

# Ansible Assignment-1

**Step1:** I created 3 EC2 instances

Instances (1/7) <a href="#">Info</a>			
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/>			
<input type="checkbox"/>	Name	Instance ID	Instance State
<input checked="" type="checkbox"/>	Ansible-Master	i-0a61c813b51af99b5	✔ Run
<input type="checkbox"/>	Ansible-Slave1	i-047de82df04859a1c	✔ Run
<input type="checkbox"/>	Ansible-Slave2	i-0e25959970d6dc163	✔ Run

**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/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3.12/site-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Apr 10 2024, 05:03:03) [CPython]
  jinja version = 3.1.2
  libyaml = True
ubuntu@ip-172-31-93-251:~$
```

i-0a61c813b51af99b5 (Ansible-Master)

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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/J6ikw151eJn7AXaCBnhFmLoKvFYOI ubuntu@ip-172-31-93-251
The key's randomart image is:
+--[ED25519 256]--+
|      .  +O      |
|      . .OO .   |
|  . o .   o =    |
| . o o .   + . o .|
| E  + S   .=OO.  |
|   o   +  .+=. = |
|   .   o = o.*++ |
|       B = *. =.  |
|       *O* o+.   |
+-----[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 AAAAC3NzaC1lZDI1NTE5AAAAIMLg7ZmoDx6n6MoQ2Q7b2oen1u2p6UMRffLWnmgOfSPf ubuntu@ip-172-31-93-251
ubuntu@ip-172-31-93-251:~/.ssh$
```

Step5:I configured the hosts and added the slave IP addresses

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

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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
```

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## Step8:Performed a check

```
ubuntu@ip-172-31-93-251:/$ sudo nano play.yaml
ubuntu@ip-172-31-93-251:/$ ansible-playbook play.yaml --check

PLAY [Installation of java on slave1] *****

TASK [Gathering Facts] *****
ok: [slave1]

TASK [install java] *****
changed: [slave1]

PLAY [Installation of mysql server] *****

TASK [Gathering Facts] *****
ok: [slave2]

TASK [install mysql server] *****
changed: [slave2]

PLAY RECAP *****
slave1                : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
slave2                : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-93-251:/$
```

## 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:~$
```