Team - 03

Nikhil S A (18BEC033)

Jagadeesh C (18BCS033)

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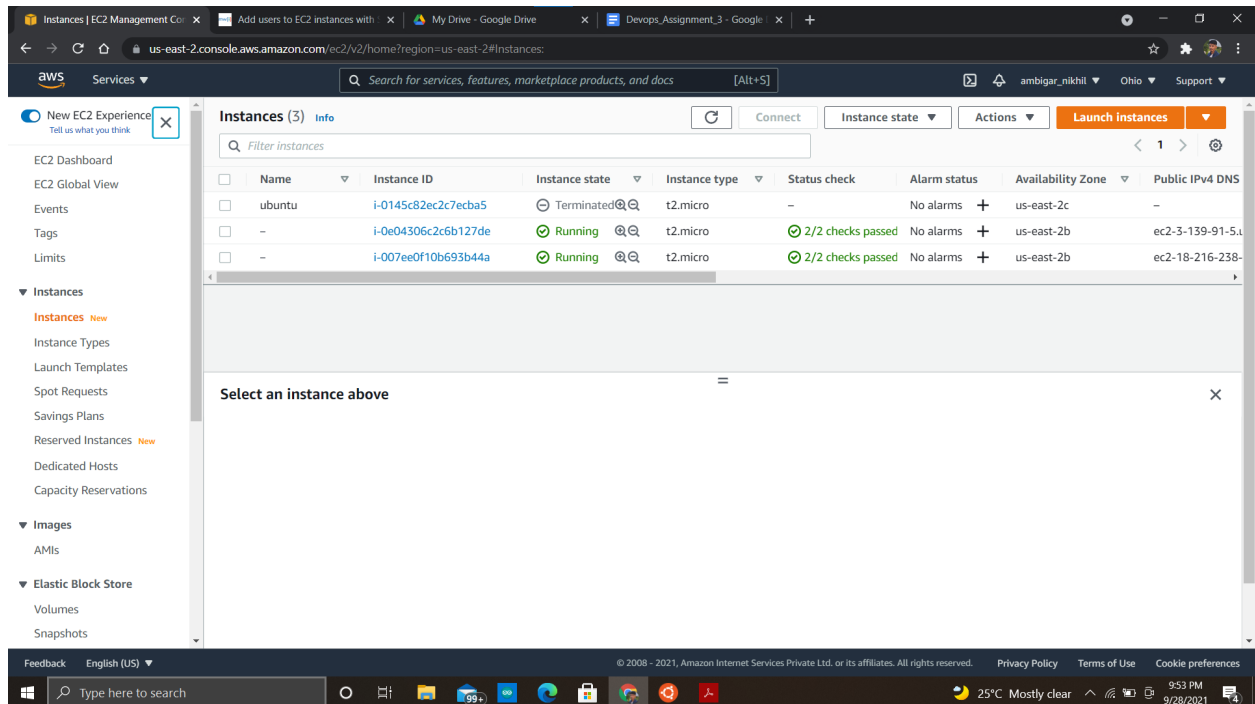Nithin R (18BEC034)

Kiran D (18BEC022)

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Assignment-3:

Add users to EC2 instances with SSH Access – Ansible.

Step1: Create two ec2 instances on the AWS platform.

Step2: Create a text file ansible-hosts.txt that contains the details of EC2 instances.


```
nikhil@Nikhil: ~/nikhil3                                    —    □    X

nikhil@Nikhil:~$ ls
Devops.pem  add-user.yml  ansible_hosts.txt  assg2  deploy.yml  deploy.yml.save  inventory.txt  secretes.yml
nikhil@Nikhil:~$ mkdir nikhil3
nikhil@Nikhil:~$ cd nikhil3
nikhil@Nikhil:~/nikhil3$ nano ansible_hosts.txt
nikhil@Nikhil:~/nikhil3$ cat ansible_hosts.txt
[hosts_to_add_key]
3.139.91.5 ansible_user=ubuntu ansible_port=22
18.216.238.107 ansible_user=ubuntu ansible_port=22


[hosts_to_add_key:vars]
ansible_ssh_common_args="-o StrictHostKeyChecking=no"
```

Step2: Generate the ssh-key key pair for all the ec2 instances.


```
nikhil@Nikhil: ~/nikhil3                                                                                          —   □   X
18.216.238.107 ansible_user=ubuntu ansible_port=22

[hosts_to_add_key:vars]
ansible_ssh_common_args="-o StrictHostKeyChecking=no"
nikhil@Nikhil:~/nikhil3$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/nikhil/.ssh/id_rsa): /home/nikhil/.ssh/nikhil3
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/nikhil/.ssh/nikhil3
Your public key has been saved in /home/nikhil/.ssh/nikhil3.pub
The key fingerprint is:
SHA256:f01DFvY9LjzzvELUczrJO13J/n+2DgXhaQrecsd2DxE nikhil@Nikhil
The key's randomart image is:
+---[RSA 3072]----+
|            .E   |
|          ..o+.  |
|      .   ==.o   |
|     . o =+o+o   |
|      So +.X=*+  |
|      .o o+&=o   |
|       . o.o*o   |
|        . .+.=   |
|           o*B   |
+----[SHA256]-----+
nikhil@Nikhil:~/nikhil3$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/nikhil/.ssh/id_rsa): /home/nikhil/.ssh/jagadeesh3
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/nikhil/.ssh/jagadeesh3
Your public key has been saved in /home/nikhil/.ssh/jagadeesh3.pub
The key fingerprint is:
SHA256:cegL3K8XB9ayLppz9Kc6fs7J/MghvvDhrJc9H5eA15w nikhil@Nikhil
The key's randomart image is:
+---[RSA 3072]----+
|                 |
|        .        |
|       o ..      |
|    . o o+..o .   |
|     o S..+o E    |
|      ..oo...     |
|     ..+=oo. o    |
|     .B*OB+.o     |
|     +BXOX*o      |
+----[SHA256]-----+
nikhil@Nikhil:~/nikhil3$ nano add-user.yml
nikhil@Nikhil:~/nikhil3$ nano add-user.yml
nikhil@Nikhil:~/nikhil3$ cat add-user.yml
```

Step3: Create an Ansible playbook add-user.yml.


```
nikhil@Nikhil:~/nikhil3$ nano add-user.yml
nikhil@Nikhil:~/nikhil3$ nano add-user.yml
nikhil@Nikhil:~/nikhil3$ cat add-user.yml
---
- name: "Playbook to Create User and  Add Key to EC2 Instance"
  hosts: hosts_to_add_key
  become: true
  tasks:

   - name : "Create Groups"
     group:
       name: "{{item}}"
       state: "present"
     with_items:
       - adminteam
       - devopsteam

   - name : "Create a user"
     user:
       name: "{{item.name}}"
       create_home: yes
       group: "{{item.group}}"
       state: present
       ssh_key_file: .ssh/id_rsa
       ssh_key_type: rsa
     with_items:
       - { name: 'Nikhil3', group: 'adminteam'}
       - { name: 'Jagadeesh3', group: 'devopsteam'}

   - name: "Copy the authorized key file from"
     authorized_key:
       user: "{{item.name}}"
       state: "{{item.userstate}}"
       key: "{{ lookup('file', '{{ item.key }}')}}"
     with_items:
       - { name: 'Nikhil3', key: '/home/nikhil/.ssh/nikhil3.pub', userstate: 'present'}
       - { name: 'Jagadeesh3', key: '/home/nikhil/.ssh/jagadeesh3.pub', userstate: 'present'}
nikhil@Nikhil:~/nikhil3$ ansible-playbook add-user.yml -i ansible_hosts.txt --key-file=nikhil3.pem

< PLAY [Playbook to Create User and Add Key to EC2 Instance] >
 -------------------------------------------------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||
```

Step4: Run the ansible-playbook.


```
logout
Connection to ec2-18-216-238-107.us-east-2.compute.amazonaws.com closed.
nikhil@Nikhil:~/nikhil3$ ansible-playbook add-user.yml -i ansible_hosts.txt --key-file=nikhil3.pem

< PLAY [Playbook to Create User and Add Key to EC2 Instance] >
 -----------------------------------------------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

< TASK [Gathering Facts] >
 ------------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

ok: [3.139.91.5]
ok: [18.216.238.107]

< TASK [Create Groups] >
 ----------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

changed: [3.139.91.5] => (item=adminteam)
changed: [18.216.238.107] => (item=adminteam)
changed: [3.139.91.5] => (item=devopsteam)
changed: [18.216.238.107] => (item=devopsteam)

< TASK [Create a user] >
 ----------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

changed: [3.139.91.5] => (item={'name': 'Nikhil3', 'group': 'adminteam'})
changed: [18.216.238.107] => (item={'name': 'Nikhil3', 'group': 'adminteam'})
changed: [3.139.91.5] => (item={'name': 'Jagadeesh3', 'group': 'devopsteam'})
changed: [18.216.238.107] => (item={'name': 'Jagadeesh3', 'group': 'devopsteam'})
```

```
changed: [3.139.91.5] => (item=adminteam)
changed: [18.216.238.107] => (item=adminteam)
changed: [3.139.91.5] => (item=devopsteam)
changed: [18.216.238.107] => (item=devopsteam)

< TASK [Create a user] >
 ----------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

changed: [3.139.91.5] => (item={'name': 'Nikhil3', 'group': 'adminteam'})
changed: [18.216.238.107] => (item={'name': 'Nikhil3', 'group': 'adminteam'})
changed: [3.139.91.5] => (item={'name': 'Jagadeesh3', 'group': 'devopsteam'})
changed: [18.216.238.107] => (item={'name': 'Jagadeesh3', 'group': 'devopsteam'})

< TASK [Copy the authorized key file from] >
 -----------------------------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

changed: [3.139.91.5] => (item={'name': 'Nikhil3', 'key': '/home/nikhil/.ssh/nikhil3.pub', 'userstate': 'present'})
changed: [18.216.238.107] => (item={'name': 'Nikhil3', 'key': '/home/nikhil/.ssh/nikhil3.pub', 'userstate': 'present'})
changed: [3.139.91.5] => (item={'name': 'Jagadeesh3', 'key': '/home/nikhil/.ssh/jagadeesh3.pub', 'userstate': 'present'})
changed: [18.216.238.107] => (item={'name': 'Jagadeesh3', 'key': '/home/nikhil/.ssh/jagadeesh3.pub', 'userstate': 'present'})

< PLAY RECAP >
 -----------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||

18.216.238.107             : ok=4    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
3.139.91.5                 : ok=4    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

nikhil@Nikhil:~/nikhil3$ ssh -p 22 /home/nikhil/.ssh/nikhil3 nikhil3@18.216.238.107
ssh: Could not resolve hostname /home/nikhil/.ssh/nikhil3: Name or service not known
nikhil@Nikhil:~/nikhil3$ ssh -p 22 /home/nikhil/.ssh/nikhil nikhil@18.216.238.107
ssh: Could not resolve hostname /home/nikhil/.ssh/nikhil: Name or service not known
nikhil@Nikhil:~/nikhil3$ ssh -p 22 /home/nikhil/.ssh/nikhil3 Nikhil3@18.216.238.107
ssh: Could not resolve hostname /home/nikhil/.ssh/nikhil3: Name or service not known
```

After successful execution of the playbook, a user has been added to the instances and can log in using the following command
ssh -p 22 -i /home/nikhil/.ssh/nikhil3 nikhil3@18.216.238.107.


```
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 Tue Sep 28 16:41:05 UTC 2021

  System load:  0.0               Processes:             100
  Usage of /:   16.5% of 7.69GB   Users logged in:       0
  Memory usage: 22%               IPv4 address for eth0: 172.31.31.3
  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: Tue Sep 28 16:10:48 2021 from 223.186.28.108
ubuntu@ip-172-31-31-3:~$ exit
logout
Connection to ec2-3-139-91-5.us-east-2.compute.amazonaws.com closed.
nikhil@Nikhil:~/nikhil3$
```