System Provisioning and Configuration Management Lab

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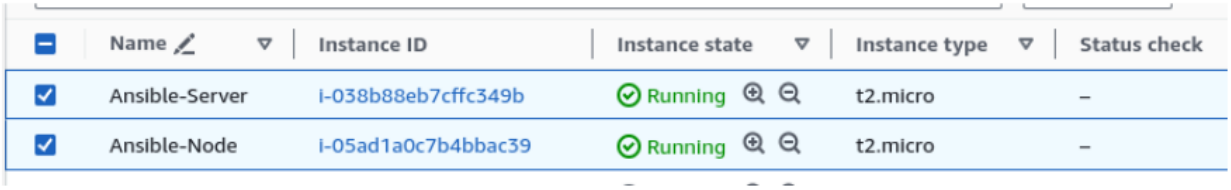
Batch - 3

Experiment 11

Configure Ansible Setup In Linux

Steps

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



Name	Instance ID	Instance state	Instance type	Status check
Ansible-Server	i-038b88eb7cffc349b	Running	t2.micro	–
Ansible-Node	i-05ad1a0c7b4bbac39	Running	t2.micro	–

2. Install ansible on Ansible Server

```
[ec2-user@ip-172-31-11-127 ~]$ sudo su
[root@ip-172-31-11-127 ec2-user]# ls
ansible.sh  epel-release-latest-7.noarch.rpm
[root@ip-172-31-11-127 ec2-user]# cat ansible.sh
wget https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm

yum install  epel-release-latest-7.noarch.rpm

yum update -y

yum install git python python-pip openssl -y

yum install ansible
[root@ip-172-31-11-127 ec2-user]# ./ansible.sh
--2024-04-20 20:19:47--  https://dl.fedoraproject.org/pub/epel/epel-release-latest-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... connected.
HTTP request sent, awaiting response... 200 OK
Length: 15608 (15K) [application/x-rpm]
Saving to: 'epel-release-latest-7.noarch.rpm.1'

100%[======================================================================>] 15,608      58.6KB/s   in 0.3s
```

```
[root@ip-172-31-11-127 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-172-31-11-127 ec2-user]#
```

3. Add Private IP of node to the Ansible server's inventory file

```
[root@ip-172-31-11-127 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-172-31-11-127 ec2-user]# vi /etc/ansible/hosts
[root@ip-172-31-11-127 ec2-user]#
```

```
# Here's another example of host ranges, this time there are no
# leading 0s:

## db-[99:101]-node.example.com

[upes]
172.31.5.83

~
~
~
```

4. Create super user in both the machines

```
[root@ip-172-31-11-127 ansible]# passwd ansible
Changing password for user ansible.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-11-127 ansible]#
```

```
[root@ip-172-31-5-83 ansible]# passwd ansiblenode
Changing password for user ansiblenode.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@ip-172-31-5-83 ansible]#
```

5. Give sudo user permissions to both users

```
##      user    MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
##
## 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, softwar
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATIN
```

```
## The COMMANDS section may have other options added to it.
##
## Allow root to run any commands anywhere
root    ALL=(ALL)       ALL
ansiblenode ALL=(ALL)     NOPASSWD: ALL

## Allows members of the 'sys' group to run networking, sof
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEG
```

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]#
```

```
#LogLevel INFO

# Authentication:

#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes 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:WciCBF7n9Wn5bE6bw5SX67C7unBGgD+qUFrBy2Zf0XI ansible@ip-172-31-11-127.ap-south-1.compute.internal
The key's randomart image is:
+---[RSA 2048]----+
|  ..o . .        |
| . + + + + o     |
|  . + + * E      |
|   . o o O o . . |
|    B   S . B o  |
|   * . o o * + . |
|  o   o . o B .  |
|   . .   +   =   |
|    .     oo+o.  |
+----[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: 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 ~]$
```

8. Connect to node server from ansible server