: A collection of database servers in the 'dbservers' group:
## [dbservers]
## db01.intranet.mydomain.net
## db02.intranet.mydomain.net
## 10.25.1.56
## 10.25.1.57

# Here's another example of host ranges, this time there are no
# leading 0s:
## db-[99:101]-node.example.com

[test]
172.31.6.4
172.31.55.6

[prod]
172.31.60.154
172.31.61.129

Help      Write Out  Where Is  Cut       Execute   Location  Undo      Set Mark  To Bracket Previous
Exit      Read File  Replace   Paste     Justify   Go To Line Redo      Copy      Where Was  Next

i-Of933668392767f3f (Ansible Master)
PublicIPs: 3.238.108.248 PrivateIPs: 172.31.11.97
```

Let us give ssh access as well for proper working. We do following commands on-Master: `sudo ssh-keygen` (copy this key)

Move to newly made servers and ssh into them.

Do this in both newly made slave servers:

`cd .ssh`

`nano authorized_keys`

Paste the copied key here.

Now that that is done, ping them all to check connectivity using command:

`Ansible -m ping all`

All the 4 worker nodes are responding.



```
aws
Services
Search [Alt+S]
The authenticity of host '172.31.61.129 (172.31.61.129)' can't be established.
ED25519 key fingerprint is SHA256:gOF0nz2Es7Wp2cG2TjovhK9jKYfJfV1+KlquwsjxB94.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? 172.31.60.154 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
172.31.55.6 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
yes
172.31.6.4 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
yes
172.31.61.129 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
ubuntu@ip-172-31-11-97:~$

i-Of933668392767f3f (Ansible Master)
PublicIPs: 3.238.108.248 PrivateIPs: 172.31.11.97
```

This is the same playbook previously used with a little change in hosts.

YAML file:

- name: tasks for assign1 on w1
 - hosts: test
 - become: true
 - tasks:
 - name: installing java
 - apt: name=openjdk-11-jdk update-cache=yes state=latest
- name: tasks for assign2 on w2
 - hosts: prod
 - become: true
 - tasks:
 - name: installing mysql
 - apt: name=mysql-server update-cache=yes state=latest

Now create new folder for playbook for this task and paste above yaml file.

mkdir assignment5

Nano assignment5.yaml

```
aws
Services
Q Search [Alt+S]
N. Virginia Anshul
172.31.55.6 | SUCCESS => (
  "changed": false,
  "ping": "pong"
)
172.31.61.129 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
yes
172.31.61.129 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
yes
172.31.61.129 | SUCCESS => (
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
)
ubuntu@ip-172-31-11-97:~$ cd Playbooks
-bash: cd: Playbooks: No such file or directory
ubuntu@ip-172-31-11-97:~$ cd Playbook
ubuntu@ip-172-31-11-97:~/Playbooks$ mkdir assignment5
ubuntu@ip-172-31-11-97:~/Playbooks$ cd assignment5
ubuntu@ip-172-31-11-97:~/Playbook/assignment5$ nano assignment5.yaml
ubuntu@ip-172-31-11-97:~/Playbook/assignment5$

i-Of933668392767f3f (Ansible Master)
PublicIPs: 3.238.108.248 PrivateIPs: 172.31.11.97
```

And paste it.

```
GNU nano 6.2 assignment5.yaml *
---
- name: tasks for assign1 on w1
  hosts: test
  become: true
  tasks:
    - name: installing java
      apt: name=openjdk-11-jdk update-cache=yes state=latest
- name: tasks for assign2 on w2
  hosts: prod
  become: true
  tasks:
    - name: installing mysql
      apt: name=mysql-server update-cache=yes state=latest
```

Now run this playbook using: `ansible-playbook <filename.yaml>`

```
aws Services Search [Alt+S] N. Virginia Anshul

-bash: cd: Playbooks: No such file or directory
ubuntu@ip-172-31-11-97:~$ cd Playbook
ubuntu@ip-172-31-11-97:~/Playbook$ mkdir assignment5
ubuntu@ip-172-31-11-97:~/Playbook$ cd assignment5
ubuntu@ip-172-31-11-97:~/Playbook/assignment5$ nano assignment5.yaml
ubuntu@ip-172-31-11-97:~/Playbook/assignment5$ ansible-playbook assignment5.yaml

PLAY [tasks for assign1 on w1] *****

TASK [Gathering Facts] *****
ok: [172.31.55.6]
ok: [172.31.6.4]

TASK [installing java] *****
ok: [172.31.55.6]
changed: [172.31.6.4]

PLAY [tasks for assign2 on w2] *****

TASK [Gathering Facts] *****
ok: [172.31.60.154]
ok: [172.31.61.129]

TASK [installing mysql] *****
ok: [172.31.60.154]
changed: [172.31.61.129]

PLAY RECAP *****
172.31.55.6 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
172.31.6.4 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
172.31.60.154 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
172.31.61.129 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

ubuntu@ip-172-31-11-97:~/Playbook/assignment5$

I-0f933668392767f3f (Ansible Master)
PublicIPs: 3.238.108.248 PrivateIPs: 172.31.11.97
```

Note: The `changed=0` are the ones which had installed in them already from previous tasks.

Let us check if they are installed in all of them.

Test1

```
Get:39 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4960 B]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [596 B]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [240 B]
Fetched 25.9 MB in 5s (5727 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
17 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-6-4:~$ cd .ssh
ubuntu@ip-172-31-6-4:~/.ssh$ ls
authorized keys
ubuntu@ip-172-31-6-4:~/.ssh$ nano authorized keys
ubuntu@ip-172-31-6-4:~/.ssh$ java --version
openjdk 11.0.17 2022-10-18
OpenJDK Runtime Environment (build 11.0.17+8-post-Ubuntu-1ubuntu222.04)
OpenJDK 64-Bit Server VM (build 11.0.17+8-post-Ubuntu-1ubuntu222.04, mixed mode, sharing)
ubuntu@ip-172-31-6-4:~/.ssh$

I-081a4dcb40072ca78 (test1)
PublicIPs: 44.213.100.185 PrivateIPs: 172.31.6.4
```

Test2

```
ubuntu@ip-172-31-55-6:~$ cd .ssh
ubuntu@ip-172-31-55-6:~/.ssh$ nano authorized keys
ubuntu@ip-172-31-55-6:~/.ssh$ java --version
openjdk 11.0.17 2022-10-18
OpenJDK Runtime Environment (build 11.0.17+8-post-Ubuntu-1ubuntu222.04)
OpenJDK 64-Bit Server VM (build 11.0.17+8-post-Ubuntu-1ubuntu222.04, mixed mode, sharing)
ubuntu@ip-172-31-55-6:~/.ssh$

I-02cd98b875943ddf2 (test2)
PublicIPs: 34.232.78.145 PrivateIPs: 172.31.55.6
```

Prod1

```
Last login: Sun Feb 26 19:27:31 2023 from 18.206.107.28
ubuntu@ip-172-31-60-154:~$ cd .ssh
ubuntu@ip-172-31-60-154:~/.ssh$ nano authorized keys
ubuntu@ip-172-31-60-154:~/.ssh$ mysql --version
mysql Ver 8.0.32-0ubuntu0.22.04.2 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-60-154:~/.ssh$

I-0687cdd6dd5f4199c (prod1)
PublicIPs: 54.167.84.112 PrivateIPs: 172.31.60.154
```

Prod2

```
ubuntu@ip-172-31-61-129:~$ cd .ssh
ubuntu@ip-172-31-61-129:~/.ssh$ nano authorized keys
ubuntu@ip-172-31-61-129:~/.ssh$ mysql --version
mysql Ver 8.0.32-0ubuntu0.22.04.2 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-61-129:~/.ssh$

I-0ddd960cf0a76fd20 (prod2)
PublicIPs: 35.153.67.234 PrivateIPs: 172.31.61.129
```