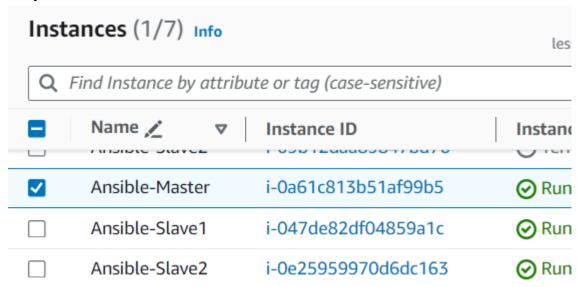
Step1:I created 3 EC2 instances



Step2: I installed Ansible on Master node of Ansible cluster

```
ubuntu@ip-172-31-93-251:~$ ansible --version
ansible [core 2.16.10]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu
  ansible python module location = /usr/lib/pyth
  ansible collection location = /home/ubuntu/.an
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Apr 10 2024, 05
  jinja version = 3.1.2
  libyaml = True
  ubuntu@ip-172-31-93-251:~$ []
i-Oa61c813b51af99b5 (Ansible-Master)
```

#### Step3:I generated ssh key pair on master node

```
ubuntu@ip-172-31-93-251:~$ ssh-keygen
Generating public/private ed25519 key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id ed25519):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id ed25519
Your public key has been saved in /home/ubuntu/.ssh/id ed25519.pub
The key fingerprint is:
SHA256:23KezK/Ed5qV1/J6ikwl51eJn7AXaCBnhFmLoKvFYOI ubuntu@ip-172-31-93-251
The key's randomart image is:
+--[ED25519 256]--+
       . +0
       . .00 .
|.00. +.0.|
 E + S
            .=00.
        + .=+.=|
    0
        0 = 0.*++
         B = \star .= .
          *0* 0+.|
  ---[SHA256]----+
ubuntu@ip-172-31-93-251:~$ 🗍
```

# Step4:Copied the public key to the slave nodes and saved it in their authorised key file.

```
ubuntu@ip-172-31-93-251:~$ cd /home/ubuntu/.ssh
ubuntu@ip-172-31-93-251:~/.ssh$ ls
authorized_keys id_ed25519 id_ed25519.pub
ubuntu@ip-172-31-93-251:~/.ssh$ sudo cat id_ed25519.pub
ssh-ed25519 AAAAC3NzaC11ZDI1NTE5AAAAIMLg7ZmoDx6n6MoQ2Q7b2oen1u2p6UMRffLWnmgOfSPf ubuntu@ip-172-31-93-251
ubuntu@ip-172-31-93-251:~/.ssh$ [
```

#### Step5:I configured the hosts and added the slave IP adresses

```
[Slaves]
slave1 ansible_host=172.31.85.193
slave2 ansible_host=172.31.84.1
```

Step6:To check the connection between ansible master and slaves i pinged the slave nodes.

```
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
slave2 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
yes
slave1 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
```

Step7:Created a playbook to install softwares on respective slaves

```
GNU nano 7.2

---
- name: Installation of java on slave1
hosts: slave1
become: true
tasks:
- name: install java
apt: name=openjdk-17-jdk state=latest
- name: Installation of mysql server
hosts: slave2
become: true
tasks:
- name: install mysql server
apt: name=mysql-server state=latest
```

#### Step8:Performed a check

#### Step9:Checked on Slave1

```
ubuntu@ip-172-31-85-193:~$ java --version
openjdk 17.0.12 2024-07-16
OpenJDK Runtime Environment (build 17.0.12+7-Ubuntu-1ubuntu224.04)
OpenJDK 64-Bit Server VM (build 17.0.12+7-Ubuntu-1ubuntu224.04, mixed mode, sharing)
ubuntu@ip-172-31-85-193:~$ []

i-047de82df04859a1c (Ansible-Slave1)
PublicIPs: 52.91.252.125 PrivateIPs: 172.31.85.193
```

### Step10:Checked on Slave2

```
ubuntu@ip-172-31-84-1:~$ mysql --version
mysql Ver 8.0.39-0ubuntu0.24.04.2 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-84-1:~$ [
```