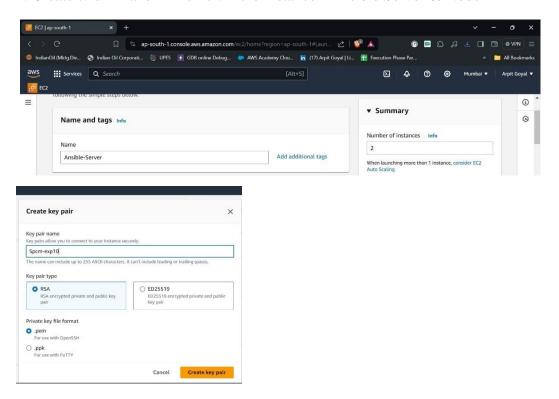
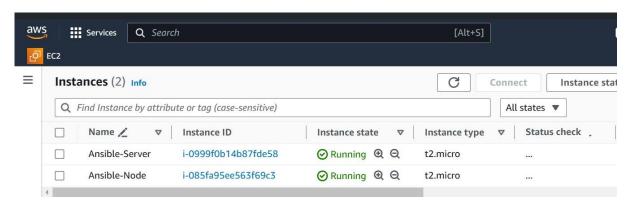
Experiment 11 – Configure Ansible Setup In Linux:

Steps:

1. Create two Amazon Linux t2.micro instance - Ansible Server & Node





2. Install ansible on Ansible Server

```
0
                                             Amazon Linux 2
                                             AL2 End of Life is 2025-06-30.
                                            Amazon Linux 2023, GA and supported until 2028-03-15. 
https://aws.amazon.com/linux/amazon-linux-2023/
   ec2-user@ip-172-31-42-231 ~]$ sudo su
  ec2-user#ip-1/2-31-42-231 ~1$ sudo su roct@ip-172-31-42-231 ec2-user] # wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm -2024-04-25 09:15:04-- https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm esolving dl.fedoraproject.org (dl.fedoraproject.org)... 38.145.60.22, 38.145.60.23, 38.145.60.24 onnecting to dl.fedoraproject.org (dl.fedoraproject.org)] 38.145.60.22|:443... connected. TTP request sent, awaiting response... 200 OK ength: 15608 (15K) (application/x-rpm) aving to: 'epel-release-latest-7.noarch.rpm'
                                                                                                                                                                                                                          ===>] 15,608
                                                                                                                                                                                                                                                                59.3KB/s in 0.3s
  024-04-25 09:15:05 (59.3 KB/s) - 'epel-release-latest-7.noarch.rpm' saved [15608/15608]
[root@ip-172-31-42-231 ec2-user]#
```

[root@ip-172-31-42-231 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 esolving Dependencies
-> Running transaction check
--> Package epel-release.noarch 0:7-14 will be installed
-> Finished Dependency Resolution
mzn2-core/2/x86_64

| 3.6 kB 00:00:00

ependencies Resolved

Package	Arch	Version	Repository	Size
Installing: epel-release	noarch	7-14	/epel-release-latest-7.noarch	25 k
Transaction Summary				

Install 1 Package

i-0d60040e871530720 (Ansible-Server)

PublicIPs: 3.6.91.13 PrivateIPs: 172.31.42.231

Downloading packages:

Running transaction check Running transaction test Transaction test succeeded

Running transaction

Installing : epel-release-7-14.noarch Verifying : epel-release-7-14.noarch

Installed:

epel-release.noarch 0:7-14

Complete!

[root@ip-172-31-42-231 ec2-user]#



[root@ip-172-31-42-231 ec2-user]# yum update -y Loaded plugins: extras_suggestions, langpacks, priorities, update-motd 229 packages excluded due to repository priority protections Resolving Dependencies

-> Running transaction check

--> Package python-lockfile.noarch 1:0.9.1-4.amzn2 will be obsoleted

--> Package python-simplejson.x86_64_0:3.2.0-1.amzn2.0.2 will be obsoleted --> Package python2-lockfile.noarch 1:0.11.0-17.e17 will be obsoleting

--> Package python2-simplejson.x86_64 0:3.11.1-1.el7 will be obsoleting

-> Finished Dependency Resolution

Dependencies Resolved

```
installed:
  python2-lockfile.noarch 1:0.11.0-17.e17
                                                                                                   python2-simplejson.x86 64 0:3.11.1-1.el7
  python-lockfile.noarch 1:0.9.1-4.amzn2
                                                                                                python-simplejson.x86_64 0:3.2.0-1.amzn2.0.2
 omplete!
   © EC2
[root@ip-172-31-42-231 ec2-user]# yum install git python python-pip openssl -y
loaded plugins: extras suggestions, langpacks, priorities, update-motd
                                                                                                                                            1 3.6 kB 00:00:00
amznz-core
229 packages excluded due to repository priority protections
Package python-2.7.18-1.amzn2.0.8.x86_64 already installed and latest version
Package 1:openssl-1.0.2k-24.amzn2.0.12.x86_64 already installed and latest version
Resolving Dependencies
 -> Running transaction check
  -> Package git.x86_64 0:2.40.1-1.amzn2.0.1 will be installed
 nstalled:
git.x86 64 0:2.40.1-1.amzn2.0.1
                                                                                 python2-pip.noarch 0:20.2.2-1.amzn2.0.5
 ependency Installed:
 git-core.x86_64 0:2.40.1-1.amzn2.0.1
perl-Git.noarch 0:2.40.1-1.amzn2.0.1
                                                       git-core-doc.noarch 0:2.40.1-1.amzn2.0.1
perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2
                                                                                                                      perl-Error.noarch 1:0.17020-2.amzn2
[root@ip-172-31-42-231 ec2-user]# yum install ansible
Loaded plugins: extras suggestions, langpacks, priorities, update-motd 229 packages excluded due to repository priority protections
 esolving Dependencies
 -> Running transaction check
--> Package ansible.noarch 0:2.9.27-1.el7 will be installed
 -> Processing Dependency: python-httplib2 for package: ansible-2.9.27-1.el7.noarch
-> Processing Dependency: python-paramiko for package: ansible-2.9.27-1.el7.noarch
-> Processing Dependency: sshpass for package: ansible-2.9.27-1.el7.noarch
     Running transaction check
  i-0d60040e871530720 (Ansible-Server)
  PublicIPs: 3.6.91.13 PrivateIPs: 172.31.42.231
Installed:
  ansible.noarch 0:2.9.27-1.el7
Dependency Installed:
  python-paramiko.noarch 0:2.1.1-0.10.el7
                                                                                             python2-httplib2.noarch 0:0.18.1-3.el7
Complete!
 Complete!
[root@ip-172-31-42-231 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/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, Dec 18 2023, 22:08:43) [GCC 7.3.1 20180712 (Red Hat 7.3.1-17)] root@ip-172-31-42-231 ec2-user]#
```

3. Connect Node to Ansible Server and Add Private IP of node to the Ansible server's inventory file

```
[ec2-user@ip-172-31-42-231 ~]$ sudo su
[root@ip-172-31-42-231 ec2-user]# vi /etc/ansible/hosts
[root@ip-172-31-42-231 ec2-user]# 

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

[upes-lab11]
172.31.37.188

## green.example.com
## blue.example.com
## 192.168.100.1

-- INSERT -- 14,14 Top

i-0d60040e871530720 (Ansible-Server)
PublicIPs: 3.6.91.13 PrivateIPs: 172.31.42.231
```

4. Create super user in both the machines

```
[ec2-user@ip-172-31-42-231 ~]$ sudo su
[root@ip-172-31-42-231 ec2-user]# vi /etc/ansible/hosts
[root@ip-172-31-42-231 ec2-user]# adduser ansible
[root@ip-172-31-42-231 ec2-user]# passwd ansible
Changing password for user ansible.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-42-231 ec2-user]#
```

```
[ec2-user@ip-172-31-37-188 ~]$ sudo su
[root@ip-172-31-37-188 ec2-user]# adduser ansible
[root@ip-172-31-37-188 ec2-user]# passwd ansible
Changing password for user ansible.

New password:
BAD PASSWORD: The password is shorter than 7 characters
Retype new password:
Sorry, passwords do not match.

New password:
Retype new password:
passwd: all authentication tokens updated successfully.
```

5. Give sudo user permissions to both users

```
[ec2-user@ip-172-31-42-231 ~]$ sudo su
[root@ip-172-31-42-231 ec2-user]# ls
ansible.sh epel-release-latest-7.noarch.rg
[root@ip-172-31-42-231 ec2-user]# visudo
[root@ip-172-31-42-231 ec2-user]#
## The COMMANDS section may have other options added to it.
## Allow root to run any commands anywhere
                   ALL
root ALL=(ALL)
ansible ALL=(ALL)
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS
## Allows people in group wheel to run all commands
%wheel ALL=(ALL)
                   AT.T.
                   ALL
NOPASSWD: ALL
root
      ALL=(ALL)
ansible ALL=(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, DR
## Allows people in group wheel to run all commands
%wheel ALL=(ALL)
                      ALL
## Same thing without a password
# %wheel
              ALL=(ALL)
                              NOPASSWD: ALL
"/etc/sudoers.tmp" 120L, 4363B
  i-0475fbb2fca6ed37a (Ansible-Node)
```

6. Edit the sshd_config file in the node server

```
root@ip-172-31-5-83 ec2-user]# visudo
[root@ip-172-31-5-83 ec2-user]# nano /etc/ssh/sshd_config
[root@ip-172-31-5-83 ec2-user]# nano /etc/ssh/sshd_config
[root@ip-172-31-5-83 ec2-user]# 
#Logtevet INFU

# Authentication:

#LoginGraceTime 2m

#PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

#PubkeyAuthentication yes

# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes
# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no
#PasswordAuthentication no
```

```
[root@ip-172-31-5-83 ec2-user]# visudo
[root@ip-172-31-5-83 ec2-user]# nano /etc/ssh/sshd_config
[root@ip-172-31-5-83 ec2-user]# service sshd restart
Redirecting to /bin/systemctl restart sshd.service
[root@ip-172-31-5-83 ec2-user]# [
```

7. Generate key pair in Ansible server and copy the key to node server

```
[ansible@ip-172-31-11-127 ~]$ ssh-key
-bash: ssh-key: command not found
[ansible@ip-172-31-11-127 ~]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ansible/.ssh/id_rsa): /home/ansible/.ssh/id_rsa already exists.
Overwrite (y/n)? y
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:WciCBF7n9Wn5bE6bw5SX67C7unB6gD+qUFrBy2Zf0XI ansible@ip-172-31-11-127.ap-south-1.compute.internal
The key's randomart image is:
  ---[RSA 2048]----+
       B S . B o
     o o.oB.
                00+0.
   ---[SHA256]---
[ansible@ip-172-31-11-127 ~]$ ssh-copy-id ansiblenode@172.31.5.83
/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: Stored of Rey(s) to be installed. Infome/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
ansiblenode@172.31.5.83's password:
Number of key(s) added: 1
Now try logging into the machine, with: "ssh 'ansiblenode@172.31.5.83'" and check to make sure that only the key(s) you wanted were added.
[ansible@ip-172-31-11-127 ~]$ [
```