EXPERIMENT 11

AIM: INSTALLING AND SETUP ANSIBLE SERVER AND NODES

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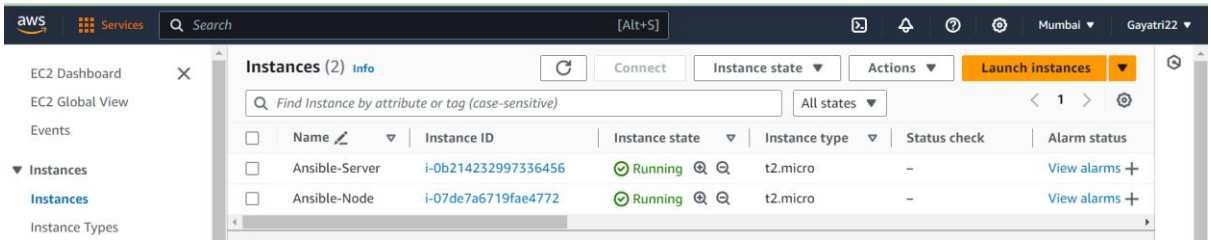
BATCH : 1(NON HONS.)

1.Create 2 AWS linux EC2 instances.



2. Install ansible in Server machine.

```
[root@ip-172-31-5-249 ec2-user]# ansible --version
ansible 2.9.27
```

3. Add private ip of Node machine in list of known hosts in **/etc/ansible/hosts** file.

```
#   - Groups of hosts are delimited by [header] elements
#   - You can enter hostnames or ip addresses
#   - A hostname/ip can be a member of multiple groups

# Ex 1: Ungrouped hosts, specify before any group headers.
[upes]
172.31.5.113
## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group

## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
-- INSERT --
```

i-03c26553f4fe38a35 (Ansible-Server)

PublicIPs: 65.2.79.47 PrivateIPs: 172.31.5.249

4. adduser ansible in both server and node machine.

```
[root@ip-172-31-5-249 ec2-user]#  vi /etc/ansible/hosts
[root@ip-172-31-5-249 ec2-user]# adduser ansible
[root@ip-172-31-5-249 ec2-user]# passwd ansible
Changing password for user ansible.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-5-249 ec2-user]#
```

i-03c26553f4fe38a35 (Ansible-Server)

PublicIPs: 65.2.79.47 PrivateIPs: 172.31.5.249

```
[ec2-user@ip-172-31-5-113 ~]$ sudo su
[root@ip-172-31-5-113 ec2-user]# adduser ansible
[root@ip-172-31-5-113 ec2-user]# passwd ansible
Changing password for user ansible.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-5-113 ec2-user]#
```

i-046f5254e32cc5213 (Ansible-Node)

PublicIPs: 13.127.24.24 PrivateIPs: 172.31.5.113

5. we have to generate a key pair and copy that into node machine.

```
[ansible@ip-172-31-5-113 ~]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ansible/.ssh/id_rsa):
Created directory '/home/ansible/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ansible/.ssh/id_rsa.
Your public key has been saved in /home/ansible/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:qyD3kEBVG34x6+4adgmPAWaFsskMJQEBtT0Ef7UDnRE ansible@ip-172-31-5-113.ap-south-1.compute.internal
```

```
[ansible@ip-172-31-5-113 ~]$ ls -a
.  ..  .bash_logout  .bash_profile  .bashrc  .ssh
```

```
[ansible@ip-172-31-5-249 .ssh]$ ssh-copy-id ansible@172.31.5.113
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ansible/.ssh/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 prompted now it is to install the new keys
ansible@172.31.5.113's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh 'ansible@172.31.5.113'"
and check to make sure that only the key(s) you wanted were added.
```

6. key has been successfully added, now we can go into node machine through server only by ssh-ing into it’s private ip.


[ansible@ip-172-31-5-249 .ssh]$ ssh 172.31.5.113
Last login: Sun Apr 21 08:52:29 2024
Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/
[ansible@ip-172-31-5-113 ~]$
i-03c26553f4fe38a35 (Ansible-Server)
PublicIPs: 65.2.79.47 PrivateIPs: 172.31.5.249

EXPERIMENT 12

AIM: ANSIBLE COMMANDS AND PLAYBOOKS:

1.Check list of hosts.

```
[ansible@ip-172-31-5-249 .ssh]$ ansible upes --list-hosts
  hosts (1):
    172.31.5.113
```

2. Install httpd.

Via Adhoc commands:

Check in node

```
[ansible@ip-172-31-5-113 ~]$ which httpd
/usr/bin/which: no httpd in (/usr/local/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/home/ansible/.local/bin:/home/ansible/bin)
```

Install on server using adhoc commands

```
[ansible@ip-172-31-5-249 .ssh]$ ansible upes -a "sudo yum install httpd -y"
```

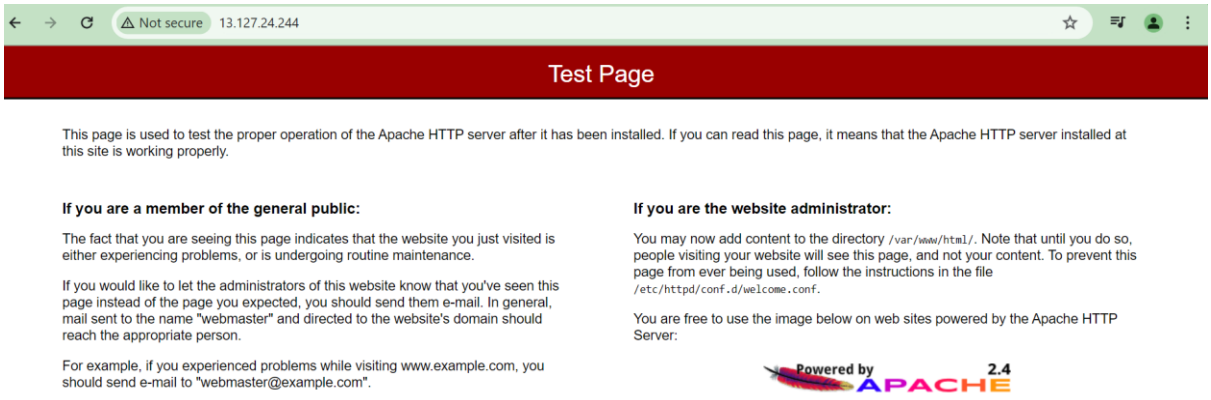
```
Installed:
  httpd.x86_64 0:2.4.58-1.amzn2

Dependency Installed:
  apr.x86_64 0:1.7.2-1.amzn2
  apr-util.x86_64 0:1.6.3-1.amzn2.0.1
  apr-util-bdb.x86_64 0:1.6.3-1.amzn2.0.1
  generic-logos-httpd.noarch 0:18.0.0-4.amzn2
  httpd-filesystem.noarch 0:2.4.58-1.amzn2
  httpd-tools.x86_64 0:2.4.58-1.amzn2
  mailcap.noarch 0:2.1.41-2.amzn2
  mod_http2.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
[ansible@ip-172-31-5-249 .ssh]$
```

i-03c26553f4fe38a35 (Ansible-Server)

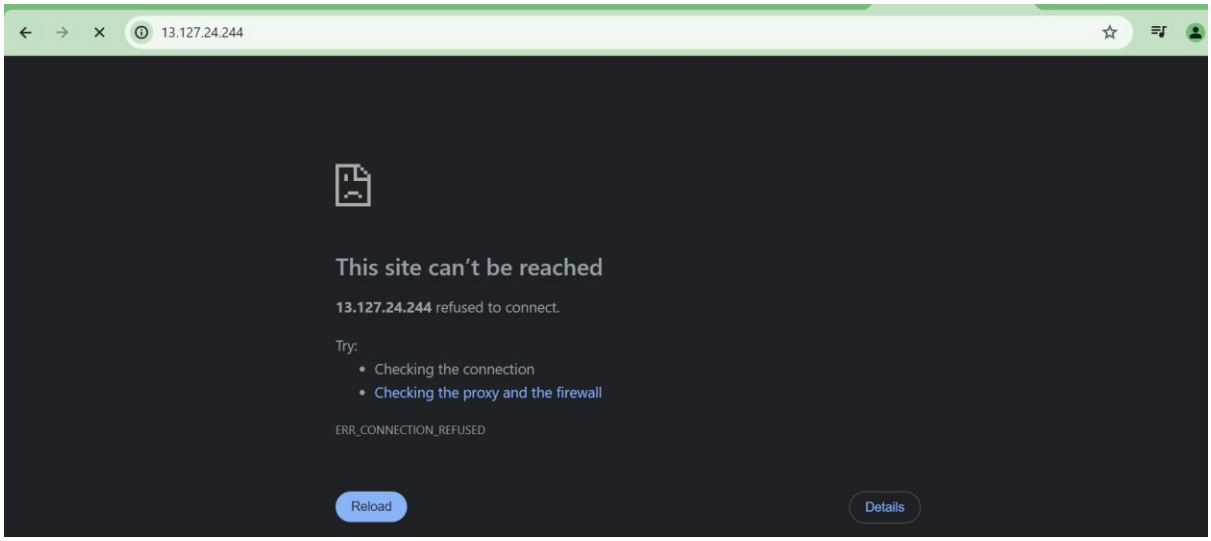
Now check on node machine.

```
[ansible@ip-172-31-5-113 ~]$ which httpd
/usr/sbin/httpd
```

3.Put public ip of node on browser and see apache web page.




```
[ansible@ip-172-31-5-249 .ssh]$ ansible upes -a "sudo yum remove httpd -y"
```



4.Via playbook

```
[ansible@ip-172-31-5-249 .ssh]$ vi pb1.yml
[ansible@ip-172-31-5-249 .ssh]$ ansible-playbook pb1.yml

PLAY [upes] ********************************************************************************************************************************************

TASK [Gathering Facts] *********************************************************************************************************************************
[WARNING]: Platform linux on host 172.31.5.113 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/reference_appendices/interpreter_discovery.html for
more information.
ok: [172.31.5.113]

TASK [Un-Install HTTPD] ********************************************************************************************************************************
ok: [172.31.5.113]

PLAY RECAP *********************************************************************************************************************************************
172.31.5.113               : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

Sample playbook

```
---
- hosts: upes
  user: ansible
  become: yes
  connection: ssh
  vars:
    pkgname: httpd
    currstatus: absent
  tasks:
    - name: Un-Install HTTPD
      action: yum name='{{pkgname}}' state='{{currstatus}}'
```