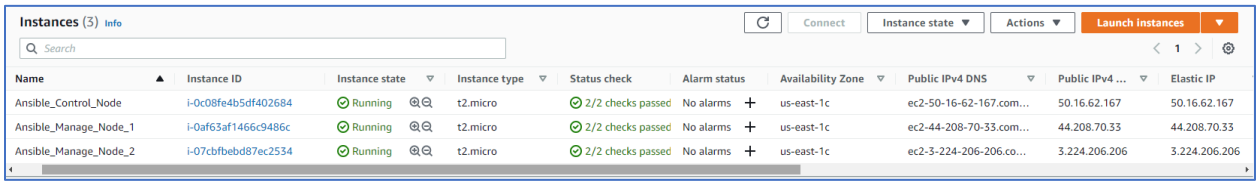
Assignment 9 :: Deploy Ansible on One of EC2 instance and write a playbook to install httpd server and host website on two ansible hosts

Step 1 :: Create three EC2 instances and name it as below

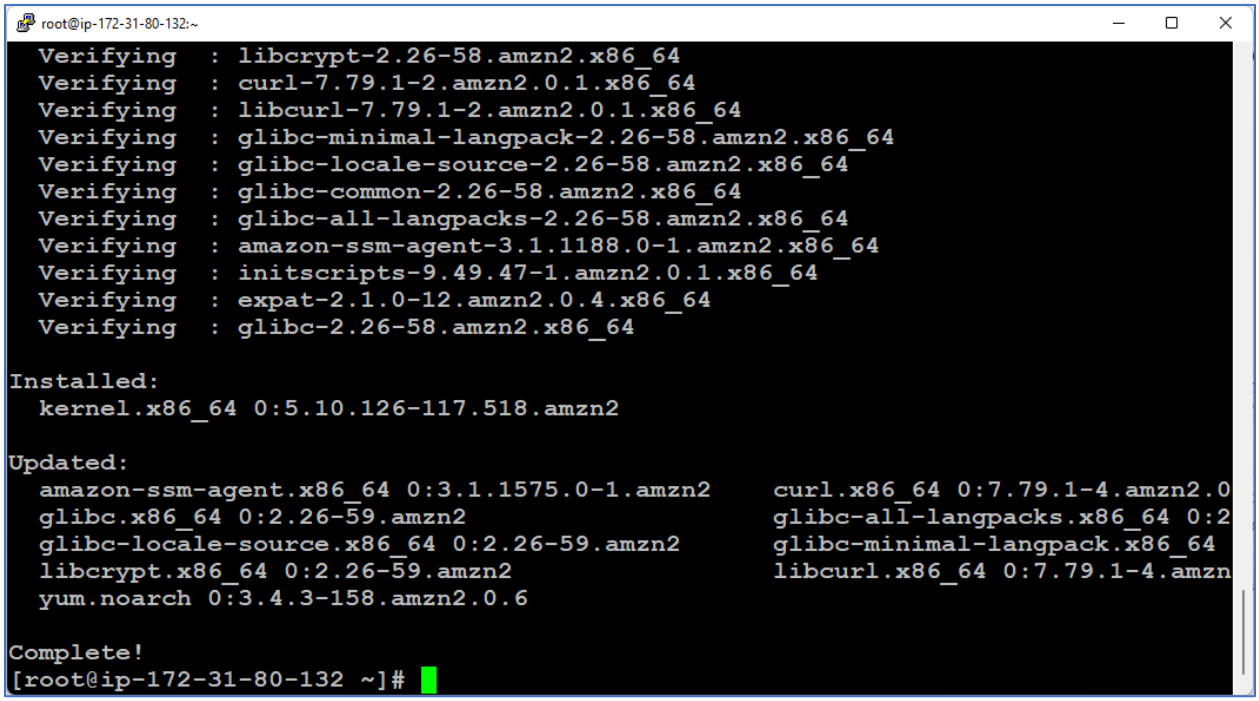
1. Ansible_Control_Node
2. Ansible_Manage_Node_1
3. Ansible_Manage_Node_2



Step 2 :: Install Ansible in Ansible_Control_Node

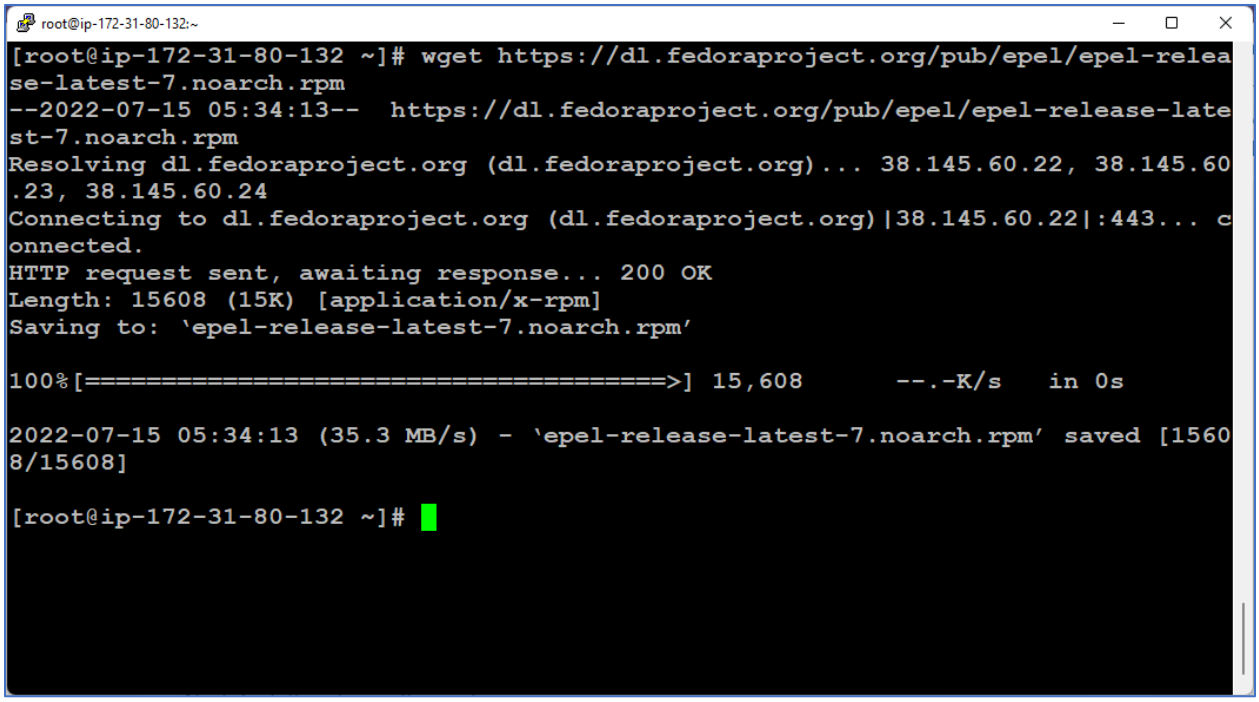
Update the rhel repo to latest

yum update -y

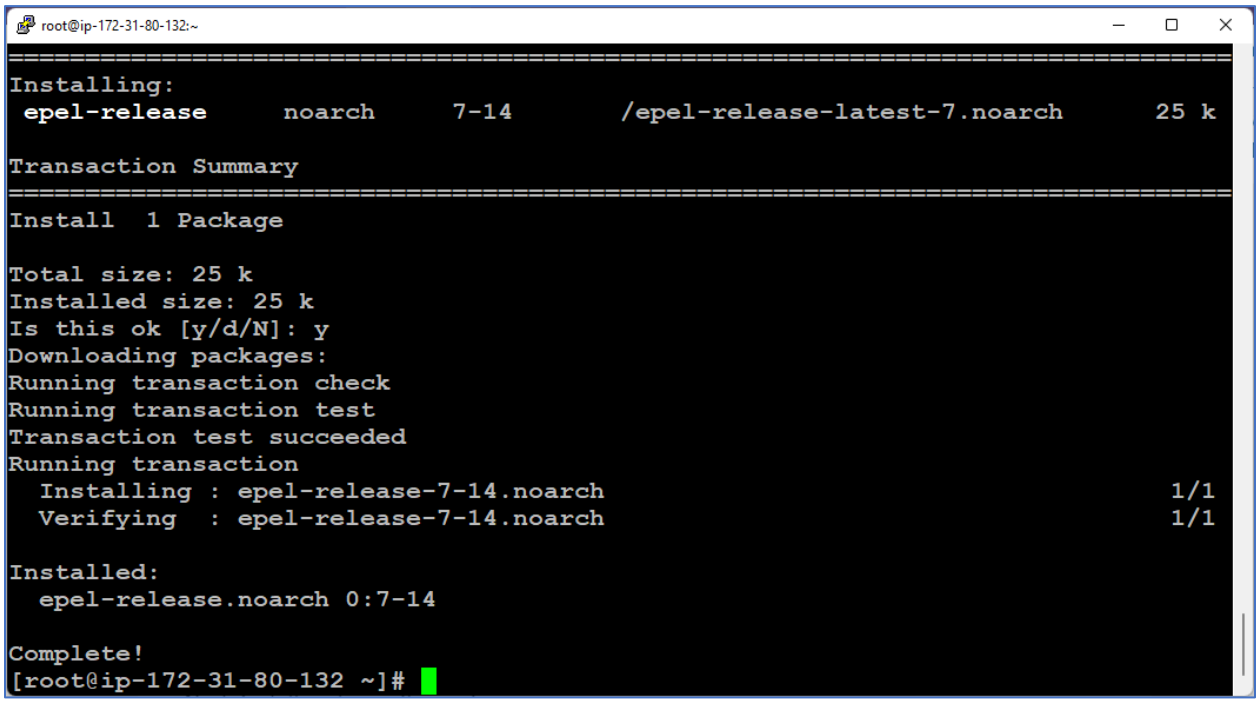


Install Ansible using EPEL Repository

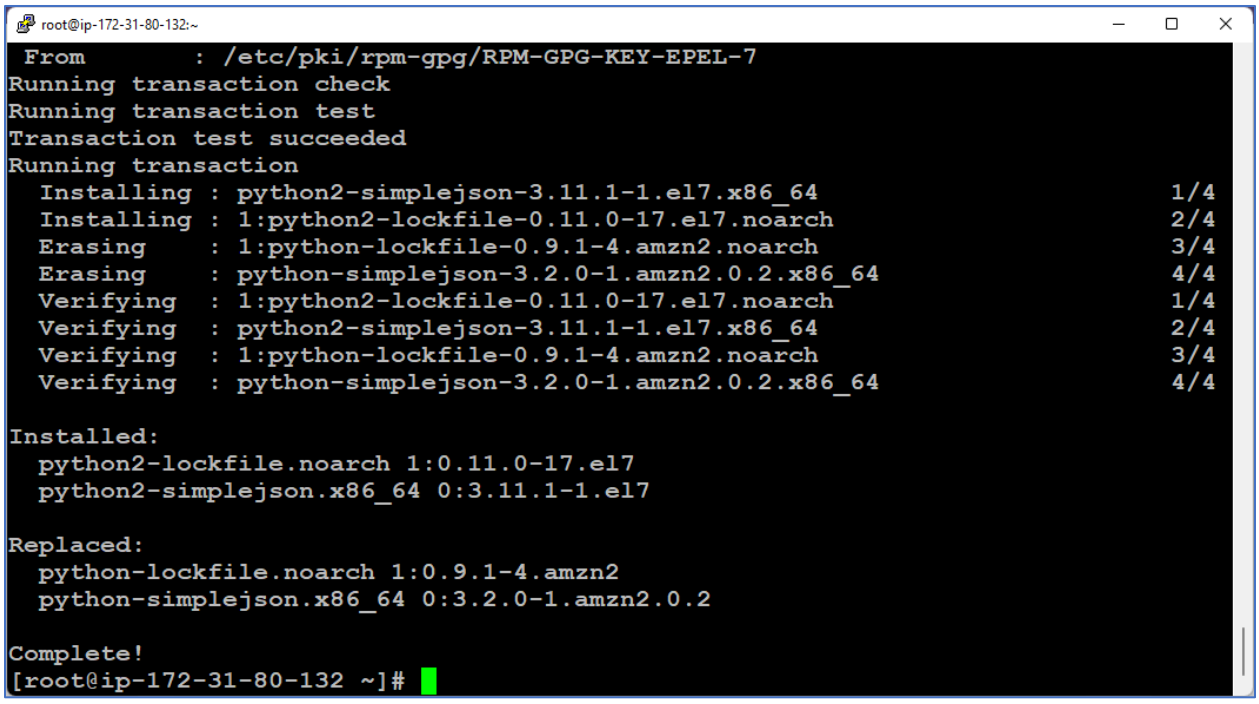
wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm



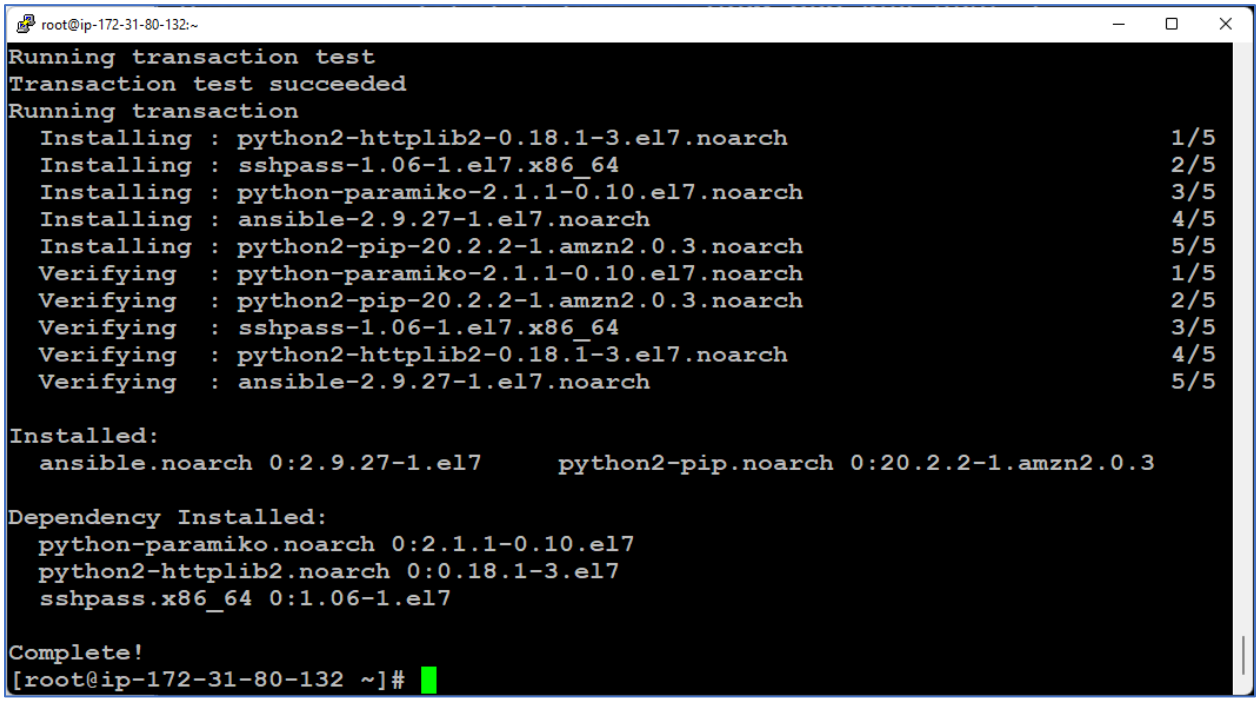
yum install -y epel-release-latest-7.noarch.rpm



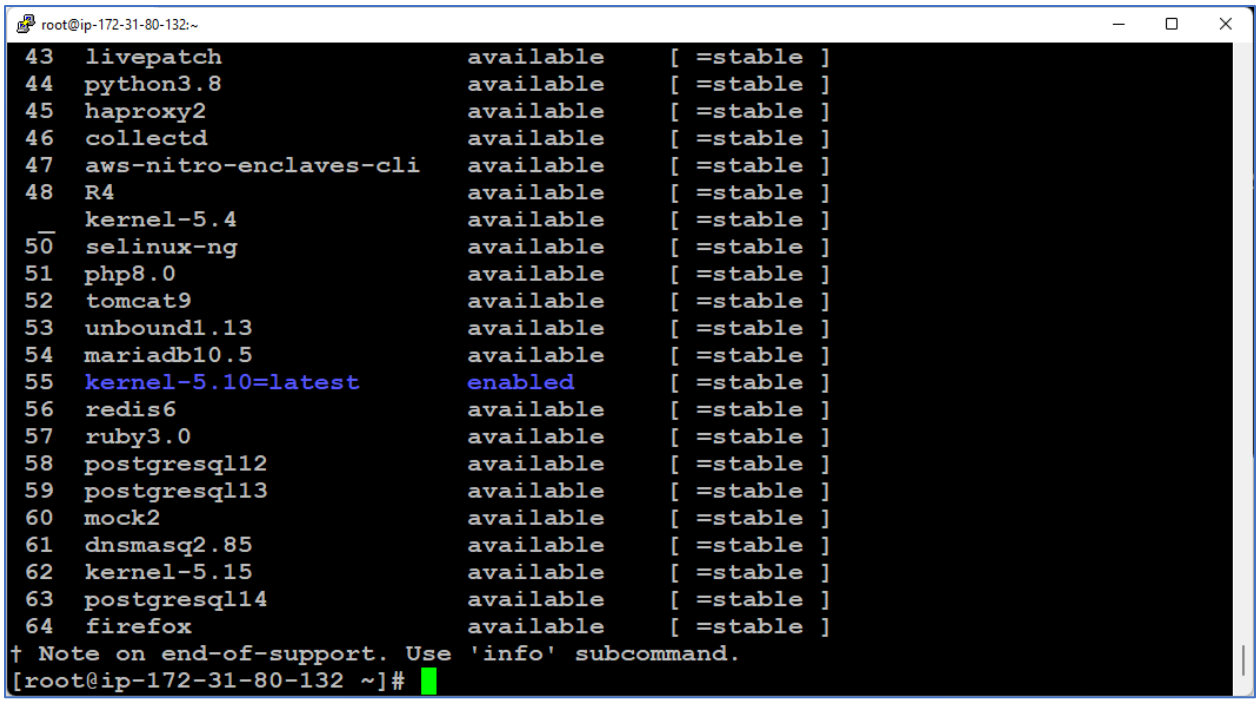
yum update -y



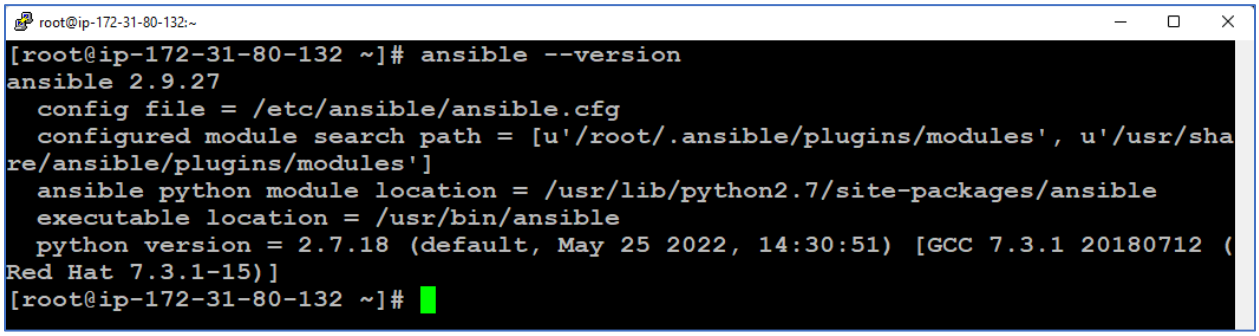
yum install python python-devel python-pip openssl ansible -y



amazon-linux-extras install ansible2



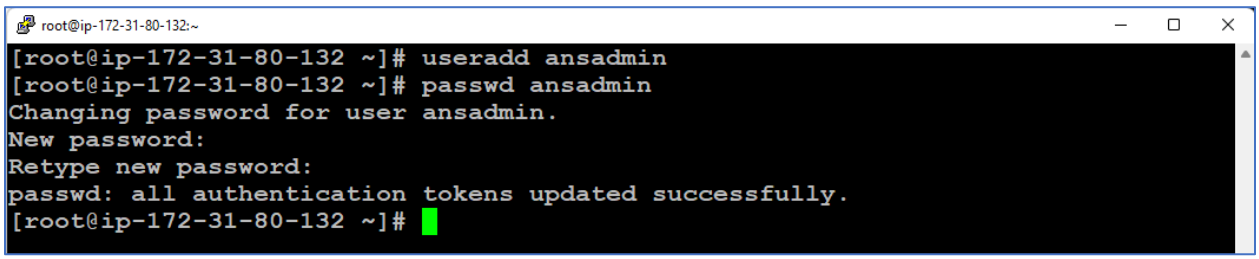
ansible --version



Step 3 :: Configuring Ansible in all nodes

useradd ansadmin

passwd ansadmin



visudo

Add below line

ansadmin ALL=(ALL) NOPASSWD: ALL

```
## Same thing without a password
# %wheel        ALL=(ALL)       NOPASSWD: ALL
ansadmin        ALL=(ALL)       NOPASSWD: ALL
```

vi /etc/ssh/sshd_config

Uncomment the below line

“PasswordAuthentication yes”

```
# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no
PasswordAuthentication no
```

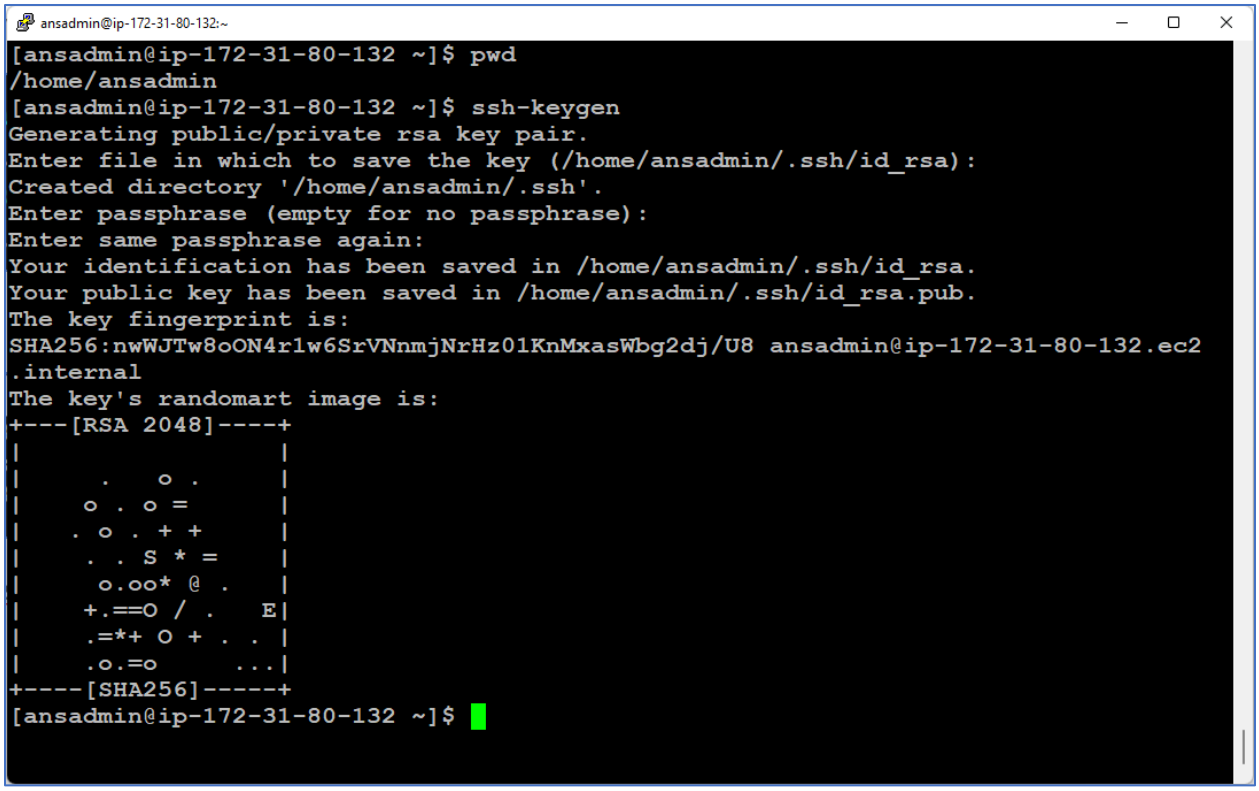
service sshd restart

```
root@ip-172-31-80-132:~
[root@ip-172-31-80-132 ~]# service sshd restart
Redirecting to /bin/systemctl restart sshd.service
[root@ip-172-31-80-132 ~]#
```

Step 4 :: Setup PasswordLess login to all the Manage Nodes from Control node via ansadmin user

su - ansadmin

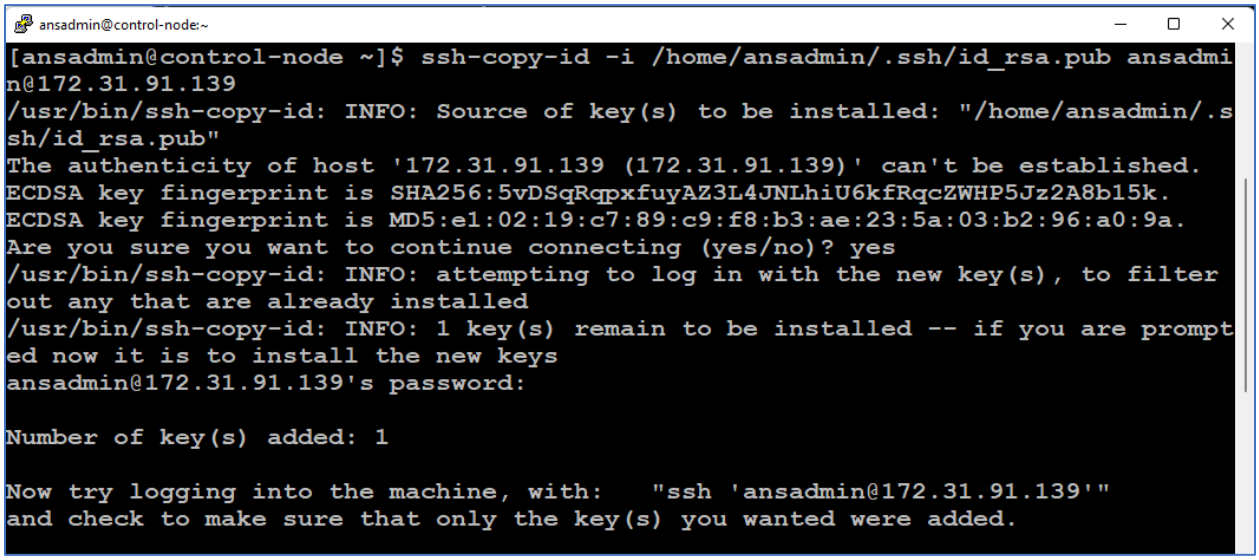
$ ssh-keygen



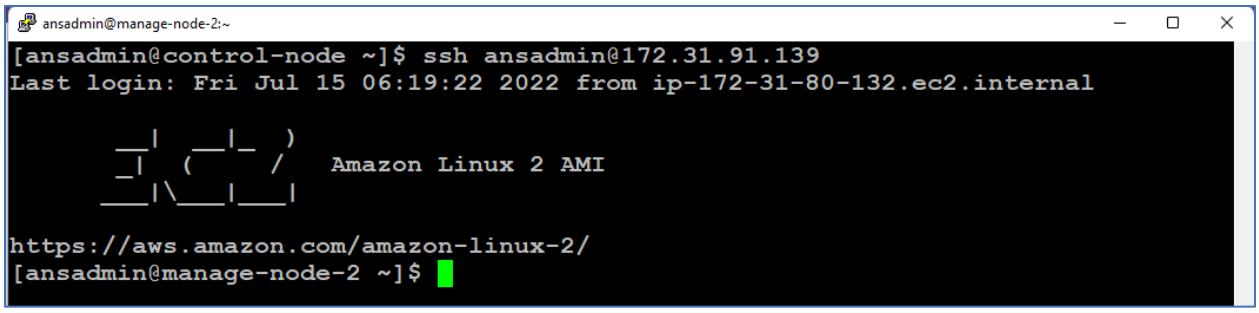
Copy the public key to Manage Nodes

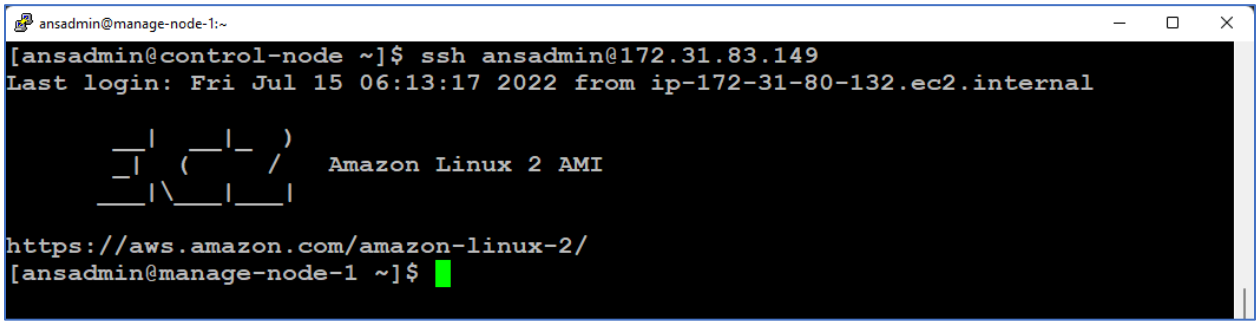
$ ssh-copy-id -i /home/ansadmin/.ssh/id_rsa.pub ansadmin@172.31.83.149

$ ssh-copy-id -i /home/ansadmin/.ssh/id_rsa.pub ansadmin@172.31.91.139



Test the PasswordLess login from control node to manage nodes



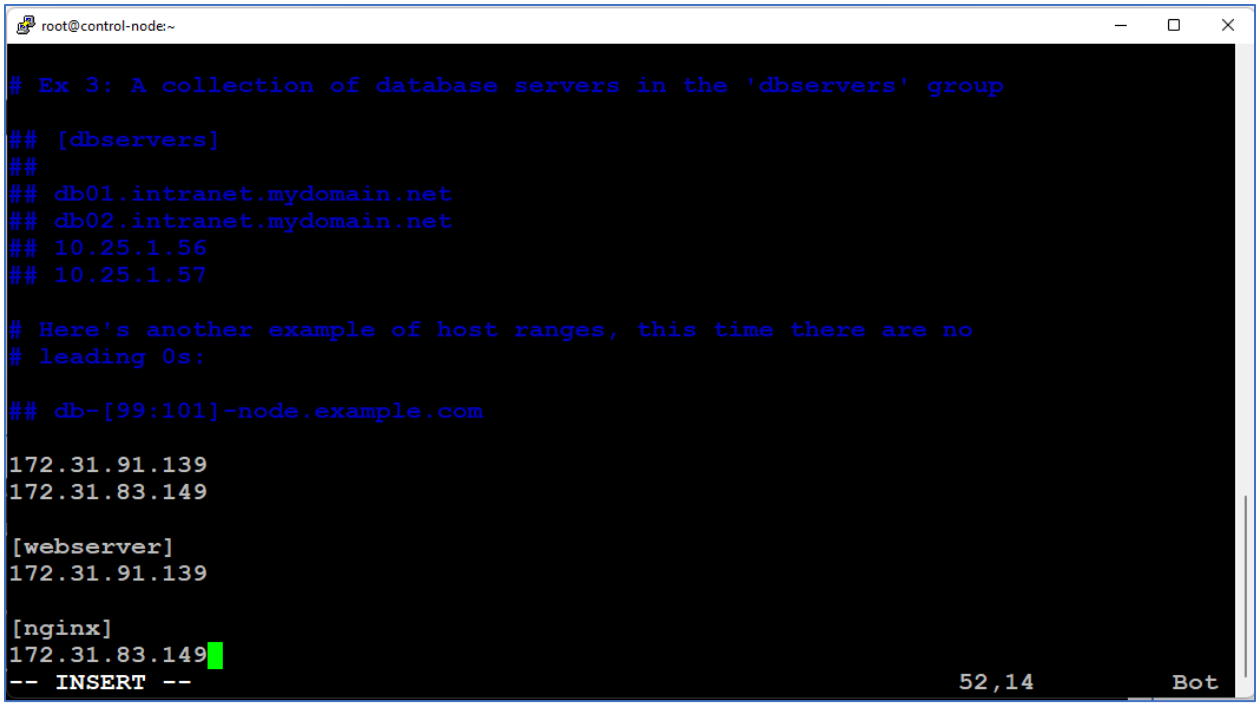


Step 5 :: Managing inventory file on Master

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

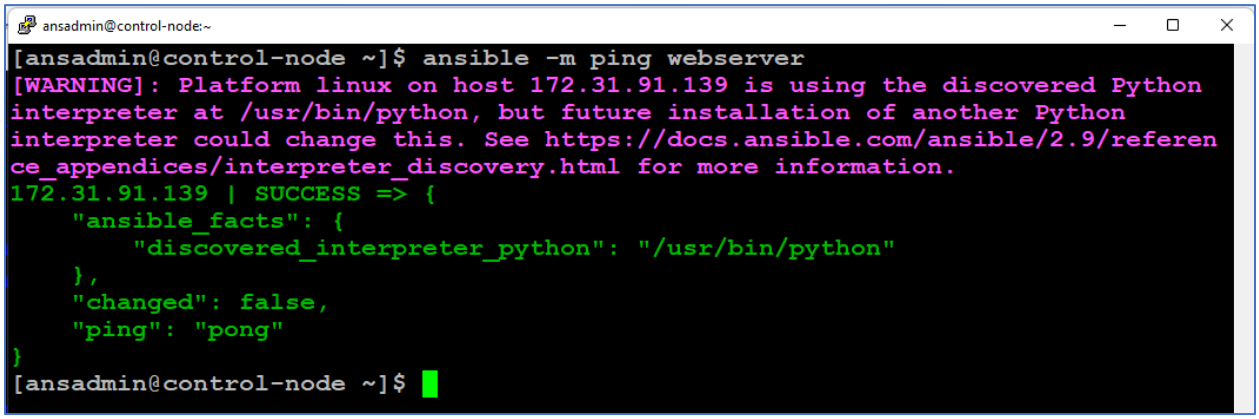
vi /etc/ansible/hosts

172.31.91.139
172.31.83.149
[webserver]
172.31.91.139
[nginx]
172.31.83.149

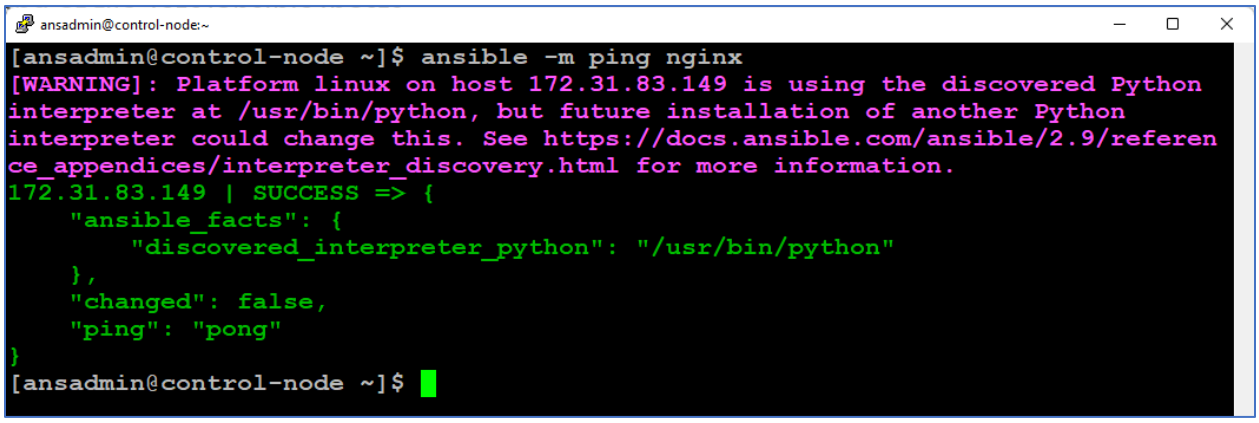


Perform Ping test from Control Node to Manage Nodes from ansadmin user

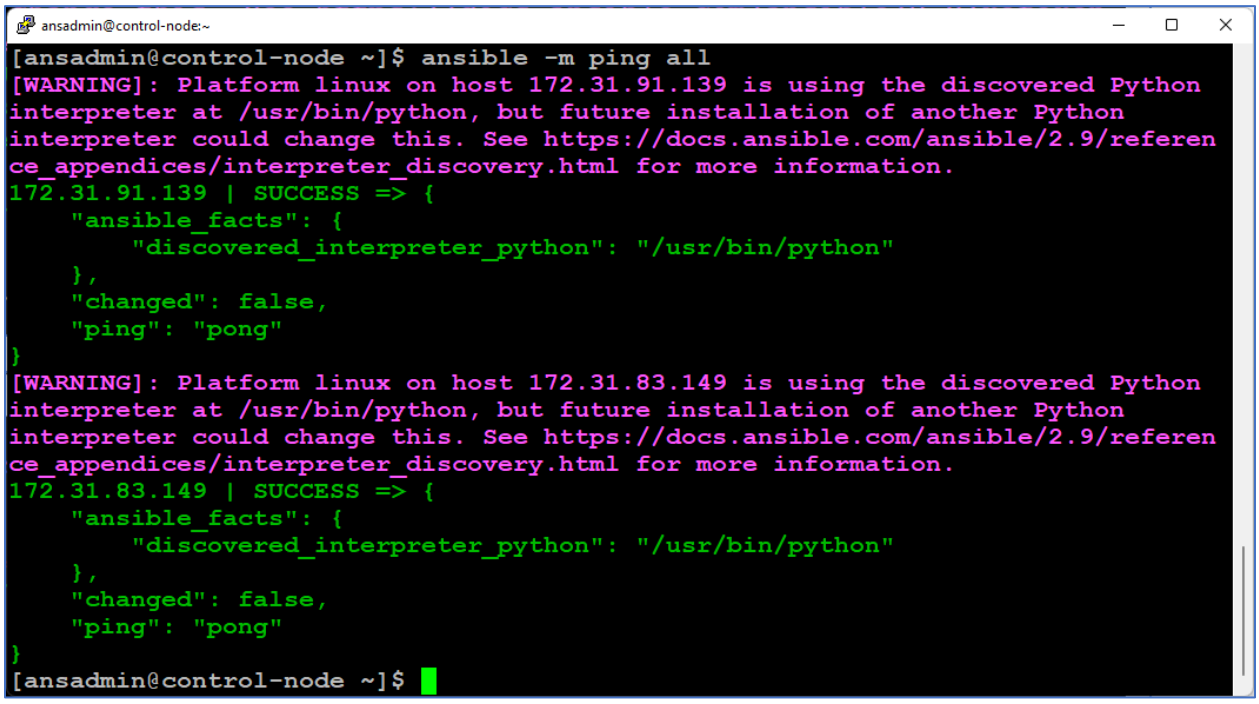
$ ansible -m ping webserver



$ ansible -m ping nginx



$ ansible -m ping all



Step 6 :: Write a playbook to install httpd and copy the index.html in manage node 1 (webserver) and install nginx in manage node 2 (nginx)

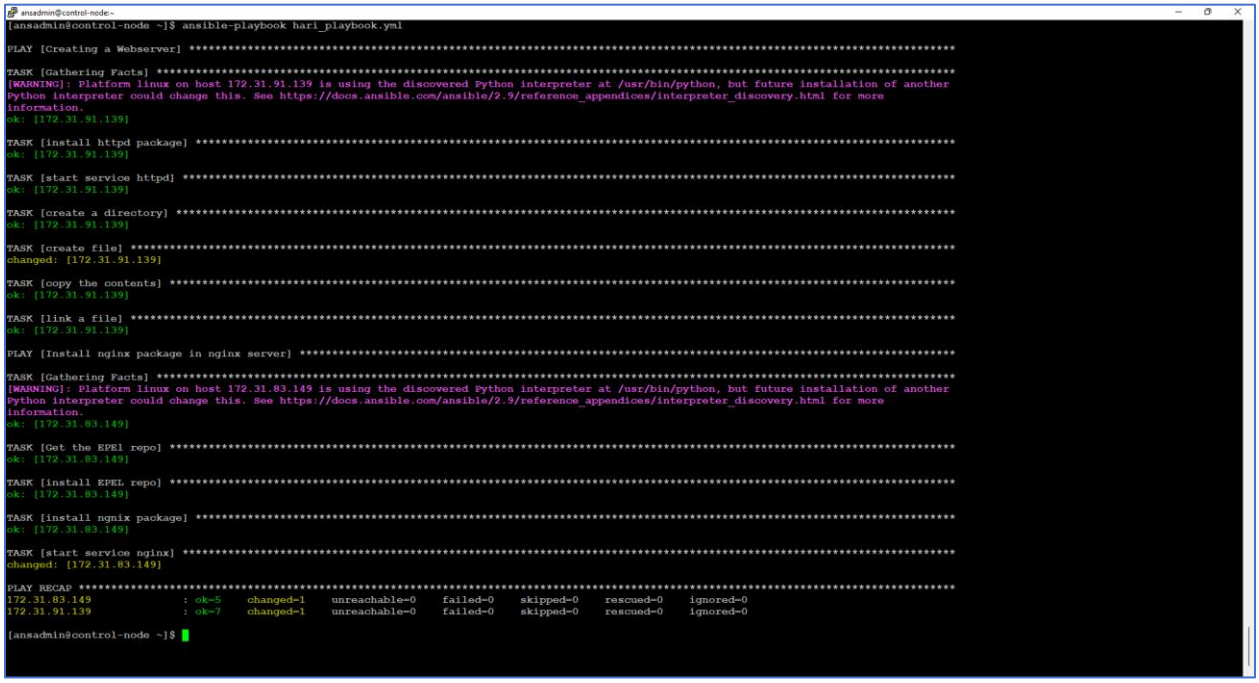
[ansadmin@control-node ~]$ cat hari_playbook.yml
- name: Creating a Webserver
  become: yes
  remote_user: ansadmin
  hosts: webserver
  tasks:
  - name: install httpd package
    yum:
      name:

```
      - httpd
    state: present
- name: start service httpd
  service:
    name: httpd
    state: started
    enabled: yes
- name: create a directory
  file:
    path: /devweb
    state: directory
    mode: 02775
    setype: httpd_sys_content_t
- name: create file
  file:
    path: /devweb/index.html
    state: touch
- name: copy the contents
  copy:
    content: "Welcome to Hariharan's WebServer page !!!\n"
    dest: /devweb/index.html
- name: link a file
  file:
    src: /devweb
    dest: /var/www/html/devweb
    state: link

- name: Install nginx package in nginx server
  become: yes
  remote_user: ansadmin
  hosts: nginx
  tasks:
  - name: Get the EPEl repo
    get_url:
      url: https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
      dest: /home/ansadmin/epel-release-latest-7.noarch.rpm
  - name: install EPEL repo
    yum:
      name: /home/ansadmin/epel-release-latest-7.noarch.rpm
      state: present
  - name: install ngnix package
    yum:
      name:
        - nginx
      state: present
  - name: start service nginx
    service:
      name: nginx
```

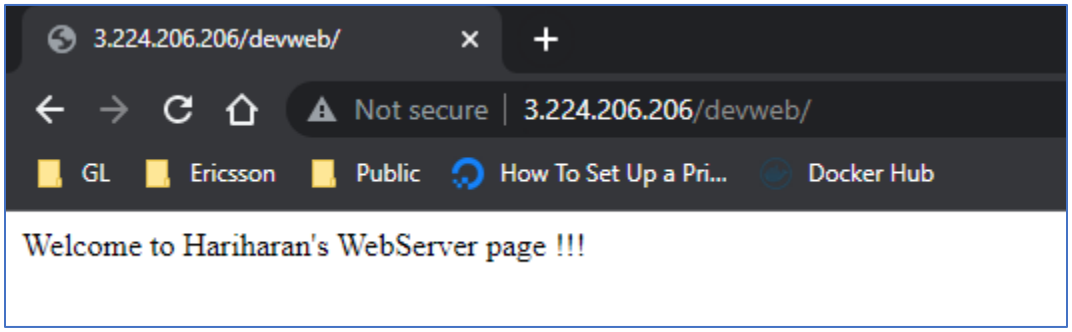
state: started
enabled: yes
[ansadmin@control-node ~]$

Run the playbook
$ ansible-playbook hari_playbook.yml



Result:

Webpage is configured in webserver



Ngnix is successfully installed in nginx server