

Module-6: Ansible Assignment - 3

You have been asked to:

- Create 2 Ansible Roles
- Install apache2 on slave1 using one role and nginx on slave2 using the other role

Above should be implemented using different Ansible Roles

Solution:

- 1) Create 1 master and 2 slave > update package > install ansible in master > connect master and slaves > check connectivity

```
ubuntu@ip-172-31-34-58:/etc/ansible$ ansible -m ping all
The authenticity of host '172.31.0.35 (172.31.0.35)' can't be established.
ED25519 key fingerprint is SHA256:6+t0IrkeKw/BWfKCDsonCaCe3W2KSvmREYk0moGZOAA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? [WARNING]: Platform linux on host 172.31.0.35 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible/core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.10.15 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.12"
  },
  "changed": false,
  "ping": "pong"
}
yes
[WARNING]: Platform linux on host 172.31.0.35 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible/core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.0.35 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3.12"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-34-58:/etc/ansible$
```

i-Oe5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 2) 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-Oe5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 3) Create roles : sudo ansible-galaxy init apache2
sudo ansible-galaxy init nginx

```
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ sudo ansible-galaxy init apache2
- Role apache2 was created successfully
ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

i-Oe5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

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

i-Oe5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

- 4) Switch to roles :
- ```
cd apache > ls > cd tasks > ls > we see main.yml > sudo vi main.yml
```

edit the main.yml file with the following commands:

```

roles/apache2/tasks/main.yml
- name: Install Apache2
 apt:
 name: apache2
 state: present
```

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

### i-Oe5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

```

roles/apache2/tasks/main.yml
- name: Install Apache2
 apt:
 name: apache2
 state: present
~
~
~
~
```

- 5) Same do it for nginx

```

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

```

## i-0e5a50632eb21b8eb (master)

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

```

tasks file for nginx
- name: Install Nginx
 apt:
 name: nginx
 state: present
~
~
~
~

```

- 6) Come to the roles directory and create a playbook to connect the roles with the respective hosts and execute by creating a playbook

```

- hosts: slave1
 become: yes
 roles:
 - apache2

- hosts: slave2
 become: yes
 roles:
 - nginx
~
~
~

```

7) Check the syntax

```
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ ansible-playbook assign3.yml --syntax -check
playbook: assign3.yml
ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

**i-0e5a50632eb21b8eb (master)**

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

8) Play the playbook

```
ubuntu@ip-172-31-34-58:/etc/ansible/roles$ ansible-playbook assign3.yml

PLAY [slave1] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.0.35 is using the discovered Python interpreter at /usr/bin/python3.12, but future
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.0.35]

TASK [apache2 : Install Apache2] *****
ok: [172.31.0.35]

PLAY [slave2] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.10.15 is using the discovered Python interpreter at /usr/bin/python3.12, but futur
Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-
core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.10.15]

TASK [nginx : Install Nginx] *****
changed: [172.31.10.15]

PLAY RECAP *****
172.31.0.35 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
172.31.10.15 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

ubuntu@ip-172-31-34-58:/etc/ansible/roles$
```

**i-0e5a50632eb21b8eb (master)**

PublicIPs: 3.108.42.153 PrivateIPs: 172.31.34.58

9) Go to slave 1

cd /etc > ls > we can see apache 2

```
ubuntu@ip-172-31-0-35:~$ cd /etc
ubuntu@ip-172-31-0-35:/etc$ ls
ModemManager debconf.conf
PackageKit debian_version
X11 default
acpi deluser.conf
adduser.conf depmod.d
alternatives dhcp
apache2 dhcpcd.conf
apparmor dpkg
apparmor.d e2scrub.conf
appport ec2_version
apt environment
bash.bashrc ethertypes
bash_completion fstab
bash_completion.d fuse.conf
bindresvport.blacklist fwupd
binfmt.d gai.conf
bryobu gnutils
ca-certificates groff
ca-certificates.conf group
chrony group-
cloud grub.d
console-setup gshadow
```

### i-0eef0d699c4921edc (slave 1)

PublicIPs: 15.207.116.1 PrivateIPs: 172.31.0.35

10) Go to slave 2

cd /etc > ls > we can see nginx

```
ubuntu@ip-172-31-10-15:~/ssh$ cd
ubuntu@ip-172-31-10-15:~$ cd /etc
ubuntu@ip-172-31-10-15:/etc$ ls
ModemManager debian_version iproute2 modules-load.
PackageKit default iscsi mtab
X11 deluser.conf issue multipath
acpi depmod.d issue.net multipath.conf
adduser.conf dhcp kernel nanorc
alternatives dhcpcd.conf landscape needrestart
apparmor dpkg ld.so.cache netconfig
apparmor.d e2scrub.conf ld.so.conf netplan
appport ec2_version ld.so.conf.d network
apt environment ldap networkd-disp
bash.bashrc ethertypes legal networks
bash_completion fstab libaudit.conf newt
bash_completion.d fuse.conf libblockdev nftables.conf
bindresvport.blacklist fwupd libibverbs.d nginx
binfmt.d gai.conf libnl-3 netswitch.conf
bryobu gnutils locale.alias opt
ca-certificates groff locale.conf os-release
ca-certificates.conf group locale.gen overlayroot.c
chrony group- localtime overlayroot.l
cloud grub.d logcheck pam.conf
console-setup gshadow login.defs pam.d
credstore gshadow- logrotate.conf passwd
```

### i-08479afa0e612e0a6 (slave 2)

PublicIPs: 35.154.202.235 PrivateIPs: 172.31.10.15