ANSIBLE

Set up ansible

sudo apt-get install ansible

ansible - -version

cd /etc/ansible/

ls

cat hosts

```
root@b37f7443401c:/home/cloud_user# ansible --version
ansible 2.9.6
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/root/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  executable location = /usr/bin/ansible
  python version = 3.8.10 (default, Mar 15 2022, 12:22:08) [GCC 9.4.0]
root@b37f7443401c:/home/cloud_user# ls
```

Ansible How to Establish ssh connection between server and Node | Devops

Create 3 ec2 linux instances

generate Keypair

Root code in advanced setting:

!#/bin/bash

Sudo su

Yum update -y

Ansible server

Node1

Node2 created

Goto server—->

sudo su

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

```
[ec2-user@ip-172-31-80-204 ~]$ sudo su
[root@ip-172-31-80-204 ec2-user]# wget https://d1.fedoraproject.org/pub/epel/epe
l-release-latest-7.noarch.rpm
--2022-07-25 14:03:07--  https://d1.fedoraproject.org/pub/epel/epel-release-late
st-7.noarch.rpm
Resolving d1.fedoraproject.org (d1.fedoraproject.org)... failed: Name or service
 not known.
wget: unable to resolve host address 'd1.fedoraproject.org'
[root@ip-172-31-80-204 ec2-user]# wget https://dl.fedoraproject.org/pub/epel/epe
l-release-latest-7.noarch.rpm
--2022-07-25 14:03:59--  https://dl.fedoraproject.org/pub/epel/epel-release-late
st-7.noarch.rpm
Resolving dl.fedoraproject.org (dl.fedoraproject.org)... 38.145.60.22, 38.145.60
.23, 38.145.60.24
Connecting to dl.fedoraproject.org (dl.fedoraproject.org)|38.145.60.22|:443... c
onnected.
HTTP request sent, awaiting response... 200 OK
Length: 15608 (15K) [application/x-rpm]
Saving to: 'epel-release-latest-7.noarch.rpm'

100%[======================================>] 15,608      --.-K/s   in 0s

2022-07-25 14:03:59 (34.2 MB/s) - 'epel-release-latest-7.noarch.rpm' saved [1560
8/15608]
```

ls

```
[root@ip-172-31-80-204 ec2-user]# ls
epel-release-latest-7.noarch.rpm
[root@ip-172-31-80-204 ec2-user]# yum install epel-release-latest-7.noarch.rpm
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Examining epel-release-latest-7.noarch.rpm: epel-release-7-14.noarch
Marking epel-release-latest-7.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package epel-release.noarch 0:7-14 will be installed
--> Finished Dependency Resolution
amzn2-core/2/x86_64                                     | 3.7 kB     00:00

Dependencies Resolved

================================================================================
 Package          Arch       Version    Repository                        Size
================================================================================
Installing:
```

yum install git python python-level python-pip openssl ansible epel-release-latest-7.noarch.rpm -y

```
[root@ip-172-31-80-204 ec2-user]# yum install git python python-level python-pip
 openssl ansible -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
227 packages excluded due to repository priority protections
Package python-2.7.18-1.amzn2.0.5.x86_64 already installed and latest version
No package python-level available.
Package 1:openssl-1.0.2k-24.amzn2.0.3.x86_64 already installed and latest versio
n
```

Check ansible install or not

>ansible –version

```
[root@ip-172-31-80-204 ec2-user]# ansible --version
ansible 2.9.27
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/root/.ansible/plugins/modules', u'/usr/sha
re/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/site-packages/ansible
  executable location = /bin/ansible
  python version = 2.7.18 (default, May 25 2022, 14:30:51) [GCC 7.3.1 20180712 (
Red Hat 7.3.1-15)]
[root@ip-172-31-80-204 ec2-user]# vi /etc/ansible/hosts
[root@ip-172-31-80-204 ec2-user]# vi /etc/ansible/ansible.cfg
```

Below Command is Only for Server:

vi /etc/ansible/hosts (enter add node1 node 2 private ips in groups)

My nodes:

[demo]

172.31.83.69

172.31.92.209

```
# Ex 1: Ungrouped hosts, specify before any group headers.

[demo]
172.31.92.99
172.31.90.42
```

`vi /etc/ansible/ansible.cfg`

`uncomment remove # for inventory and sudo_user`

```
inventory      = /etc/ansible/hosts
#library        = /usr/share/my_modules/
#module_utils   = /usr/share/my_module_utils/
#remote_tmp     = ~/.ansible/tmp
#local_tmp      = ~/.ansible/tmp
#plugin_filters_cfg = /etc/ansible/plugin_filters.yml
#forks          = 5
#poll_interval  = 15
sudo_user      = root
```

adduser ansible (#ansible user name) do on node 1, and node 2 also

```
[root@ip-172-31-80-204 ec2-user]# adduser ansible
[root@ip-172-31-80-204 ec2-user]# passwd ansible
Changing password for user ansible.
New password:
```

```
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-80-204 ec2-user]#  su - ansible
[ansible@ip-172-31-80-204 ~]$ touch file1
[ansible@ip-172-31-80-204 ~]$ ls
file1
[ansible@ip-172-31-80-204 ~]$ yum install httpd -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
You need to be root to perform this command.
[ansible@ip-172-31-80-204 ~]$ sudo yum install httpd -y

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

[sudo] password for ansible:
ansible is not in the sudoers file.  This incident will be reported.
[ansible@ip-172-31-80-204 ~]$ exit
logout
```

```
[root@ip-172-31-80-204 ec2-user]# visudo
[root@ip-172-31-80-204 ec2-user]# visudo
[root@ip-172-31-80-204 ec2-user]#  su - ansible
Last login: Mon Jul 25 14:24:20 UTC 2022 on pts/0
[ansible@ip-172-31-80-204 ~]$ ssh 172.31.92.99
The authenticity of host '172.31.92.99 (172.31.92.99)' can't be established.
ECDSA key fingerprint is SHA256:G5yO9opNN6tFOfAkLH9N4s0UwgH93AB964eTzFIC0dk.
ECDSA key fingerprint is MD5:2a:e3:9f:24:91:f6:de:4b:2f:02:68:5d:7c:d9:67:b9.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.31.92.99' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ansible@ip-172-31-80-204 ~]$ exit
logout
```

```
su – ansible                //here ansible is username
exit
go to root
Visudo
```

Add oneline:

```
ansible ALL=(ALL) NOPASSWD: ALL (same will be done to node 1 and node 2)
```

```
save and exit //here ansible is username that was added earlier
```

```
##
## Allow root to run any commands anywhere
root    ALL=(ALL)       ALL
ansible ALL=(ALL) NOPASSWD: ALL

## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS

## Allows people in group wheel to run all commands
```

```
[root@ip-172-31-80-204 ec2-user]# visudo
[root@ip-172-31-80-204 ec2-user]# visudo
[root@ip-172-31-80-204 ec2-user]#  su - ansible
Last login: Mon Jul 25 14:24:20 UTC 2022 on pts/0
[ansible@ip-172-31-80-204 ~]$ ssh 172.31.92.99
The authenticity of host '172.31.92.99 (172.31.92.99)' can't be established.
ECDSA key fingerprint is SHA256:G5yO9opNN6tFOfAkLH9N4sOUwgH93AB964eTzFICOdk.
ECDSA key fingerprint is MD5:2a:e3:9f:24:91:f6:de:4b:2f:02:68:5d:7c:d9:67:b9.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.31.92.99' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ansible@ip-172-31-80-204 ~]$ exit
logout
[root@ip-172-31-80-204 ec2-user]# vi /etc/ssh/sshd_config
```

vi /etc/ssh/sshd_config (same will be done to node 1 and node 2)

remove #

```
#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10
```

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

Remove # and add #to last

Now ,
service sshd restart
su – ansible //here ansible is username
ssh (private ip of node 1) repeat for node2 also create file and check

create files1 2 3
touch cfile1
logout

```
[root@ip-172-31-80-204 ec2-user]# service sshd restart
Redirecting to /bin/systemctl restart sshd.service
[root@ip-172-31-80-204 ec2-user]# su - ansible
Last login: Mon Jul 25 14:36:40 UTC 2022 on pts/0
[ansible@ip-172-31-80-204 ~]$ ssh 172.31.92.99
ansible@172.31.92.99's password:
Last login: Mon Jul 25 14:53:08 2022

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
[ansible@ip-172-31-92-99 ~]$ touch file2 file3
[ansible@ip-172-31-92-99 ~]$ touch file4
[ansible@ip-172-31-92-99 ~]$ exit
logout
Connection to 172.31.92.99 closed.
```

Now without password we need to login so do keygen

```
root@ip-172-31-80-204 ec2-user]# su - ansible
ast login: Mon Jul 25 14:52:39 UTC 2022 on pts/0
ansible@ip-172-31-80-204 ~]$ ssh_keygen
bash: ssh_keygen: command not found
ansible@ip-172-31-80-204 ~]$ ssh-keygen
enerating public/private rsa key pair.
nter file in which to save the key (/home/ansible/.ssh/id_rsa):
nter passphrase (empty for no passphrase):
nter same passphrase again:
our identification has been saved in /home/ansible/.ssh/id_rsa.
our public key has been saved in /home/ansible/.ssh/id_rsa.pub.
he key fingerprint is:
HA256:io3Srr2hWCIzh8VkfuObAqJkexTJkalwEsLT4s46g94 ansible@ip-172-31-80-204.ec2.
nternal
he key's randomart image is:
---[RSA 2048]----+
+.. o           |
++.=            |
ooB o           |
 B +            |
o + +   S       |
oB = = .        |
&.* * o         |
BOo* +          |
o++E*.          |
----[SHA256]-----+
ansible@ip-172-31-80-204 ~]$ ls -a
  ..  .bash_history  .bash_logout  .bash_profile  .bashrc  file1  .ssh
ansible@ip-172-31-80-204 ~]$ cd .ssh/
ansible@ip-172-31-80-204 .ssh]$ ls
```

```
[ansible@ip-172-31-80-204 ~]$ ls -a
.  ..  .bash_history  .bash_logout  .bash_profile  .bashrc  file1  .ssh
[ansible@ip-172-31-80-204 ~]$ cd .ssh/
[ansible@ip-172-31-80-204 .ssh]$ ls
id_rsa  id_rsa.pub  known_hosts
[ansible@ip-172-31-80-204 .ssh]$ ssh-copy-id ansible@172.31.92.99
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ansible/.s
h/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are promp
ed now it is to install the new keys
ansible@172.31.92.99's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh 'ansible@172.31.92.99'"
and check to make sure that only the key(s) you wanted were added.
```

Ls -a

Cd .ssh/

Ls

ssh-copy-id ansible@172.31.90.42 (private ip of any node1 or node2)

Same do for another node also

Hosts patterns

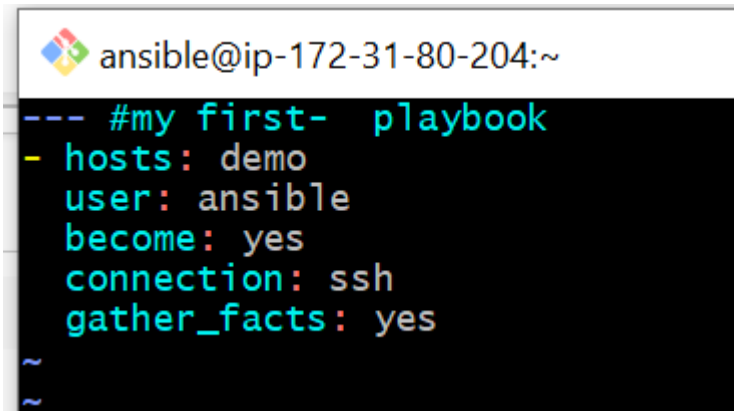
```
[ansible@ip-172-31-80-204 ~]$ ansible all --list-hosts
  hosts (2):
    172.31.92.99
    172.31.90.42
[ansible@ip-172-31-80-204 ~]$ ansible demo --list-host
  hosts (2):
    172.31.92.99
    172.31.90.42
```

```
[ansible@ip-172-31-80-204 ~]$ ansible demo --list-host
  hosts (2):
    172.31.92.99
    172.31.90.42
[ansible@ip-172-31-80-204 ~]$ ansible demo[0] --list-host
  hosts (1):
    172.31.92.99
[ansible@ip-172-31-80-204 ~]$ ansible demo[1] --list-host
  hosts (1):
    172.31.90.42
[ansible@ip-172-31-80-204 ~]$ ansible demo[2] --list-host
[WARNING]: No hosts matched, nothing to do
  hosts (0):
```

Playbook

Go to Server

vi target.yml



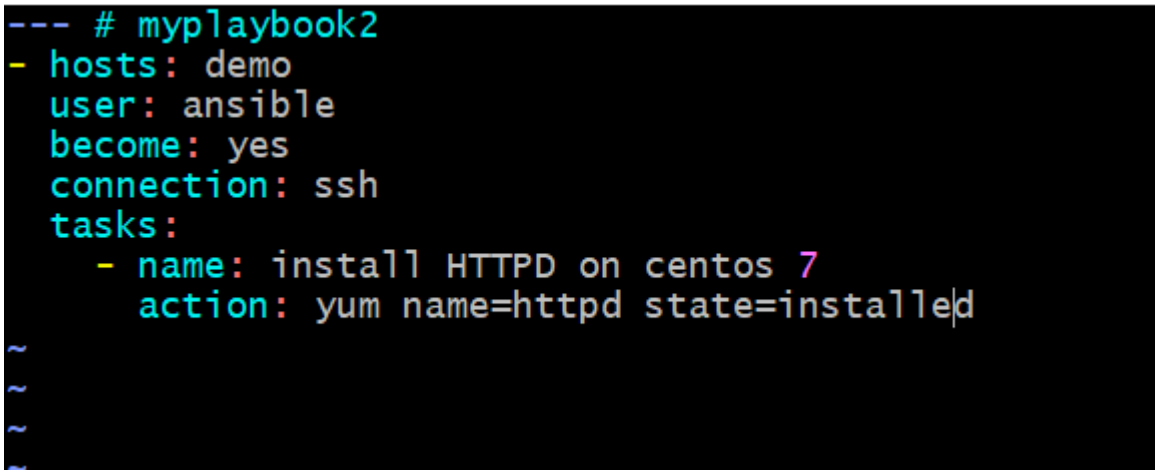

```
--- #my first-  playbook
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  gather_facts: yes


~
ansible-playbook target.yml   =========run this cmd
```

```
[ansible@ip-172-31-80-204 ~]$ rm -rf *
[ansible@ip-172-31-80-204 ~]$ ls
[ansible@ip-172-31-80-204 ~]$ vi target.yml
[ansible@ip-172-31-80-204 ~]$ ansible-playbook target.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.90.42 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.90.42]
[WARNING]: Platform linux on host 172.31.92.99 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.92.99]

PLAY RECAP *********************************************************************
172.31.90.42               : ok=1    changed=0    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.92.99               : ok=1    changed=0    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

Another playbook to install httpd on two nodes

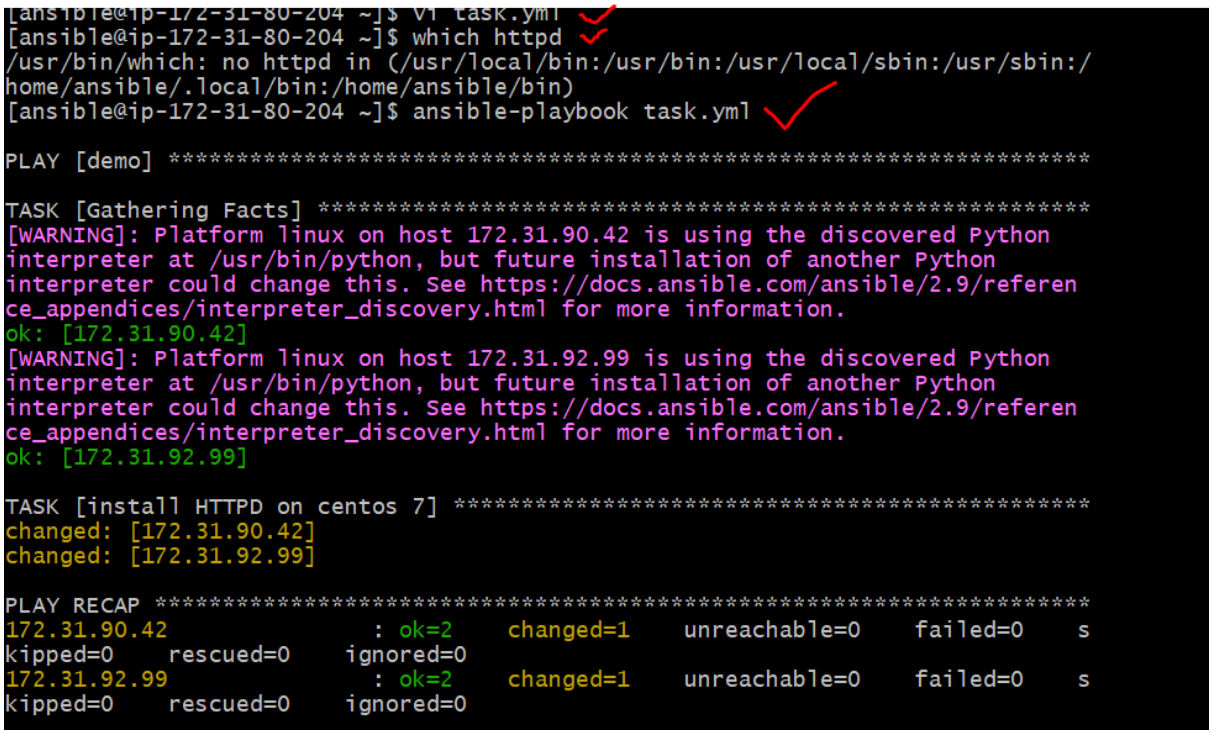
Vi task.yml

```
--- # myplaybook2
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: install HTTPD on centos 7
      action: yum name=httpd state=installed
~
```



Which httpd (check if available remove)

sudo yum remove httpd -y



Variables in playbook

Vi variable.yml

ansible@ip-172-31-80-204:~

```
--- #my variable file
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  vars:
    pkgname: httpd
  tasks:
      - name: install HTTPD server on centos 7
        action: yum name='{{pkgname}}' state=installed
~
```

```
--- #my variable file
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  vars:
    pkgname: httpd
  tasks:
      - name: install HTTPD server on centos 7
        action: yum name='{{pkgname}}' state=installed
```

```
[ansible@ip-172-31-80-204 ~]$ vi variable.yml
[ansible@ip-172-31-80-204 ~]$ ansible-playbook variable.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.90.42 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.90.42]
[WARNING]: Platform linux on host 172.31.92.99 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.92.99]

TASK [install HTTPD server on centos 7] ****************************************
ok: [172.31.90.42]
ok: [172.31.92.99]

PLAY RECAP *********************************************************************
172.31.90.42               : ok=2    changed=0    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.92.99               : ok=2    changed=0    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

HANDLERS

Ls
Remove httpd
sudo yum remove httpd -y   ((on two nodes because I will install again

vi handlers

```
--- # playbook for handlers
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: installed httpd server for centos
      action: yum name=httpd state=installed
      notify: restart httpd
  handlers:
    - name: restart httpd
      action: service name=httpd state=restarted
~
```

ansible@ip-172-31-80-204:~

```
--- # playbook for handlers
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: installed httpd server for centos
      action: yum name=httpd state=installed
      notify: restart httpd
  handlers:
    - name: restart httpd
      action: service name=httpd state=restarted
~
~
~
~
```

Dry run

```
ansible-playbook handlers.yml --check
```

Ansible-playbook handlers.yml --check

```
[ansible@ip-172-31-80-204 ~]$ vi handlers.yml
[ansible@ip-172-31-80-204 ~]$ ansible-playbook handlers.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.90.42 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.90.42]
[WARNING]: Platform linux on host 172.31.92.99 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.92.99]

TASK [installed httpd server for centos] ***************************************
changed: [172.31.90.42]
changed: [172.31.92.99]

RUNNING HANDLER [restart httpd] ************************************************
changed: [172.31.90.42]
changed: [172.31.92.99]

PLAY RECAP *********************************************************************
172.31.90.42               : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.92.99               : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

Conditions

Vi condition.yml

```yaml
--- #conditional playbook
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: install apache server for debian family
      command: apt-get -y install apache2
      when: ansible_os_family == "Debian"
    - name: install apache server for redhat family
      command: yum -y install httpd
      when: ansible_os_family == "RedHat"
```

ansible@ip-172-31-80-204:~

```
--- #conditional playbook
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: install apache server for debian family
      command: apt-get -y install apache2
      when: ansible_os_family == "Debian"
    - name: install apache server for redhat family
      command: yum -y install httpd
      when: ansible_os_family == "RedHat"
~
~
```

```
[ansible@ip-172-31-80-204 ~]$ vi condition.yml
[ansible@ip-172-31-80-204 ~]$ ansible-playbook condition.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.90.42 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.90.42]
[WARNING]: Platform linux on host 172.31.92.99 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.92.99]

TASK [install apache server for debian family] *********************************
skipping: [172.31.92.99]
skipping: [172.31.90.42]

TASK [install apache server for redhat family] *********************************
[WARNING]: Consider using the yum module rather than running 'yum'.  If you
need to use command because yum is insufficient you can add 'warn: false' to
this command task or set 'command_warnings=False' in ansible.cfg to get rid of
this message.
changed: [172.31.90.42]
changed: [172.31.92.99]

PLAY RECAP *********************************************************************
172.31.90.42               : ok=2    changed=1    unreachable=0    failed=0    s
kipped=1    rescued=0    ignored=0
172.31.92.99               : ok=2    changed=1    unreachable=0    failed=0    s
kipped=1    rescued=0    ignored=0
```

```
[ansible@ip-172-31-80-204 ~]$ vi condition.yml
[ansible@ip-172-31-80-204 ~]$ ansible-playbook condition.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.90.42 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.90.42]
[WARNING]: Platform linux on host 172.31.92.99 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.92.99]

TASK [install apache server for debian family] *********************************
skipping: [172.31.92.99]
skipping: [172.31.90.42]

TASK [install apache server for redhat family] *********************************
[WARNING]: Consider using the yum module rather than running 'yum'.  If you
need to use command because yum is insufficient you can add 'warn: false' to
this command task or set 'command_warnings=False' in ansible.cfg to get rid of
this message.
changed: [172.31.90.42]
changed: [172.31.92.99]

PLAY RECAP *********************************************************************
172.31.90.42               : ok=2    changed=1    unreachable=0    failed=0    s
kipped=1    rescued=0    ignored=0
172.31.92.99               : ok=2    changed=1    unreachable=0    failed=0    s
kipped=1    rescued=0    ignored=0
```

ROLES

STEP1: INSTALL TREE

```
sudo yum install tree -y
```

```
tree
```

```
[ansible@ip-172-31-8-65 ~]$ tree
.
├── task.yml
└── variable.yml

0 directories, 2 files
```

Step 2: make a directory

```
mkdir -p playbook/roles/webserver/tasks
cd  playbook/
```

```
[ansible@ip-172-31-8-65 ~]$ mkdir -p playbook/roles/webserver/tasks
[ansible@ip-172-31-8-65 ~]$ tree
.
├── playbook
│   └── roles
│       └── webserver
│           └── tasks
├── task.yml
└── variable.yml

4 directories, 2 files
[ansible@ip-172-31-8-65 ~]$ cd playbook/
[ansible@ip-172-31-8-65 playbook]$ tree
.
├── roles
│   └── webserver
│       └── tasks
```

```
touch roles/webserver/tasks/main.yml
ls
```

```
[ansible@ip-172-31-8-65 playbook]$ touch roles/webserver/tasks/main.yml
[ansible@ip-172-31-8-65 playbook]$ ls
roles
[ansible@ip-172-31-8-65 playbook]$ tree
.
└── roles
    └── webserver
        └── tasks
            └── main.yml

3 directories, 1 file
[ansible@ip-172-31-8-65 playbook]$ touch master.yml
[ansible@ip-172-31-8-65 playbook]$ tree
.
├── master.yml
└── roles
    └── webserver
        └── tasks
            └── main.yml
```

Touch master.yml

Tree

```
vi roles/webserver/tasks/main.yml

- name: install apache on RedHat
  yum: pkg=httpd state=latest
```

ansible@ip-172-31-8-65:~/playbook

```
- name: install apache on RedHat
  yum: pkg=httpd state=latest
~
~
~
~
~
```

Vi master.yml

```
--- # master playbook for webservers
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  roles:
    - webserver
```

ansible@ip-172-31-8-65:~/playbook

```
--- # master playbook for webservers
- hosts: demo
  user: ansible
  become: yes
  connection: ssh
  roles:
    - webserver
```

```
[ansible@ip-172-31-8-65 playbook]$ vi master.yml
[ansible@ip-172-31-8-65 playbook]$ ansible-playbook master.yml

PLAY [demo] ********************************************************************

TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.6.104 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.6.104]
[WARNING]: Platform linux on host 172.31.2.9 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
ok: [172.31.2.9]

TASK [webserver : install apache on RedHat] ************************************
changed: [172.31.6.104]
changed: [172.31.2.9]

PLAY RECAP *********************************************************************
172.31.2.9                 : ok=2    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.6.104               : ok=2    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```