Configure apache2 server using Ansible roles

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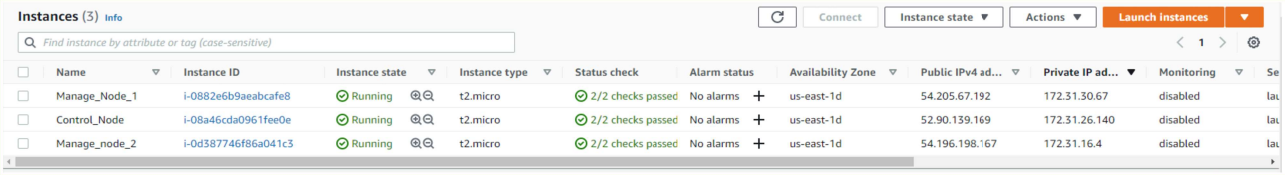
Step 1 :: Creating EC2 instances

Create three EC2 instances and name it as below

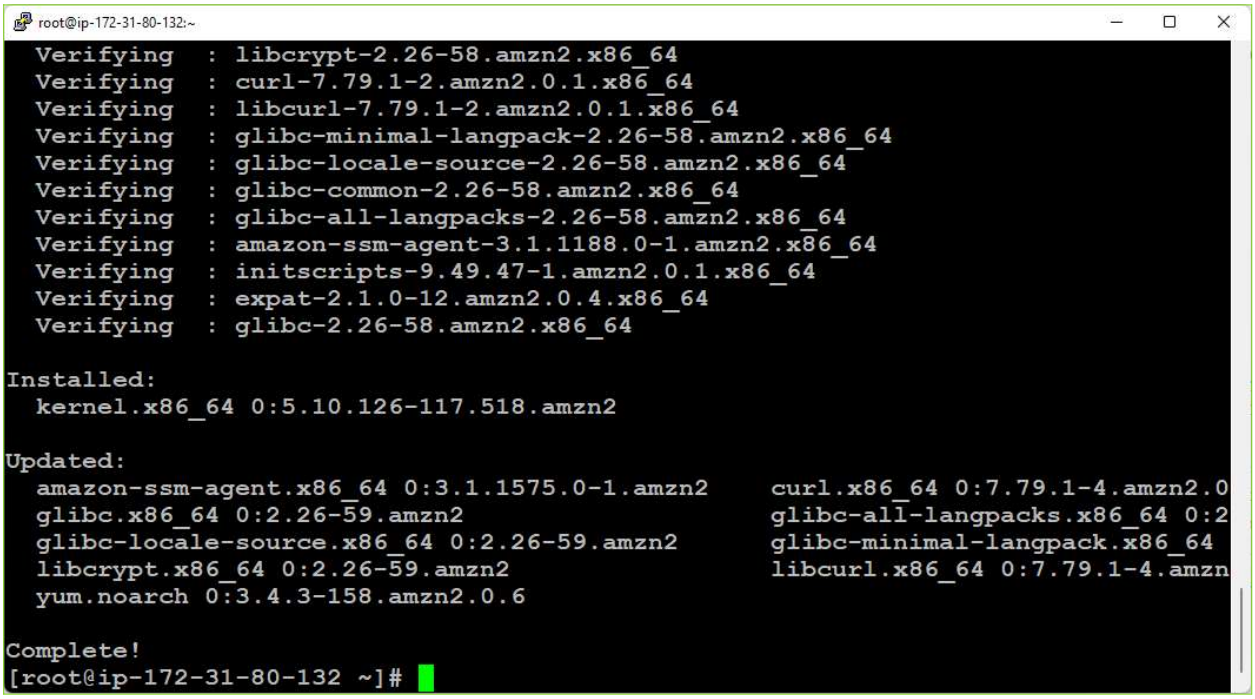
1. Ansible_Control_Node
2. Ansible_Manage_Node_1
3. Ansible_Manage_Node_2



Step 2 :: Installing Ansible

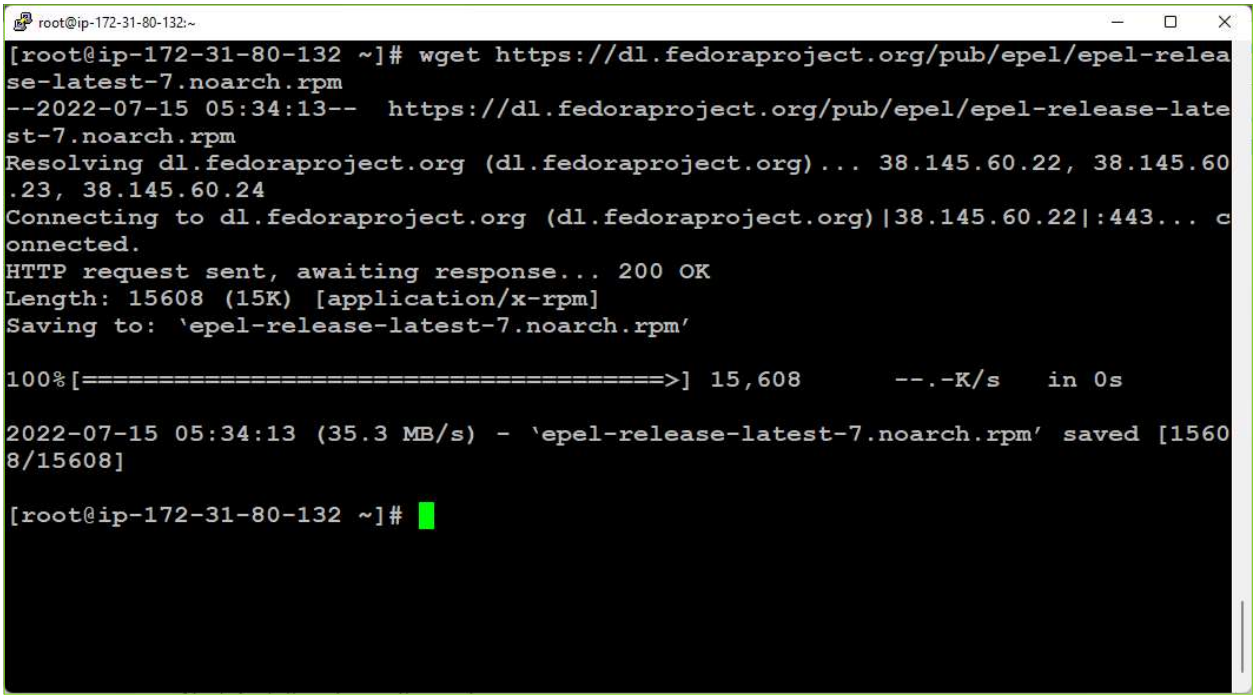
Install Ansible in Ansible_Control_Node
Update the rhel repo to latest

yum update -y

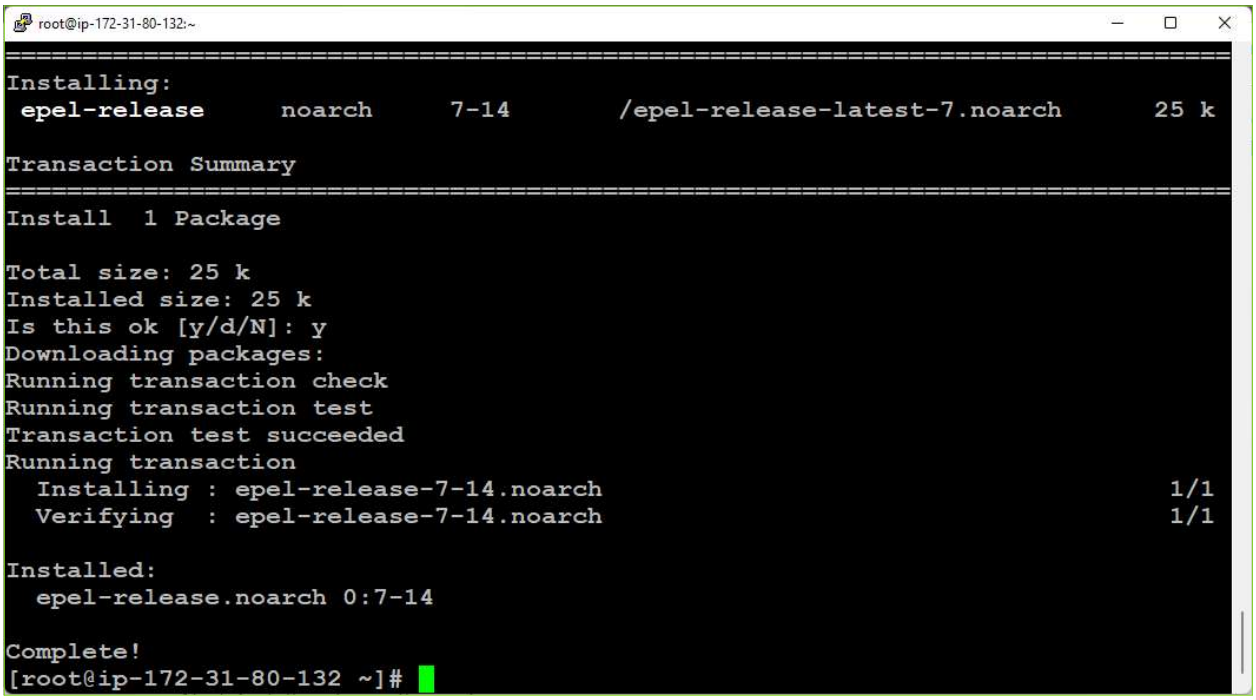


Install Ansible using EPEL Repository

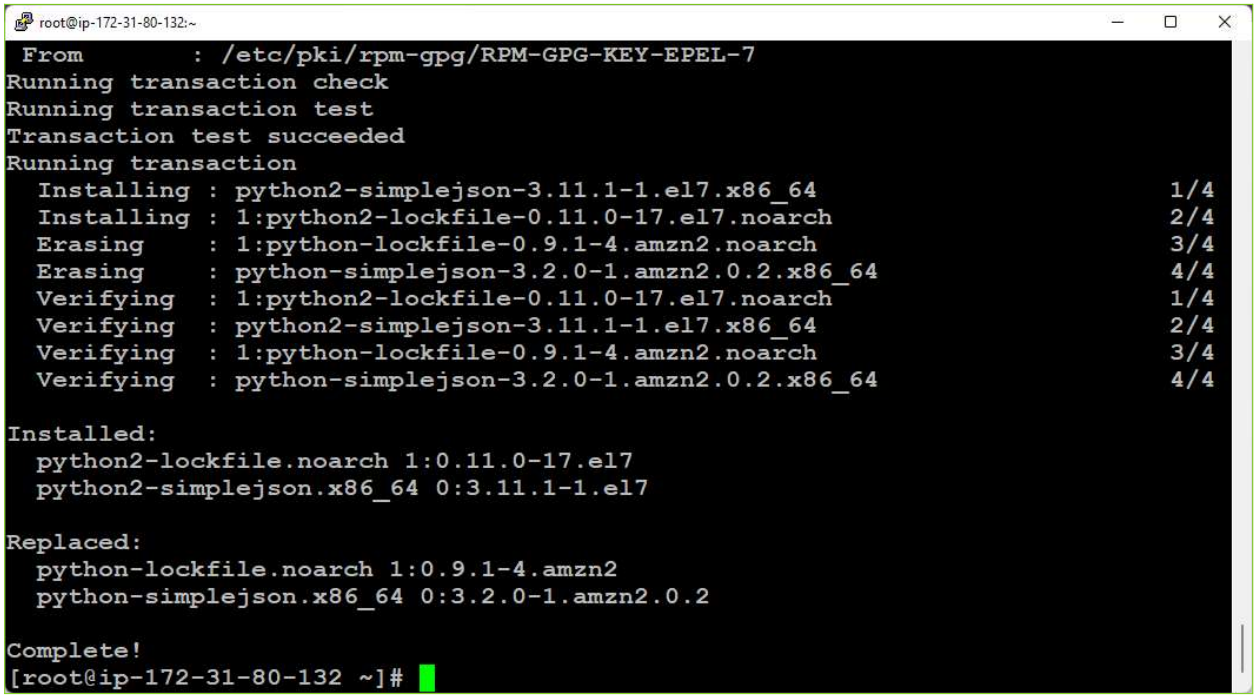
wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm



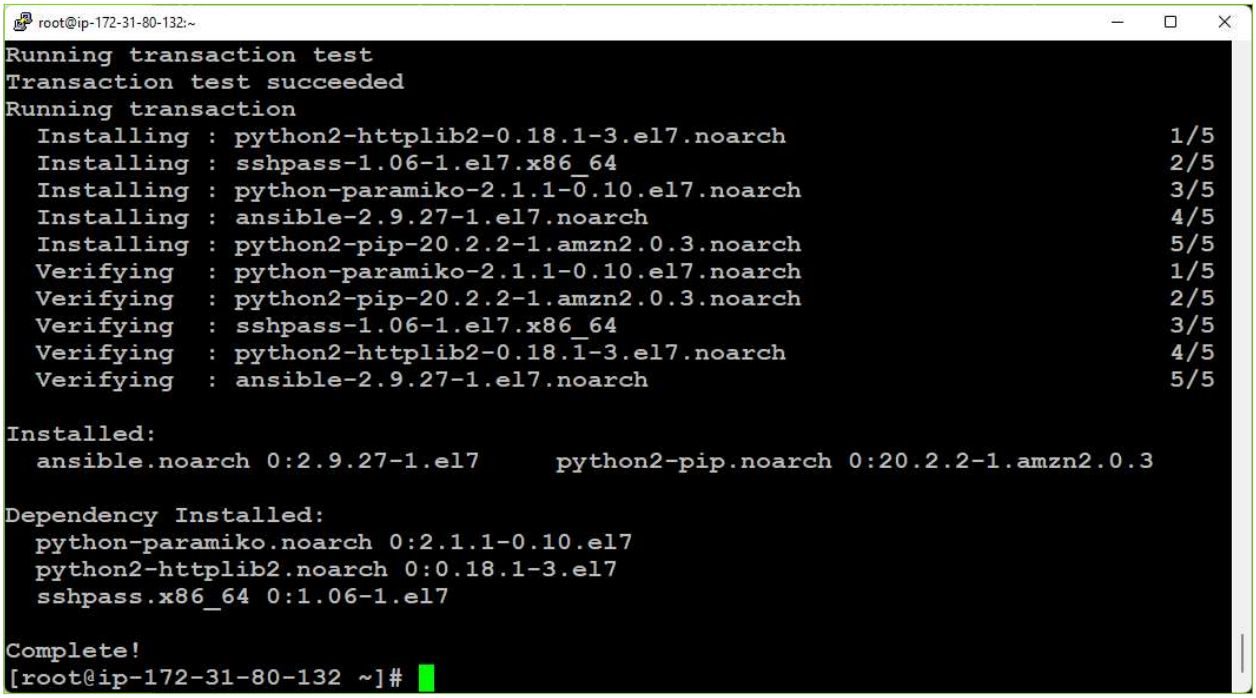
yum install -y epel-release-latest-7.noarch.rpm



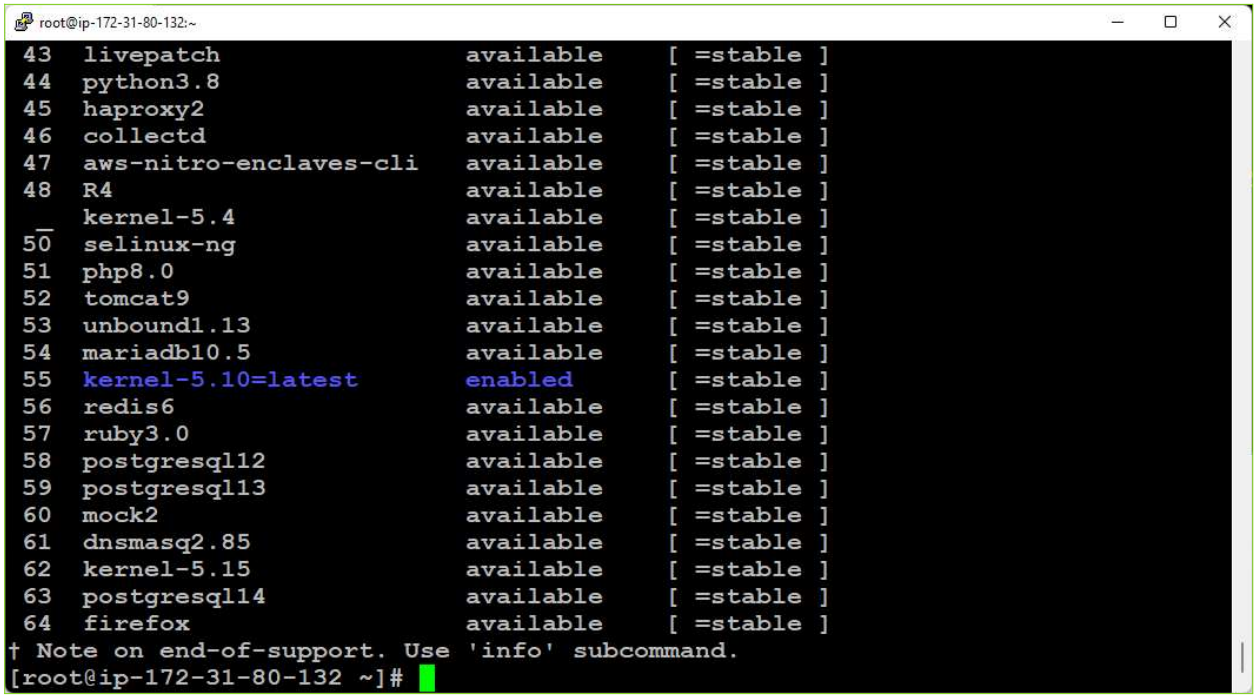
yum update -y



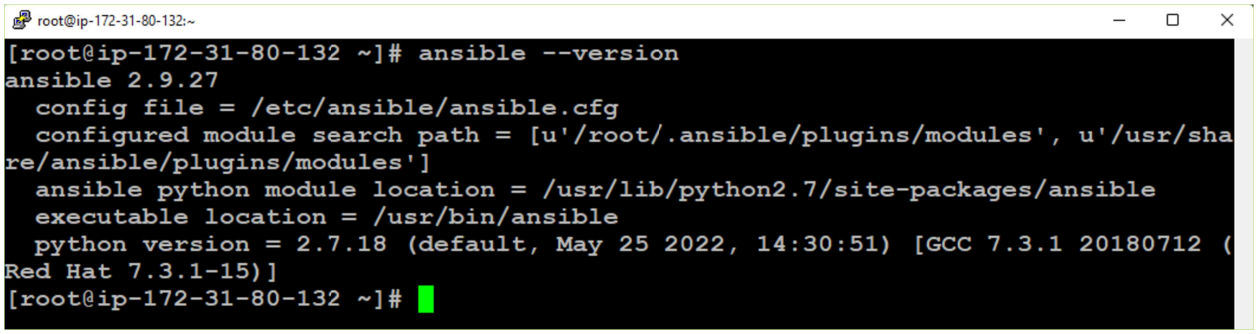
yum install python python-devel python-pip openssl ansible -y



amazon-linux-extras install ansible2

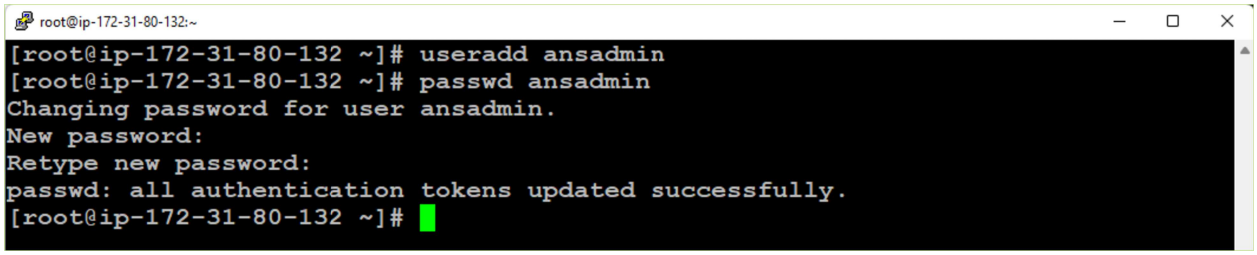


ansible --version

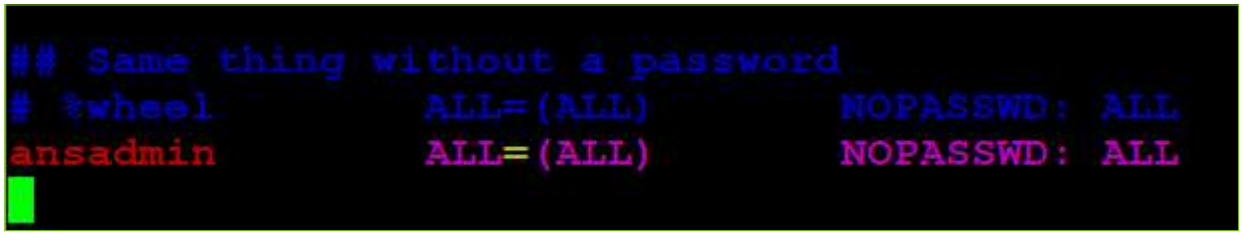


Step 3 :: Configuring Ansible in all nodes

useradd ansadmin
passwd ansadmin

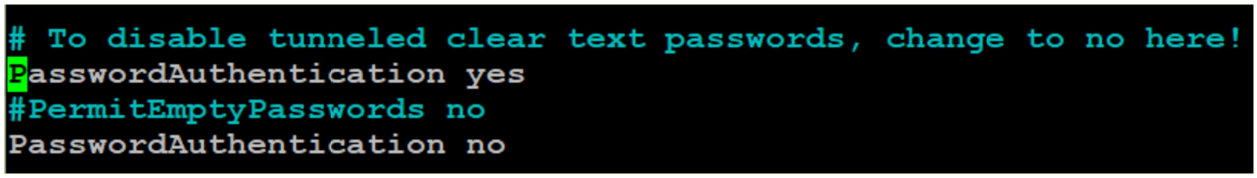


visudo
Add below line
ansadmin ALL=(ALL) NOPASSWD: ALL

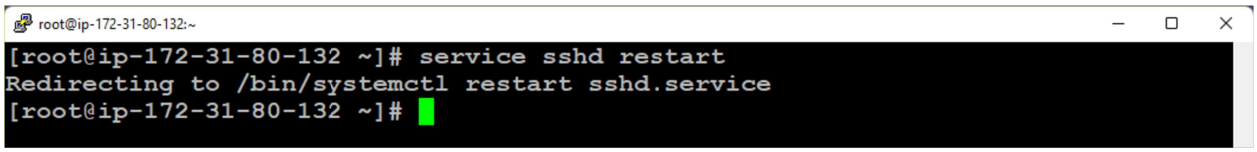


vi /etc/ssh/sshd_config

Uncomment the below line
“PasswordAuthentication yes”

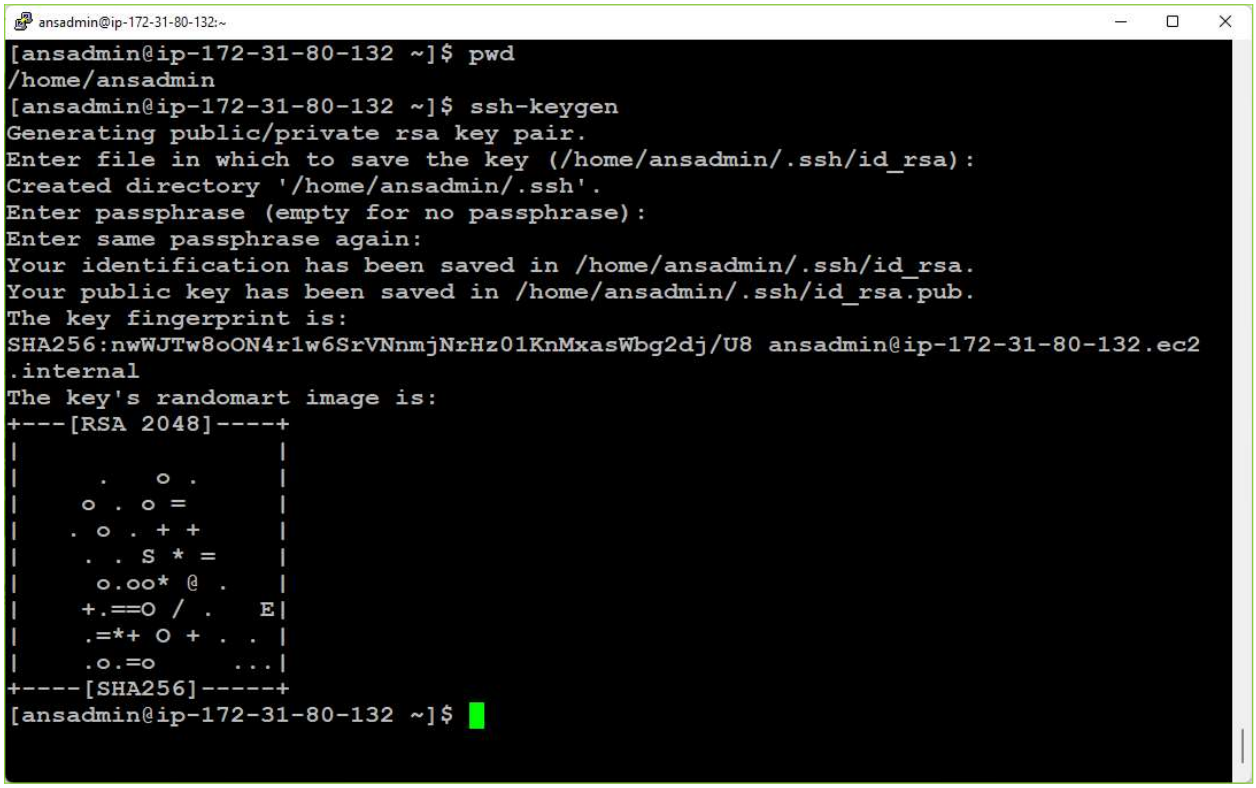


service sshd restart



Step 4 :: Setup PasswordLess login

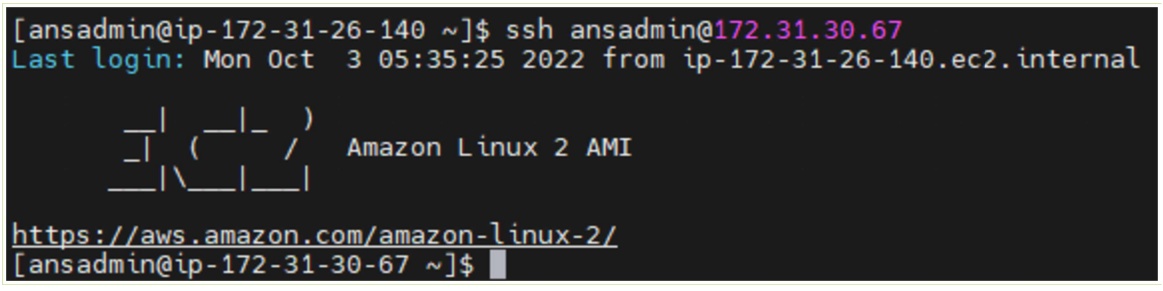
Setup PasswordLess login to all the Manage Nodes from Control node via ansadmin user
# su - ansadmin
$ ssh-keygen

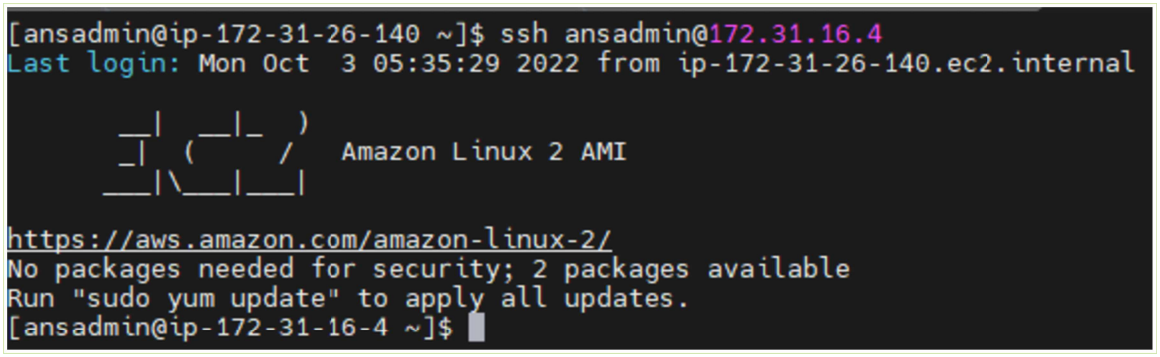


Copy the public key to Manage Nodes

$ ssh-copy-id -i /home/ansadmin/.ssh/id_rsa.pub ansadmin@172.31.30.67
$ ssh-copy-id -i /home/ansadmin/.ssh/id_rsa.pub ansadmin@172.31.16.4

Test the PasswordLess login from control node to manage nodes





Step 5 :: Managing inventory file on Master

Add the below lines at end of file /etc/ansible/hosts

vi /etc/ansible/hosts

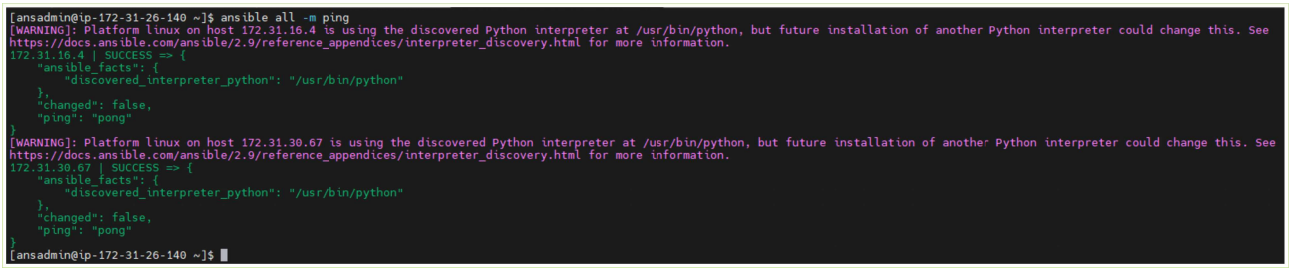
172.31.30.67
172.31.16.4

[webserver]
172.31.30.67

[dbserver]
172.31.16.4

Step 6 :: Perform Ping test from Control Node to Manage Nodes from ansadmin user

$ ansible all -m ping

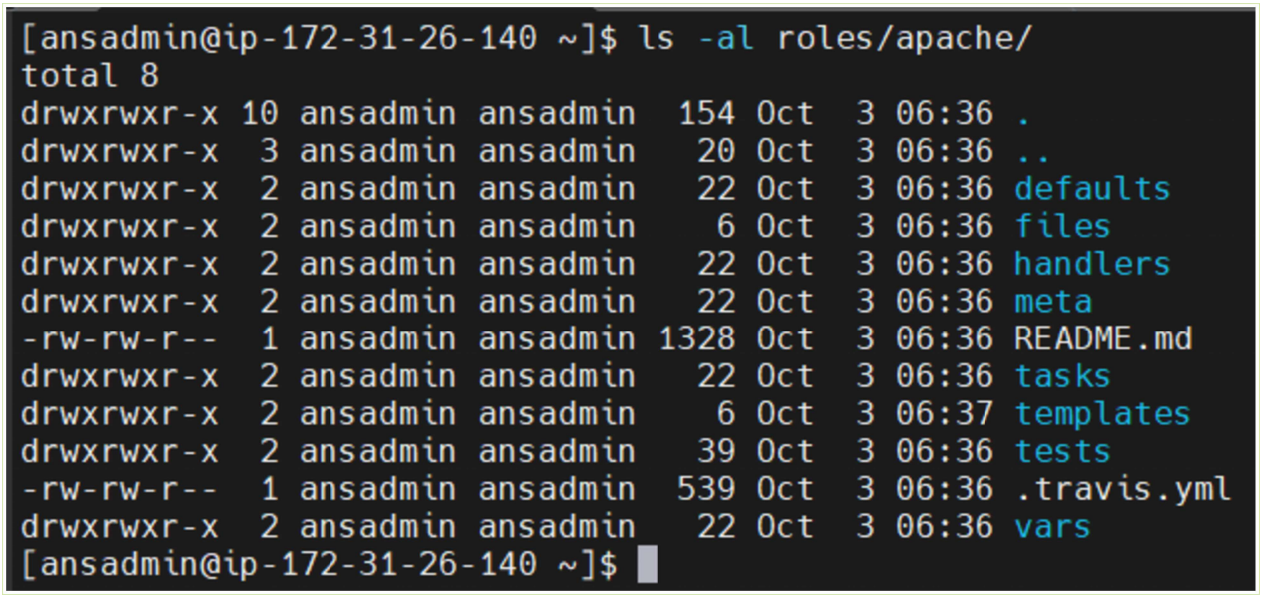


Step 7 :: Creating a role named apache

Create a role named apache via ansadmin user

$ ansible-galaxy init roles/apache

$ ls -al roles/apache/



Step 8 :: Creating a template

Create a template to print fqdn and ip address of the server

$ vi roles/apache/templates/template.j2

My hostname is {{ ansible_fqdn }} on {{ansible_default_ipv4.address}}

Step 9 :: Creating tasks

Create a tasks yaml file to install and configure apache server

$ vi roles/apache/tasks/main.yml

```
- name: install httpd package
  yum:
    name:
      - httpd
      - firewalld
    state: present
- name: start service httpd
  service:
    name: httpd
    state: started
    enabled: yes
- name: start service firewalld
```

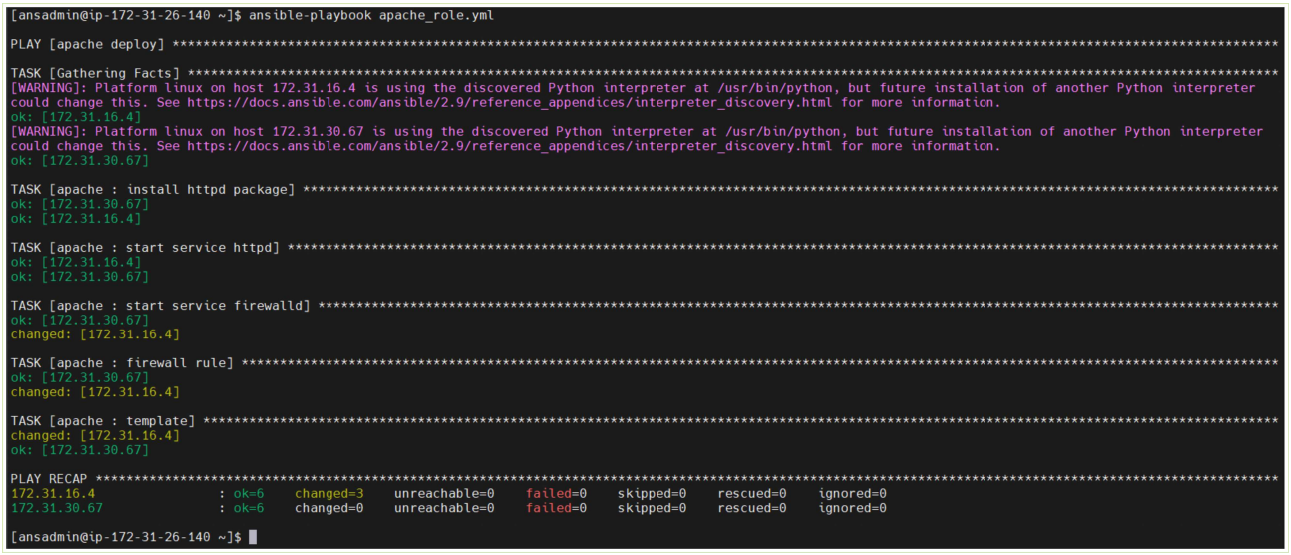
```
  service:
    name: firewalld
    state: started
    enabled: yes
- name: firewall rule
  firewalld:
    service: http
    state: enabled
    permanent: true
    immediate: yes
- template:
    src: template.j2
    dest: /var/www/html/index.html
```

Step 10 :: Creating the main playbook

```
$ vi apache_role.yml
---
- name: apache deploy
  hosts: all
  roles:
    - apache
```

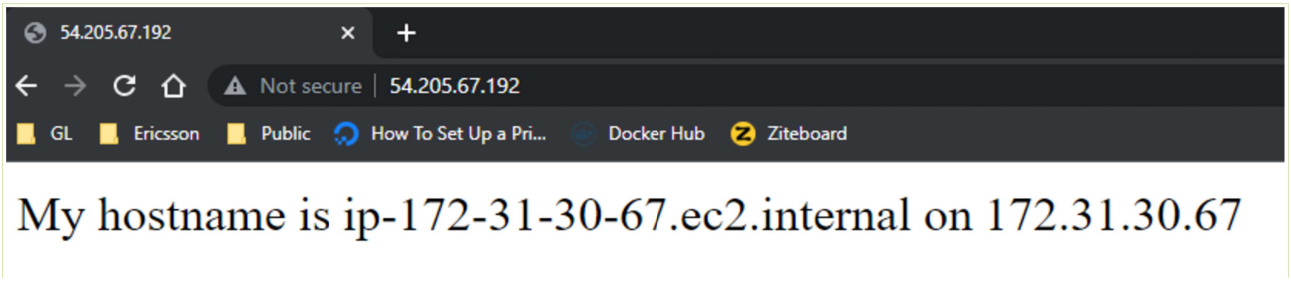
Step 11 :: Running the role

$ ansible-playbook apache_role.yml



Step 12 :: Result

Manage_node_1



Manage_Node_2