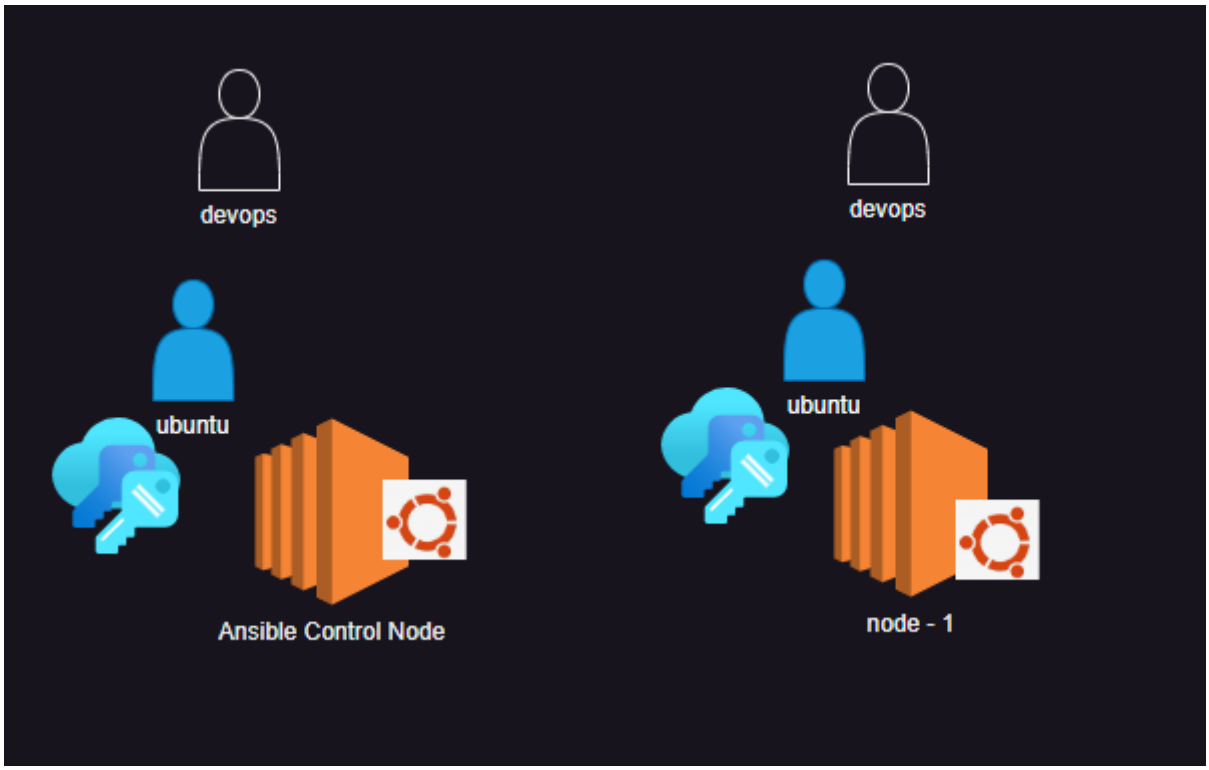
Setting up Ansible on EC2 instances

- Create a key pair or use existing
- Create two ec2 instances



- We need to create a user on both instances
- aws ec2 instances donot support password based authentication by default.
- Lets enable password based authentication for the time being

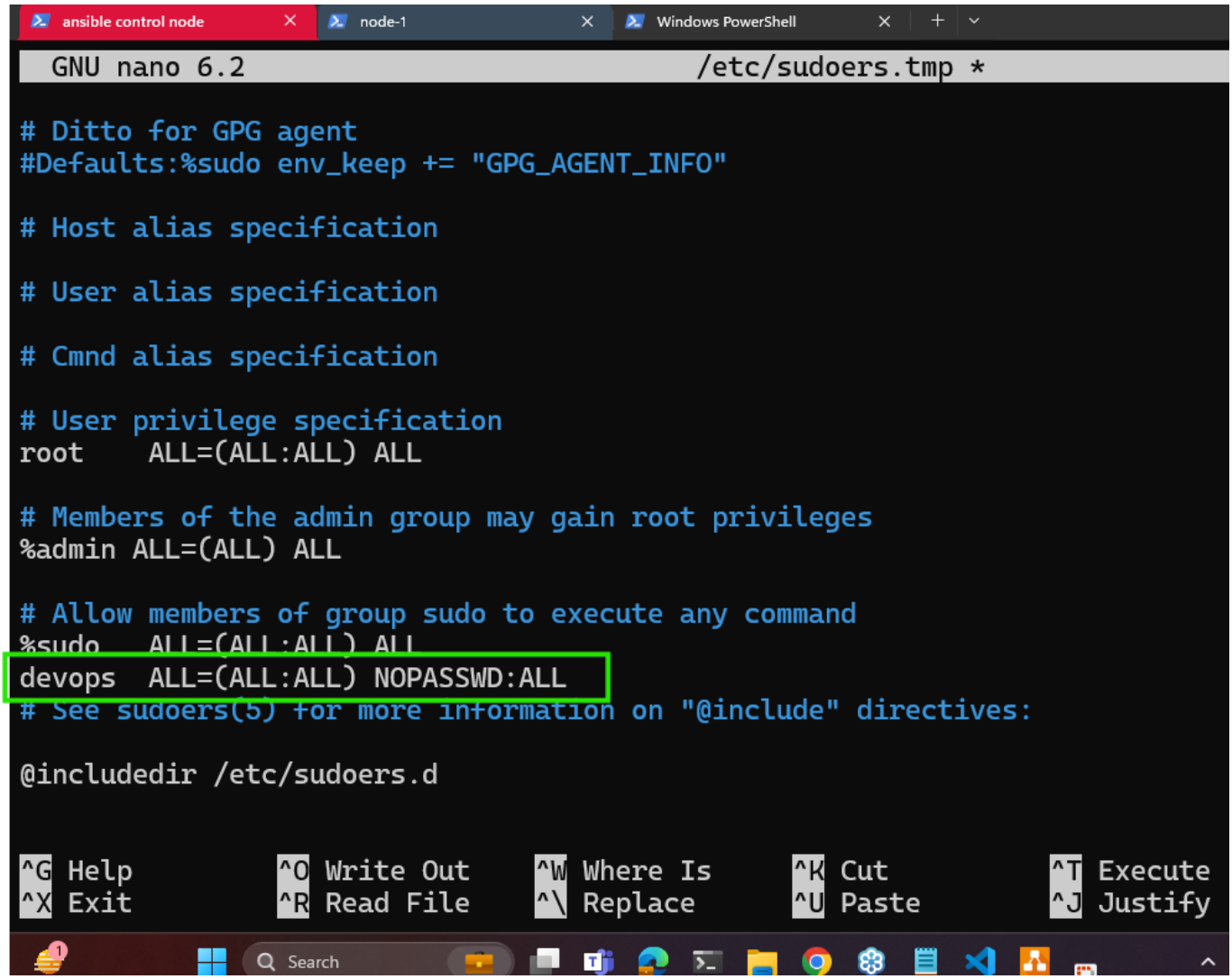
```
sudo vi /etc/ssh/sshd_config
# Change passwordAuthentication to yes
sudo service sshd restart
```

- Lets create a user called as devops

```
sudo adduser devops
```

- We need to proviede sudo access without password to devops user

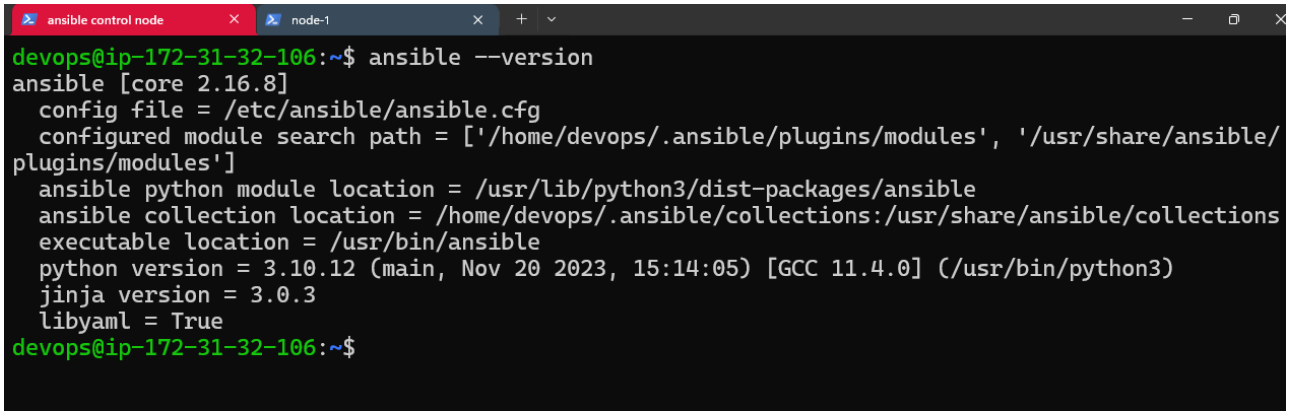
```
sudo visudo
```



- Now lets install ansible on ansible control node as python exists on both machines

```
sudo apt update
sudo apt install software-properties-common
sudo add-apt-repository --yes --update ppa:ansible/ansible
sudo apt install ansible -y
```

- Now execute `ansible --version` on ansible control node



- Now lets do the connectivity check

```
echo '172.31.44.144' > hosts
ansible -i hosts -m ping -k all
```

```
devops@ip-172-31-32-106:~$ ansible -i hosts -m ping -k all
SSH password:
172.31.44.144 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
devops@ip-172-31-32-106:~$
```

- Now lets create a key pair for devops user on ansible control node

```
ssh-keygen
```

```
devops@ip-172-31-32-106:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/devops/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/devops/.ssh/id_rsa
Your public key has been saved in /home/devops/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:Ak+uE0ZeInI4wA5rl0ejLFObCNiWH0N8bLck7cLcCJg devops@ip-172-31-32-106
The key's randomart image is:
+---[RSA 3072]----+
|+. *.. .         |
|=oE.=o= +        |
|Bo*.XO+B .       |
|.X @.O= +        |
|. + = +.S        |
|    . o .        |
|     o           |
|      .          |
|                 |
+----[SHA256]-----+
devops@ip-172-31-32-106:~$
```

- Now lets copy the public key to the node1 from ansible control node

```
devops@ip-172-31-32-106:~$ ssh-copy-id devops@172.31.44.144
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/devops/.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
devops@172.31.44.144's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh 'devops@172.31.44.144'"
and check to make sure that only the key(s) you wanted were added.

devops@ip-172-31-32-106:~$
```

- From this moment ansible control node can communicate with node 1 using its private key

```
devops@ip-172-31-32-106:~$ ssh 172.31.44.144
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Fri Jul  5 02:33:53 UTC 2024

  System load:  0.0               Processes:             102
  Usage of /:   23.6% of 7.57GB   Users logged in:       1
  Memory usage: 24%               IPv4 address for eth0: 172.31.44.144
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Fri Jul  5 02:29:14 2024 from 172.31.32.106
devops@ip-172-31-44-144:~$
```

- Now ansible is configured to use private key

```
devops@ip-172-31-32-106:~$ ansible -i hosts -m ping all
172.31.44.144 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
devops@ip-172-31-32-106:~$
```

- Exercise: Try configuring ansible with 3 node setup
    - 1 ansible control node
    - 2 nodes