Kaushik Dey

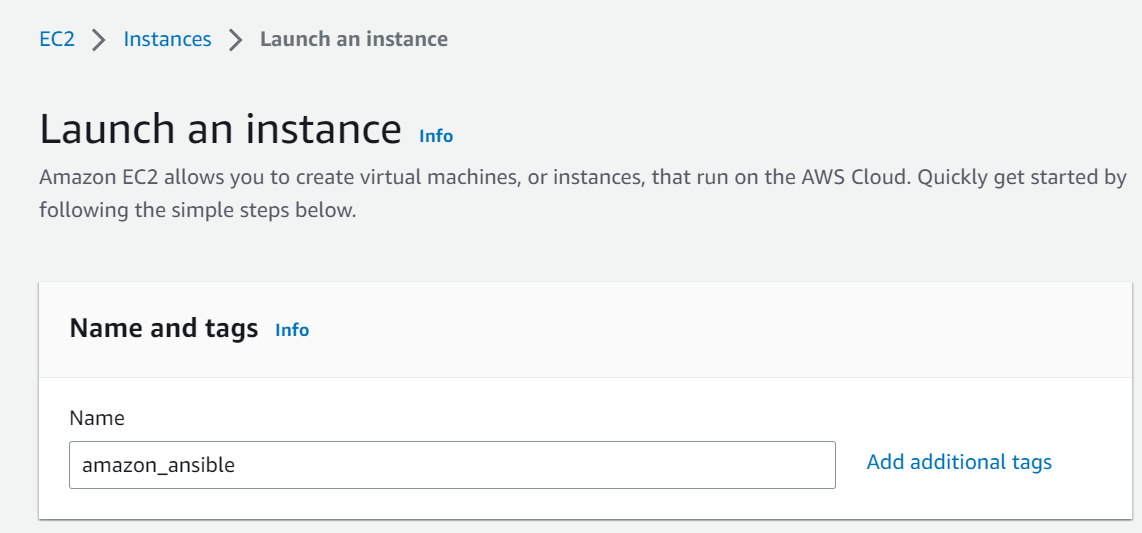
Kaushikdey1984@yahoo.com

ansible installation with master slave connection

Ansible Devops

Step 1:

First create 3 ec2 instances . Launch 3 EC2 Instances... 1 for Ansible Controller & 2 as Nodes



Graphical user interface, application

Description automatically generated

Graphical user interface, text, application, email

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Graphical user interface, application

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Graphical user interface, text, application, email

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Graphical user interface, text, application, email

Description automatically generated

Step 2 :

Graphical user interface, text, application

Description automatically generated

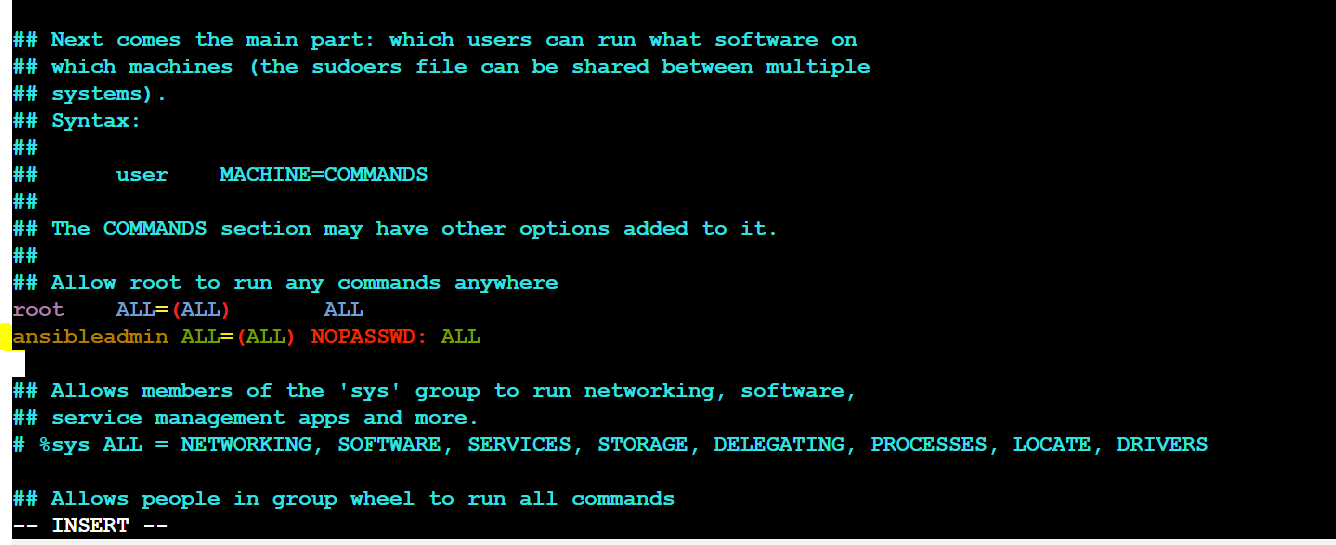
Then we have to connect amazon\_ansible\_master system.

Step 3 :

Password : Ishan@5000 (at least 8 charecters)

vi /etc/ssh/sshd\_config .

#add the below mentioned line in the file and save it.



[root@ip-172-31-28-20 ~]# yum update -y

Loaded plugins: extras\_suggestions, langpacks, priorities, update-motd

amzn2-core | 3.7 kB 00:00:00

No packages marked for update

[root@ip-172-31-28-20 ~]# useradd -m -d /home/ansibleadmin ansibleadmin

[root@ip-172-31-28-20 ~]# passwd ansibleadmin

Changing password for user ansibleadmin.

New password:

Retype new password:

passwd: all authentication tokens updated successfully.

[root@ip-172-31-28-20 ~]# vi /etc/ssh/sshd\_config

[root@ip-172-31-28-20 ~]# ^C

[root@ip-172-31-28-20 ~]# service sshd reload

Redirecting to /bin/systemctl reload sshd.service

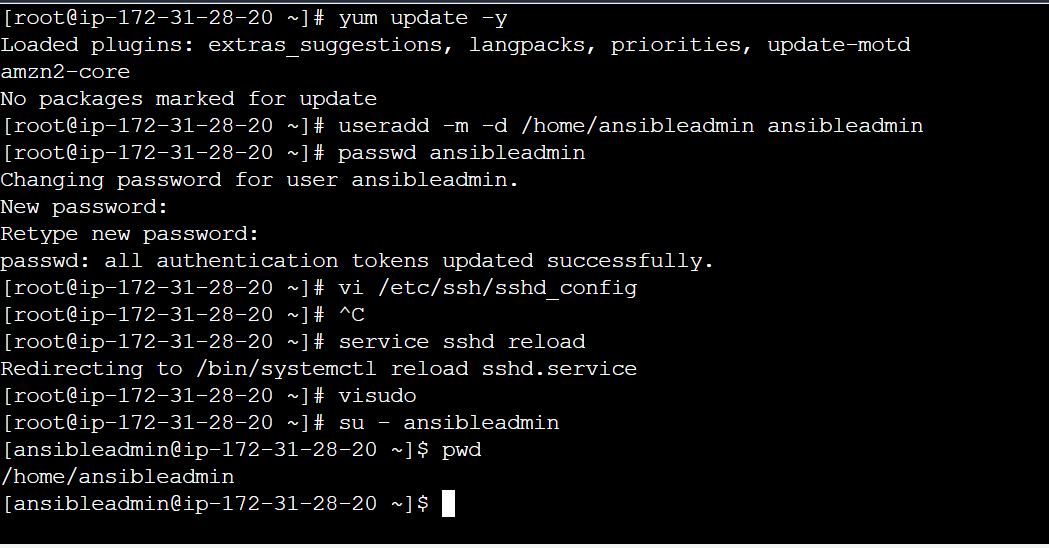
[root@ip-172-31-28-20 ~]# visudo

[root@ip-172-31-28-20 ~]# su - ansibleadmin

[ansibleadmin@ip-172-31-28-20 ~]$ pwd

/home/ansibleadmin

[ansibleadmin@ip-172-31-28-20 ~]$



Text

Description automatically generated

Now we must work with controller machine.

amazon-linux-extras install epel -y

amazon-linux-extras install ansible2 -y

[root@ip-172-31-81-101 ~]# cd /etc/ansible

[root@ip-172-31-81-101 ansible]# ansible --version

ansible 2.9.23

config file = /etc/ansible/ansible.cfg

configured module search path = [u'/root/.ansible/plugins/modules', u'/usr/share/ansible/plugins/modules']

ansible python module location = /usr/lib/python2.7/site-packages/ansible

executable location = /bin/ansible

python version = 2.7.18 (default, Feb 28 2023, 02:51:06) [GCC 7.3.1 20180712 (Red Hat 7.3.1-15)]

[root@ip-172-31-81-101 ansible]# ll

total 24

-rw-r--r-- 1 root root 19985 Jul 1 2021 ansible.cfg

-rw-r--r-- 1 root root 1016 Jul 1 2021 hosts

drwxr-xr-x 2 root root 6 Jul 1 2021 roles

[root@ip-172-31-81-101 ansible]#

[root@ip-172-31-16-135 ~]# cd /etc/ansible

[root@ip-172-31-16-135 ansible]# ll

total 24

-rw-r--r-- 1 root root 19985 Jul 1 2021 **ansible.cfg**

-rw-r--r-- 1 root root 1016 Jul 1 2021 **hosts [different inventory file]**

drwxr-xr-x 2 root root 6 Jul 1 2021 **roles**

[root@ip-172-31-16-135 ansible]#

Step 4 : As of now Ansible controller is ready along with 2 node ( Target) system.

Now we must create admin in controller machine.

[root@ip-172-31-81-101 ansible]# useradd -m -d /home/devopsadmin devopsadmin

[root@ip-172-31-81-101 ansible]# chown -R devopsadmin:devopsadmin /etc/ansible

[root@ip-172-31-81-101 ansible]# ll

total 24

-rw-r--r-- 1 devopsadmin devopsadmin 19985 Jul 1 2021 ansible.cfg

-rw-r--r-- 1 devopsadmin devopsadmin 1016 Jul 1 2021 hosts

drwxr-xr-x 2 devopsadmin devopsadmin 6 Jul 1 2021 roles

[root@ip-172-31-81-101 ansible]# pwd

/etc/ansible

[root@ip-172-31-81-101 ansible]# su - devopsadmin

[devopsadmin@ip-172-31-81-101 ~]$

[devopsadmin@ip-172-31-81-101 ~]$ ssh-keygen

Generating public/private rsa key pair.

Enter file in which to save the key (/home/devopsadmin/.ssh/id\_rsa):

Created directory '/home/devopsadmin/.ssh'.

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /home/devopsadmin/.ssh/id\_rsa.

Your public key has been saved in /home/devopsadmin/.ssh/id\_rsa.pub.

The key fingerprint is:

SHA256:oYuu8rPcDAMKbaDYTaBTJ9r1C16/iGymr/WJCCYx+1I devopsadmin@ip-172-31-81-101.ec2.internal

The key's randomart image is:

+---[RSA 2048]----+

| + o |

| = = . |

|= . o o . |

|o= + o + . |

|B + o o S |

|o\*E. o o . |

|=oo B o . |

|=+.% o . |

| +X\*\* o |

+----[SHA256]-----+

[devopsadmin@ip-172-31-81-101 ~]$ cd .ssh

[devopsadmin@ip-172-31-81-101 .ssh]$ ll

total 8

-rw------- 1 devopsadmin devopsadmin 1675 Apr 26 11:52 id\_rsa

-rw-r--r-- 1 devopsadmin devopsadmin 423 Apr 26 11:52 id\_rsa.pub

Step 5 : we have to copy controller file SSH key to the Node machine 1 and Node Machine 2.

ssh-copy-id ansibleadmin@ 172.31.93.37

ssh-copy-id ansibleadmin@ 172.31.82.1

so, with this command I have transferred my controller machine key to node1 and node , so successfully transferred the key to node 1 and node 2. The screenshot is given below.

Text

Description automatically generated

Text

Description automatically generated

Remote server Authentication!!!!

Jenkins\_master and slave ==> are owned by Devops Team.

Ansible Controller :: owned by the Devops Team/Infra Team

Target Machines: dev,test,hosted servers, mail server.

**Please Note: As soon as I run the command ssh-copy-id it will create .ssh folder in target machine and also it creates known hosts folder in its controller.**

**[devopsadmin@ip-172-31-81-101 .ssh]$ cat known\_hosts**

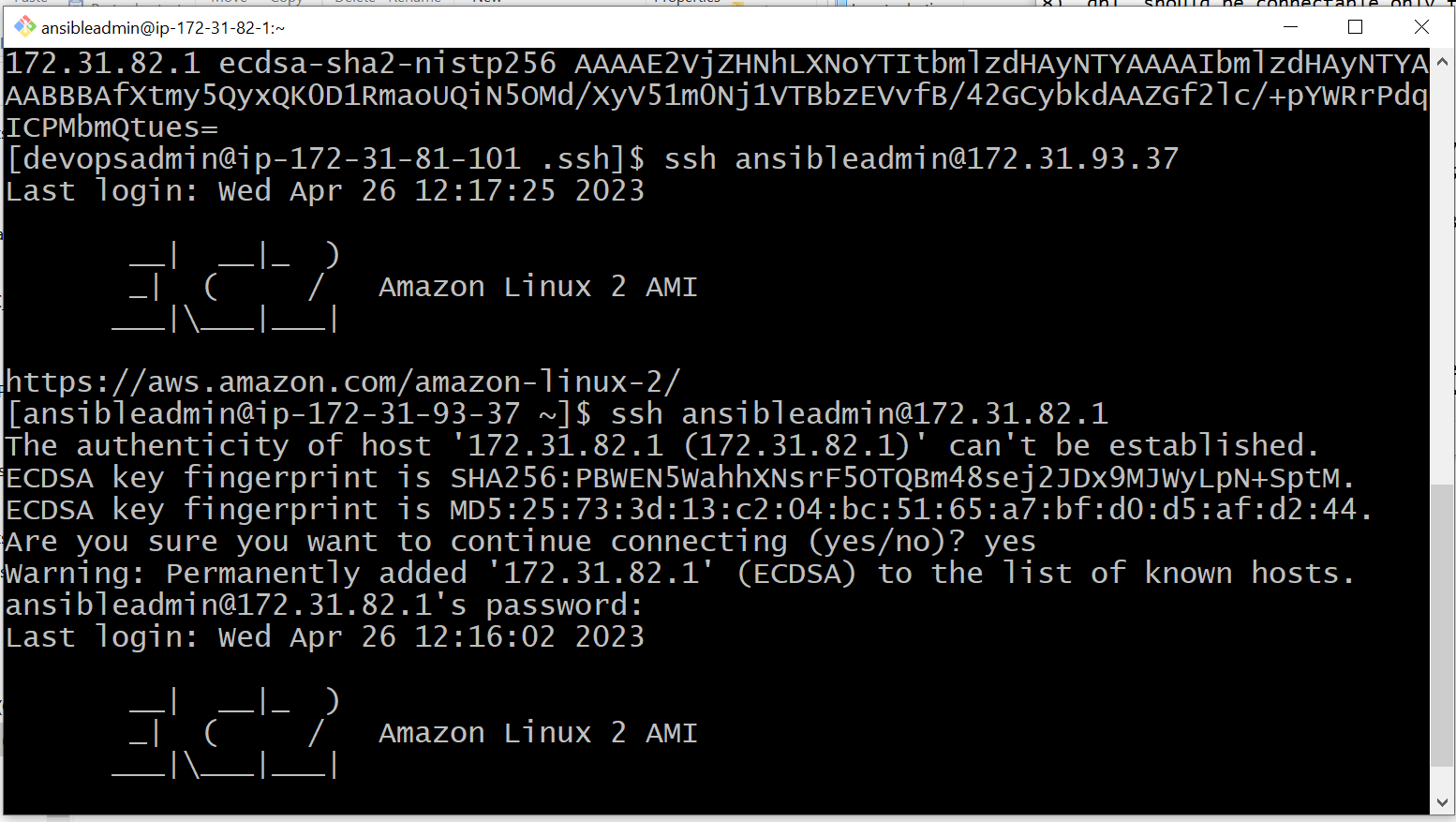
172.31.93.37 ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBK2pas6wJBG+1mcLoebYsDK5MAIjNEQHiaVux4IHz1T3U6KeJvtadzC7SRDPPThSGGzUi336miG+CAkA2vs2Ll4=

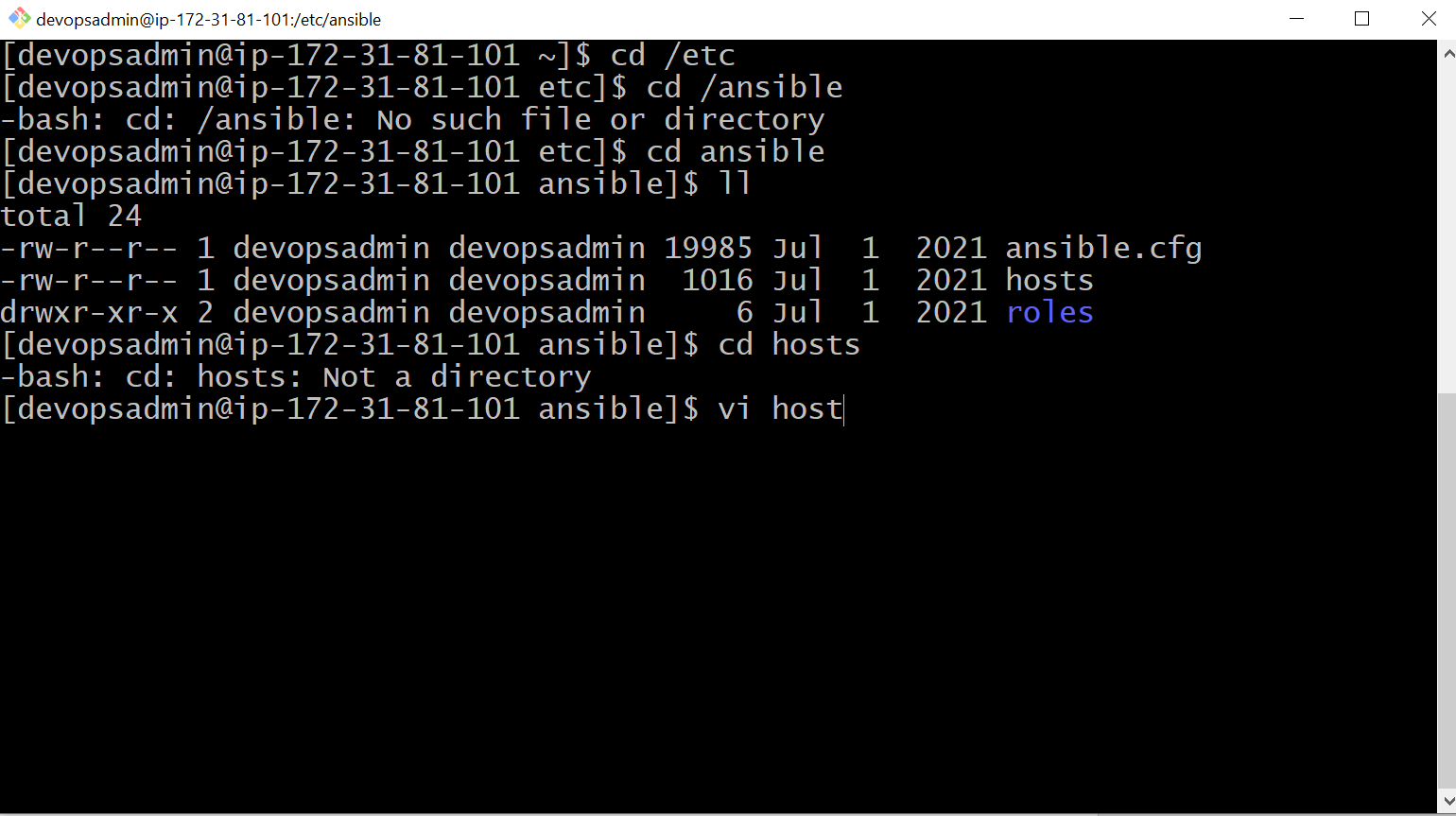
172.31.82.1 ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBAfXtmy5QyxQK0D1RmaoUQiN5OMd/XyV51m0Nj1VTBbzEVvfB/42GCybkdAAZGf2lc/+pYWRrPdqICPMbmQtues=

Now from our Controller system we can enter inside our Node Target Machine. The code is there.

ssh ansibleadmin@172.31.93.37

ssh ansibleadmin@172.31.82.1





Hosts is default inventory file.

**Step 9 :** Nowwe **ping the server and get the response , the code is**

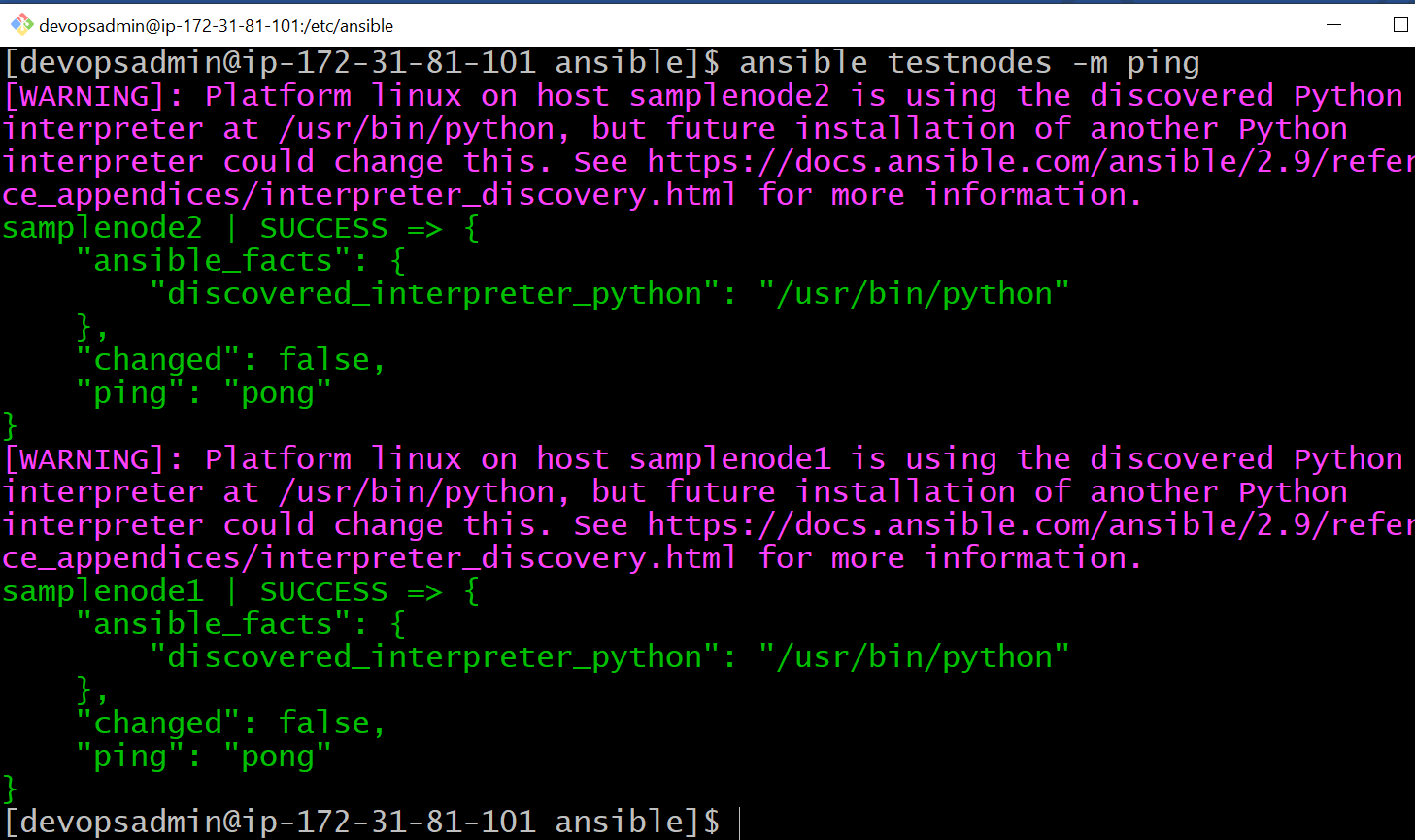
[testnodes]

samplenode1 ansible\_ssh\_host=172.31.93.37 ansible\_ssh\_user=ansibleadmin

samplenode2 ansible\_ssh\_host=172.31.82.1 ansible\_ssh\_user=ansibleadmin

ansible <hosts\_name> -m <module\_name> -i <inventory\_file>

ansible testnodes -m ping



Step 10 :

Ansible adhoc commands.

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode1 -m ping

[WARNING]: Platform linux on host samplenode1 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.

samplenode1 | SUCCESS => {

"ansible\_facts": {

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

},

"changed": false,

"ping": "pong"

}

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode2 -m ping

[WARNING]: Platform linux on host samplenode2 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.

samplenode2 | SUCCESS => {

"ansible\_facts": {

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

},

"changed": false,

"ping": "pong"

}

[devopsadmin@ip-172-31-81-101 ansible]$ ansible all -m ping

[devopsadmin@ip-172-31-81-101 ansible]$ ansible testNodes -m ping

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode1 -m ping

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode2 -m ping

Now where we store the inventory parameters

[devopsadmin@ip-172-31-81-101 ansible]$ cat ansible.cfg

[devopsadmin@ip-172-31-81-101 ansible]$ cat ansible.cfg

To create inventory file

[devopsadmin@ip-172-31-81-101 ansible]$ echo "samplenode1 ansible\_ssh\_host=172.31.93.37 ansible\_ssh\_user=ansibleadmin" >>inventory1

[devopsadmin@ip-172-31-81-101 ansible]$ ls

ansible.cfg hosts inventory1 roles

[devopsadmin@ip-172-31-81-101 ansible]$

To create sample Inventory file,

[devopsadmin@ip-172-31-81-101 ansible]$

echo "samplenode1 ansible\_ssh\_host=172.31.93.37 ansible\_ssh\_user=ansibleadmin" >>inventory1

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode1 -m ping -i inventory1

Ansible Module Commands

In agent system .ansible file will be created.

[ansibleadmin@ip-172-31-93-37 ~]$ ls -a

. .. .ansible .bash\_history .bash\_logout .bash\_profile .bashrc .ssh

[ansibleadmin@ip-172-31-93-37 ~]$ cd .ansible/

[ansibleadmin@ip-172-31-93-37 .ansible]$ ls

tmp

[ansibleadmin@ip-172-31-93-37 .ansible]$ tmp

-bash: tmp: command not found

[ansibleadmin@ip-172-31-93-37 .ansible]$ cd tmp/

[ansibleadmin@ip-172-31-93-37 tmp]$ ls

[ansibleadmin@ip-172-31-93-37 tmp]$ pwd

/home/ansibleadmin/.ansible/tmp

[ansibleadmin@ip-172-31-93-37 tmp]$

To collect the history of sample machine we should run this command.

[ansibleadmin@ip-172-31-93-37 tmp]$ ansible samplenode1 -m setup

[devopsadmin@ip-172-31-81-101 ansible]$ ansible samplenode1 -m setup -a "filter=ansible\_mounts"

##Transfer a file from Ansible Controller to Nodes using copy Module

[devopsadmin@ip-172-31-81-101 ansible] $ echo “record1” >> file1.txt

[devopsadmin@ip-172-31-81-101 ansible] ls

[devopsadmin@ip-172-31-81-101 ansible]

ansible samplenode1 -m copy -a "src=/etc/ansible/file1.txt dest=/home/ansibleadmin"

in our target server we can see that file1.txt is present

[ansibleadmin@ip-172-31-93-37 ~]$ ls

Please note that if you want to copy this files inside 100 servers what you will do, instead of file name you can add server name.

If we change the content in the same file then 2 records are being maintained there.

So, we should backup it.

[devopsadmin@ip-172-31-81-101 ansible]

ansible samplenode1 -m copy -a "src=/etc/ansible/file1.txt dest=/home/ansibleadmin backup=yes"

##Transfer a file from Ansible Nodes to Ansible Controller using fetch Module

[devopsadmin@ip-172-31-81-101 ansible]

ansible samplenode1 -m fetch -a "src=/home/ansibleadmin/kaushik.txt dest=/home/devopsadmin"

please note kaushik.txt file will be created in target node & we are trying to copy it from target to controller machine.