

Experiment No. 1.3

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Branch: **MCA - CCD**

Semester: **IV**

Subject Name: **CI/CD Pipelines**

UID: **22MCC20039**

Section/Group: **MCD-1/ Grp A**

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1. Aim/Overview of the practical:

- Install and Configure Ansible Server in AWS/Microsoft Azure/Docker and two nodes (YOUR UID_1, YOUR UID_2).
- Create a connection between Ansible Server and Nodes.

2. Code for practical:

A)

- Open AWS account and click to EC2 instance.
- Create an instance with name ansible_master and create a security key RSA, pem.
- Select Ubuntu and click on create Instance.
- When instance start, select and click on Instance State, Click on Actions > Create Similar instances.
- Select same security key for ssh and create 3 new instances.

Instances (4) Info						
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/>					Any state ▼	
<input type="checkbox"/>	Name 	Instance ID	Instance state 	Instance type 	Status check	
<input type="checkbox"/>	22MCC20039_3	i-057fe103bb6b9a8dd	 Running  	t3.micro	-	
<input type="checkbox"/>	22MCC20039_1	i-08c94702f5942c5cf	 Running  	t3.micro	-	
<input type="checkbox"/>	22MCC20039_2	i-0a888a98ccbf3186	 Running  	t3.micro	-	
<input type="checkbox"/>	ansible_master	i-0c9b5421b51bf6100	 Running  	t3.micro	-	

- Select master node and click on connect by ssh.

B)

- Use following command to install ansible

```
sudo apt update
```

```
sudo apt install ansible -y
```

- Go to .ssh and create an ansible_key with vim and paste contents of security key.pem file.

```
cd .ssh
```

```
vim ansible_key
```

- Initlize ssh key using your Private server address:

```
sudo ssh -i ~/.ssh/ansible_key ubuntu@13.53.124.96
```

- Make a directory named ansible and inside it make a file using vim hosts.

```
mkdir ansible
```

```
cd ansible
```

```
vim hosts
```

- Inside hosts add server IP addresses and If you want to install any dependencies you can do it in here.

```
[servers]
server1 ansible_host=13.53.124.96
server2 ansible_host=13.60.14.159
server3 ansible_host=51.20.190.151

[all:vars]
ansible_python_interpreter=/usr/bin/python3
```

- Provide ansible hosts list like following

```
ansible-inventory --list -y /home/ubuntu/ansible/hosts
```

- Provide permissions to .ssh and ansible_key

```
chmod 700 ~/.ssh
```

```
chmod 600 ~/.ssh/ansible_key
```

- To ping all servers use command:

```
ansible all -m ping -i /home/ubuntu/ansible/hosts --private-key=~/.ssh/ansible_key
```

```
This key is not known by any other names
The authenticity of host '51.20.190.151 (51.20.190.151)' can't be established.
ED25519 key fingerprint is SHA256:E/lMdAeIOyssTqa/XV1JnMQOTmyXkWcoheJ8ObTACNw.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? server1 | CHANGED | rc=0 >>
total      used      free      shared  buff/cache   available
Mem:      924Mi      173Mi      366Mi      0.0Ki      385Mi      596Mi
Swap:      0B           0B           0B
yes
server2 | CHANGED | rc=0 >>
total      used      free      shared  buff/cache   available
Mem:      924Mi      181Mi      414Mi      0.0Ki      329Mi      589Mi
Swap:      0B           0B           0B
yes
server3 | CHANGED | rc=0 >>
total      used      free      shared  buff/cache   available
Mem:      924Mi      180Mi      411Mi      0.0Ki      333Mi      589Mi
Swap:      0B           0B           0B
ubuntu@ip-172-31-18-171:~$ ansible all -m ping -i /home/ubuntu/ansible/hosts --private-key=~/.ssh/ansible_key
server1 | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
server3 | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
server2 | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-18-171:~$
```

- To view free space in servers, use command:

ansible all -a "free -h" -i /home/ubuntu/ansible/hosts --private-key=~/.ssh/ansible_key

***** **THE END** *****