PROJECT OF ANSIBLE

QUESTION. Developed an Ansible playbook using Jinja2 template in Ansible to automate the deployment of a static website to a remote server.

ANSWER. lsblk

mkswap /dev/xvdb

blkid /dev/xvdb

vi /etc/fstab

mount -a

swapon -a

free -h

df -h

```
[root@control ~]# lsblk
NAME      MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
xvda      202:0    0    10G  0 disk
├─xvda1 202:1    0     1M  0 part
├─xvda2 202:2    0   200M  0 part /boot/efi
├─xvda3 202:3    0     1G  0 part /boot
└─xvda4 202:4    0   8.8G  0 part /
xvdb      202:16   0     1G  0 disk [SWAP]
```

dnf install https://dl.fedoraproject.org/pub/epel/epel-release-latest-9.noarch.rpm -y

yum install ansible vim -y

```
[root@control ~]# ansible --version
ansible [core 2.14.14]
```

```
[root@control ~]# mkdir ansible
mkdir: cannot create directory 'ansible': File exists
[root@control ~]# cd ansible/
[root@control ansible]# cat inventory
[dev]
dev.ayushi.com

[test]
test.ayushi.com
[root@control ansible]# cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1          localhost localhost.localdomain localhost6 localhost6.localdomain6

172.31.13.114      dev.ayushi.com
172.31.3.220       test.ayushi.com
[root@control ansible]# cat ansible.cfg
[defaults]
inventory = ./inventory
remote_user = ec2-user
ask_pass = false
host_key_checking = false
private_key_file = ./control.pem

[privilege_escalation]
become = true
become_user = root
become_method = sudo
become_ask_pass = false
```

```
[root@control ansible]# exit
logout
[ec2-user@control ~]$ logout
Connection to 3.137.200.116 closed.
PS C:\Users\hp> scp -i "C:\Users\hp\Downloads\control.pem" "C:\Users\hp\Downloads\control.pem" ec2-user@3.137.200.116:/home/ec2-user
control.pem                                                          100% 1674     2.2KB/s   00:00
PS C:\Users\hp> ssh -i "C:\Users\hp\Downloads\control.pem" ec2-user@3.137.200.116
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Wed Jul 31 09:25:16 2024 from 103.59.75.161
[ec2-user@control ~]$ pwd
/home/ec2-user
[ec2-user@control ~]$ ls
control.pem
[ec2-user@control ~]$ sudo -i
[root@control ~]# ls
```

```
[root@control ~]# ls
ansible
```

```
[root@control ~]# cd ansible/
[root@control ansible]#
[root@control ansible]# cp -rvf /home/ec2-user/control.pem .
cp: overwrite './control.pem'? y
'/home/ec2-user/control.pem' -> './control.pem'
```

```
[root@control ansible]# chmod 400 control.pem
```

```
[root@control ansible]# ll
total 20
-rw-r--r--. 1 root root  262 Jul 30 07:07 ansible.cfg
-r--------. 1 root root 1674 Jul 31 09:42 control.pem
```

```
-rw-r--r--. 1 root root   45 Jul 30 07:08 inventory
```

```
[root@control ansible]# ansible all -m ping
test.ayushi.com | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
dev.ayushi.com | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
```

```
[root@control ansible]# vim project-webserver.yml
```

```
root@control:~/ansible                    ×    +    ∨

---
- name: Creating one webserver project
  hosts: dev
  tasks:
    - name: Installing httpd
      yum:
        name: httpd
        state: present

    - name: Starting httpd service
      service:
        name: httpd
        state: started
        enabled: yes

    - name: Creating index.html for /var/www/html
      lineinfile:
        path: /var/www/html/index.html
        line: "my machine hostname is {{ ansible_facts.hostname }}"
        create: yes

    - name: Setting SELinux context for /var/www/html/index.html
      command: chcon -t httpd_sys_content_t /var/www/html/index.html

    - name: Creating the custom.conf for virtual hosting
      template:
        src: ./custom.conf.j2
        dest: /etc/httpd/conf.d/custom.conf

~
~
~
```

```
[root@control ansible]# vim custom.conf.j2
```

```
root@control:~/ansible    ×    +    ∨

<virtualhost *:80>
documentroot  /var/www/html
servername    dev.ayushi.com
</virtualhost>
~

~

~
```

```
[root@control ansible]# ls
ansible.cfg  control.pem  custom.conf.j2  inventory  project-webserver.yml
```

```
[root@control ansible]# ansible-playbook project-webserver.yml --syntax-check

playbook: project-webserver.yml
```

```
[root@control ansible]# ansible-playbook project-webserver.yml

PLAY [Creating one webserver project] ************************************************************************************

TASK [Gathering Facts] **************************************************************************************************
ok: [dev.ayushi.com]

TASK [Installing httpd] *************************************************************************************************
ok: [dev.ayushi.com]

TASK [Starting httpd service] ******************************************************************************************
ok: [dev.ayushi.com]

TASK [Creating index.html for /var/www/html] ***************************************************************************
ok: [dev.ayushi.com]

TASK [Setting SELinux context for /var/www/html/index.html] ***********************************************************
changed: [dev.ayushi.com]

TASK [Creating the custom.conf for virtual hosting] *******************************************************************
ok: [dev.ayushi.com]

PLAY RECAP **********************************************************************************************************
dev.ayushi.com              : ok=6    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

```
[root@control ansible]# ansible dev -m command -a "rpm -q httpd"
dev.ayushi.com | CHANGED | rc=0 >>
httpd-2.4.57-11.el9_4.x86_64
[root@control ansible]# ansible dev -m command -a "systemctl status httpd"
dev.ayushi.com | CHANGED | rc=0 >>
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
     Active: active (running) since Wed 2024-07-31 08:42:07 UTC; 46min ago
       Docs: man:httpd.service(8)
   Main PID: 6114 (httpd)
     Status: "Total requests: 4; Idle/Busy workers 100/0;Requests/sec: 0.00144; Bytes served/sec:    1 B/sec"
      Tasks: 230 (limit: 4400)
     Memory: 31.6M
        CPU: 1.382s
     CGroup: /system.slice/httpd.service
             ├─ 6114 /usr/sbin/httpd -DFOREGROUND
             ├─ 6209 /usr/sbin/httpd -DFOREGROUND
             ├─ 6214 /usr/sbin/httpd -DFOREGROUND
             ├─ 6215 /usr/sbin/httpd -DFOREGROUND
             ├─ 6220 /usr/sbin/httpd -DFOREGROUND
             └─13122 /usr/sbin/httpd -DFOREGROUND

Jul 31 08:42:07 ip-172-31-13-114.us-east-2.compute.internal systemd[1]: Starting The Apache HTTP Server...
Jul 31 08:42:07 ip-172-31-13-114.us-east-2.compute.internal systemd[1]: Started The Apache HTTP Server.
Jul 31 08:42:07 ip-172-31-13-114.us-east-2.compute.internal httpd[6114]: Server configured, listening on: port 80
```

```
[root@control ansible]# ansible dev -m command -a "semanage fcontext -a -t httpd_sys_content_t '/var/www/html/index.html'"
dev.ayushi.com | CHANGED | rc=0 >>
File context for /var/www/html/index.html already defined, modifying instead
[root@control ansible]# ansible dev -m command -a "restorecon -vRF '/var/www/html/index.html'"
dev.ayushi.com | CHANGED | rc=0 >>
```