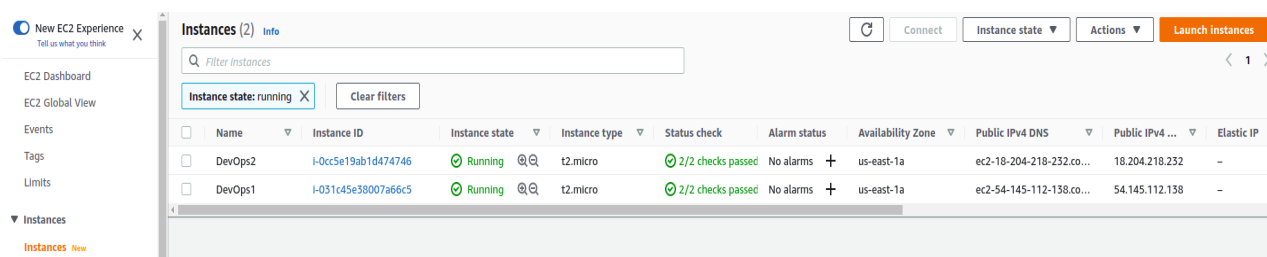


## Add users to EC2 instances with SSH Access (Ansible)

- Step 1: Create 2 or (any numbers of EC2 instances on AWS)



- Install Ansible into Local Machine:
  - `$ sudo apt update`
  - `$ sudo apt install software-properties-common`
  - `$ sudo add-apt-repository --yes --update ppa:ansible/ansible`
  - `$ sudo apt install ansible`
- Check Connecting to EC2 Via SSH Connection:
  - `ssh -i ~/Downloads/DevOps1.pem ubuntu@18.204.218.232`

```
aryan@boss: ~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible
aryan@boss:~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible$ ssh -i ~/Downloads/DevOps1.pem ubuntu@18.204.218.232
Welcome to Ubuntu 20.04.2 LTS (GNU/Linux 5.4.0-1045-aws x86_64)

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

System information as of Thu Sep 23 16:20:54 UTC 2021

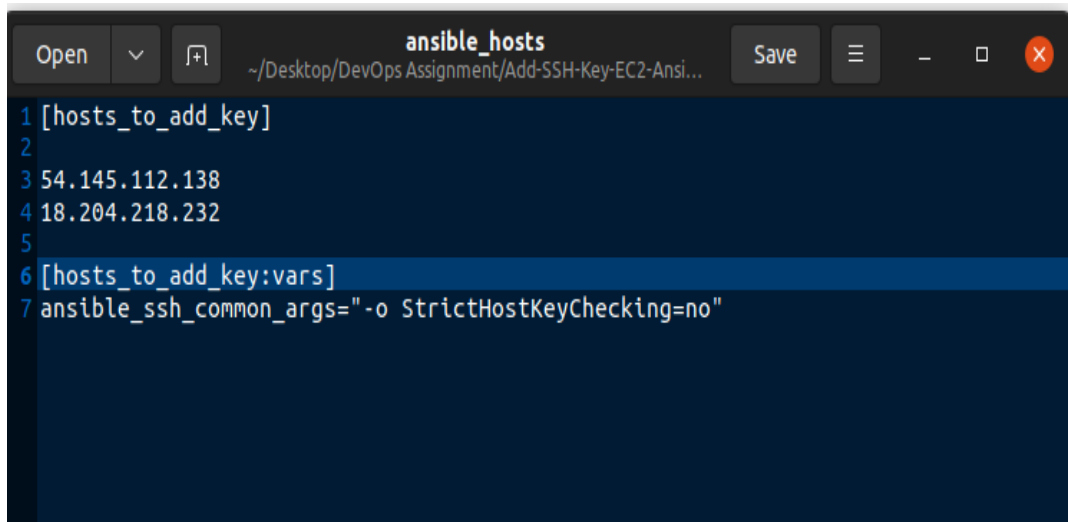
System load:  0.0          Processes:    100
Usage of /:   16.5% of 7.69GB Users logged in: 0
Memory usage: 23%         IPv4 address for eth0: 172.31.83.110
Swap usage:   0%

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Thu Sep 23 15:37:00 2021 from 106.206.196.98
ubuntu@ip-172-31-83-110:~$ logout
Connection to 18.204.218.232 closed.
```

- Create a *ansible\_hosts* file and mention all IPV4 addresses of EC2 instances.

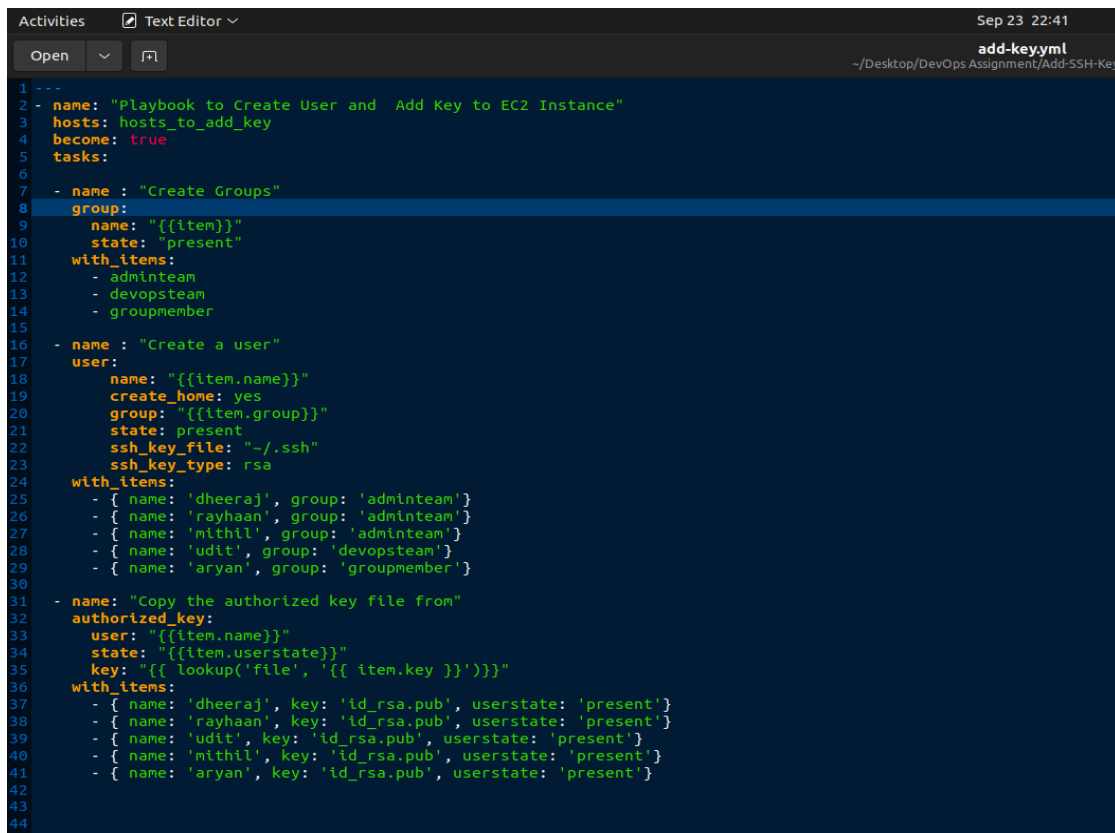


```

1 [hosts_to_add_key]
2
3 54.145.112.138
4 18.204.218.232
5
6 [hosts_to_add_key:vars]
7 ansible_ssh_common_args="-o StrictHostKeyChecking=no"

```

- Create playbook (YAML file) and mention all the tasks i.e, Add users to EC2 instances.



```

1 ---
2 - name: "Playbook to Create User and Add Key to EC2 Instance"
3   hosts: hosts_to_add_key
4   become: true
5   tasks:
6
7   - name: "Create Groups"
8     group:
9       name: "{{item}}"
10      state: "present"
11      with_items:
12        - adminteam
13        - devopsteam
14        - groupmember
15
16   - name: "Create a user"
17     user:
18       name: "{{item.name}}"
19       create_home: yes
20       group: "{{item.group}}"
21       state: present
22       ssh_key_file: "~/ssh"
23       ssh_key_type: rsa
24       with_items:
25        - { name: 'dheeraj', group: 'adminteam' }
26        - { name: 'rayhaan', group: 'adminteam' }
27        - { name: 'mithil', group: 'adminteam' }
28        - { name: 'udit', group: 'devopsteam' }
29        - { name: 'aryan', group: 'groupmember' }
30
31   - name: "Copy the authorized key file from"
32     authorized_key:
33       user: "{{item.name}}"
34       state: "{{item.userstate}}"
35       key: "{{ lookup('file', '{{ item.key }}') }}"
36       with_items:
37        - { name: 'dheeraj', key: 'id_rsa.pub', userstate: 'present' }
38        - { name: 'rayhaan', key: 'id_rsa.pub', userstate: 'present' }
39        - { name: 'udit', key: 'id_rsa.pub', userstate: 'present' }
40        - { name: 'mithil', key: 'id_rsa.pub', userstate: 'present' }
41        - { name: 'aryan', key: 'id_rsa.pub', userstate: 'present' }
42
43
44

```

- Execute the following command line to push the playbook instructions to host machines.
  - *ansible-playbook add-key.yml -i ansible\_hosts --user ubuntu --key-file ~/Downloads/DevOps1.pem*
- We trying to make 3 groups and add 5 users from different groups in every virtual machine.

```

Activities  Terminal  Sep 23 22:44
aryan@boss: ~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible
]
aryan@boss:~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible$ ansible-playbook add-key.yml -i ansible_hosts --user ubuntu --key-file ~/Downloads/DevOps1.pem
PLAY [Playbook to Create User and Add Key to EC2 Instance] *****

TASK [Gathering Facts] *****
ok: [18.204.218.232]
ok: [54.145.112.138]

TASK [Create Groups] *****
ok: [18.204.218.232] => (item=adminteam)
ok: [54.145.112.138] => (item=adminteam)
ok: [18.204.218.232] => (item=devopsteam)
ok: [54.145.112.138] => (item=devopsteam)

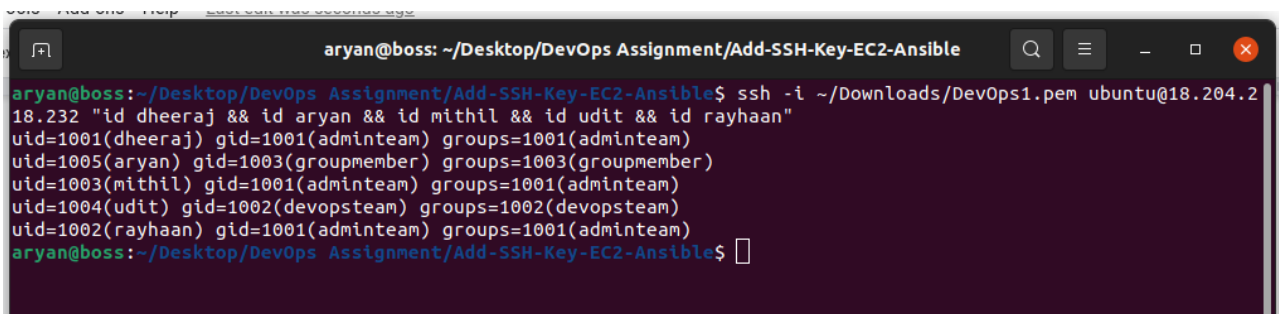
TASK [Create a user] *****
ok: [18.204.218.232] => (item={'name': 'dheeraj', 'group': 'adminteam'})
ok: [54.145.112.138] => (item={'name': 'dheeraj', 'group': 'adminteam'})
ok: [18.204.218.232] => (item={'name': 'rayhaan', 'group': 'adminteam'})
ok: [54.145.112.138] => (item={'name': 'rayhaan', 'group': 'adminteam'})
ok: [18.204.218.232] => (item={'name': 'mithil', 'group': 'adminteam'})
ok: [54.145.112.138] => (item={'name': 'mithil', 'group': 'adminteam'})
ok: [18.204.218.232] => (item={'name': 'udit', 'group': 'devopsteam'})
ok: [54.145.112.138] => (item={'name': 'udit', 'group': 'devopsteam'})
ok: [18.204.218.232] => (item={'name': 'aryan', 'group': 'devopsteam'})
ok: [54.145.112.138] => (item={'name': 'aryan', 'group': 'devopsteam'})

TASK [Copy the authorized key file from] *****
ok: [18.204.218.232] => (item={'name': 'dheeraj', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [54.145.112.138] => (item={'name': 'dheeraj', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [18.204.218.232] => (item={'name': 'rayhaan', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [54.145.112.138] => (item={'name': 'rayhaan', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [18.204.218.232] => (item={'name': 'udit', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [54.145.112.138] => (item={'name': 'udit', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [18.204.218.232] => (item={'name': 'mithil', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [54.145.112.138] => (item={'name': 'mithil', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [18.204.218.232] => (item={'name': 'aryan', 'key': 'id_rsa.pub', 'userstate': 'present'})
ok: [54.145.112.138] => (item={'name': 'aryan', 'key': 'id_rsa.pub', 'userstate': 'present'})

PLAY RECAP *****
18.204.218.232      : ok=4   changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
54.145.112.138     : ok=4   changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

```

- Now Execute the following command line to check the added users and their mapped groups.
  - *ssh -i ~/Downloads/DevOps1.pem ubuntu@18.2X4.2X8.232 "id dheeraj && id aryan && id mithil && id udit && id rayhaan"*

A terminal window titled 'aryan@boss: ~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible'. The command 'ssh -i ~/Downloads/DevOps1.pem ubuntu@18.204.218.232 "id dheeraj && id aryan && id mithil && id udit && id rayhaan"' has been executed. The output shows details for five users: dheeraj (uid=1001, gid=1001, group=admin), aryan (uid=1005, gid=1003, group=groupmember), mithil (uid=1003, gid=1001, group=admin), udit (uid=1004, gid=1002, group=devopsteam), and rayhaan (uid=1002, gid=1001, group=admin). The prompt returns to 'aryan@boss:~/Desktop/DevOps Assignment/Add-SSH-Key-EC2-Ansible\$'.

- We can see the playbook has been executed successfully and the user can log in/SSH now with his private key
- As per our configuration, five new users have been created named mithil, dheeraj, aryan, udit and rayhaan and they have been mapped to different groups as well.

-----XXXXX-----