2 EC2 machines instance for

1)Controller

2)Hosts

**Controller**

* **Install**

yum-config-manager --enable epel

which python

pip install ansible

yum install ansible

ansible --version

* **Generate Key**

cd /etc/ansible => to verify hosts file available

cd /root/.ssh/ => to generate key

ssh-keygen

id\_rsa => file name to be generate

cat id\_rsa.pub = copy the key

**Hosts**

cd /root/.ssh/

vi authorized\_keys = paste the key of controller

cd /etc/ssh

vi sshd\_config

uncomment PermitRootLogin yes

service sshd restart

**Controller**

* Add the hosts IP address

cd /etc/ansible

vi hosts

[Server]

172.31.35.60

* Establish connection with host

ansible -m ping all

expected result

172.31.35.60 | SUCCESS => {

"ansible\_facts": {

"discovered\_interpreter\_python": "/usr/bin/python"

},

"changed": false,

"ping": "pong"

* Playbook = writing script

Playbook can be written anywhere in the ansible.

Let’s write playbook in home/ec2-user/ folder => cd /home/ec2-user/

1. vi apache.yml

---

-

hosts: Servers

tasks:

-

name: "Install apache"

yum: "name=httpd state=installed"

-

name: "Start apache"

service: "name=httpd state=restarted"

* Code validate

Code can be validated by 2 options

1) http://www.yamllint.com/

or

2)ansible -playbook apache.yml --syntax-check

* Code execution

ansible-playbook apache.yml

1. vars.yml

vi vars.yml

---

- hosts: Server

vars:

http\_port: 8087

username: raghu

tasks:

- debug: msg="Inventory hostnames are {{inventory\_hostname}}"

- debug: msg="Port variable is {{http\_port}} & username is {{username}}"

ansible -playbook vars.yml --syntax-check

ansible-playbook vars.yml

1. mkdir playbooks

cd playbooks/

which ansible-playbook

vi include.yml

---

- include: apache.yml

vi apache.yml

---

-

hosts: Server

tasks:

-

name: "Install apache"

yum: "name=httpd state=installed"

-

name: "Start apache"

service: "name=httpd state=restarted"

-

name: "install tomcat"

yum: "name=tomcat7 state=installed"

-

name: "start tomcat"

service: "name=tomcat7 state=restarted"

-

name: "install tomcat-webapps"

yum: "name=tomcat7-webapps state=installed"

ansible-playbook include.yml

ansible-playbook apache.yml

1. outputstore.yml

vi outputstore.yml

---

- hosts: Server

become: yes

tasks:

- shell: /usr/bin/whoami

register: username

- debug: msg="{{username.stdout}}"

ansible-playbook outputstore.yml

1. User prompt

vi prompt.yml

---

-

hosts: Server

vars:

http\_port: 8087

username: raghu

vars\_prompt:

- name: "dbpass"

prompt: "Enter password for database"

tasks:

- debug: msg=" DB password is {{dbpass}}"

ansible-playbook prompt.yml

1. Handlers

vi apache.yml

---

-

name: "Install apache"

yum: "name=httpd state=installed"

-

name: "Start apache"

service: "name=httpd state=restarted"

-

name: "install tomcat"

yum: "name=tomcat7 state=installed"

-

name: "start tomcat"

service: "name=tomcat7 state=restarted"

-

name: "install tomcat-webapps"

yum: "name=tomcat7-webapps state=installed"

vi handlers.yml

---

-

hosts: Server

become: yes

tasks:

-

include: apache.yml

-

name: "Copy the website config file"

copy: "src=proxy.conf dest=/etc/httpd/conf.d/proxy.conf"

notify:

- "Apache Restart"

handlers:

-

name: "Apache Restart"

service: "name=httpd state=restarted"

proxy.conf

ProxyPass /examples http://localhost:8080/examples

ProxyPassReverse /examples http://localhost:8080/examples

ansible-playbook handlers.yml

1. Template

mkdir template

cd template/

vi index.html

<head><title>Hello from rith</title></head>

<body>

<h1> Congrats </h1>

<p> Nice Job {{ username }} </p>

</body>

</html>

cd ..

vi template.yml

---

- hosts: Server

sudo: yes

vars:

username: DevOps

doc\_root: /var/www/html/

tasks:

- name: “Copy site file”

template: “src=template/index.html dest={{doc\_root}}/index.html mode=0644”

ansible-playbook template.yml

1. Inventoy\_prod

cd /etc/ansible/

vi ansible.cfg

[default]

hostfile =inventory\_prod

host\_key\_checking =False

vi inventory\_prod

web1 ansible\_ssh\_host= 172.31.39.252

[webserver]

web1

cd /home/ec2-user/playbook

mkdir index

ll

cd index/

vi index.html

cd ..

cp proxy.conf index/

cd index/

cd ..

vi webserver.yml

---

- hosts: webserver

sudo: yes

vars:

http\_port: 80

doc\_dir: /ansible/

doc\_root: /var/www/html/ansible/

max\_clients: 5

ansible\_python\_interpreter: python

vars\_prompt:

- name: "username"

prompt: what is your name ?

tasks:

- name: Ensure lib-python installed

yum: name=libselinux-python state=present

- name: ensure httpd installed

yum: name=httpd state=present

when: ansible\_os\_family == "RedHat"

- name: create a directory

file: path=/var/www/html/ansible state=directory

- name: ensure apache running

service: name=httpd enabled=yes state=started

- name: Replace a localhost entry with our own

lineinfile:

path: /etc/httpd/conf/httpd.conf

regexp: 'DocumentRoot "/var/www/html"'

line: DocumentRoot "/var/www/html"

- name: deploy template

template: src=index/proxy.conf dest=/etc/httpd/conf.d/proxy.conf

notify:

- Restart apache

- name: deploy template

template: src=template/index.html dest={{doc\_root}}/index.html mode=0644

handlers:

- name: Restart apache

service: name=httpd state=restarted

ansible-playbook webserver.yml

## Roles

$ mkdir roles

$ cd roles/

/roles$ ansible-galaxy init apache

- apache was created successfully

/roles$ tree

L apache

defaults

main.yml

| handlers

main.yml

| meta

main.yml

README.md

tasks

L main.yml

tests

inventory

L test.yml

L vars

L main.yml

$ cd ..

vi *Webservers.yml*

hosts: webservers

sudo: yes

gather\_facts: no

roles:

- apache

name: Ensure Apache installed

yum: name=httpd state=present

name: Creates dlrectoy

file: path=/var/www/html/anslble state=dlrectory

name: Ensure llbsellnux-python Installed

yum: name=llbsellnux-python state=present

name: Ensure Apache is running

service: name=httpd enabled=yes state=started

name: Deploy configuration File

template: src=templates/httpd.j2 dest=/etc/httpd/conf/httpd.conf

notify:

- Restart Apache

name: Copy Site Files

template: src=templates/index.j2 dest={{doc\_root}}/index.html mode=0644

name: Stop IPTABLES Now!!

service: name=iptables state=stopped

$vi roles/apache/handlers/main.yml

name: Restart Apache

' service: name=httpd state=restarted

$ vi roles/apache/vars/main.yml

http\_port: 80

doc dir: /ansible/

doc root: /var/www/html/ansible/

max clients: 5

ansible python interpreter: python

username: devops

$ Is roles/apache/templates/

httpd.j2 index.j2

What should be content of httpd.j2?

What should be content of index.j2 ?