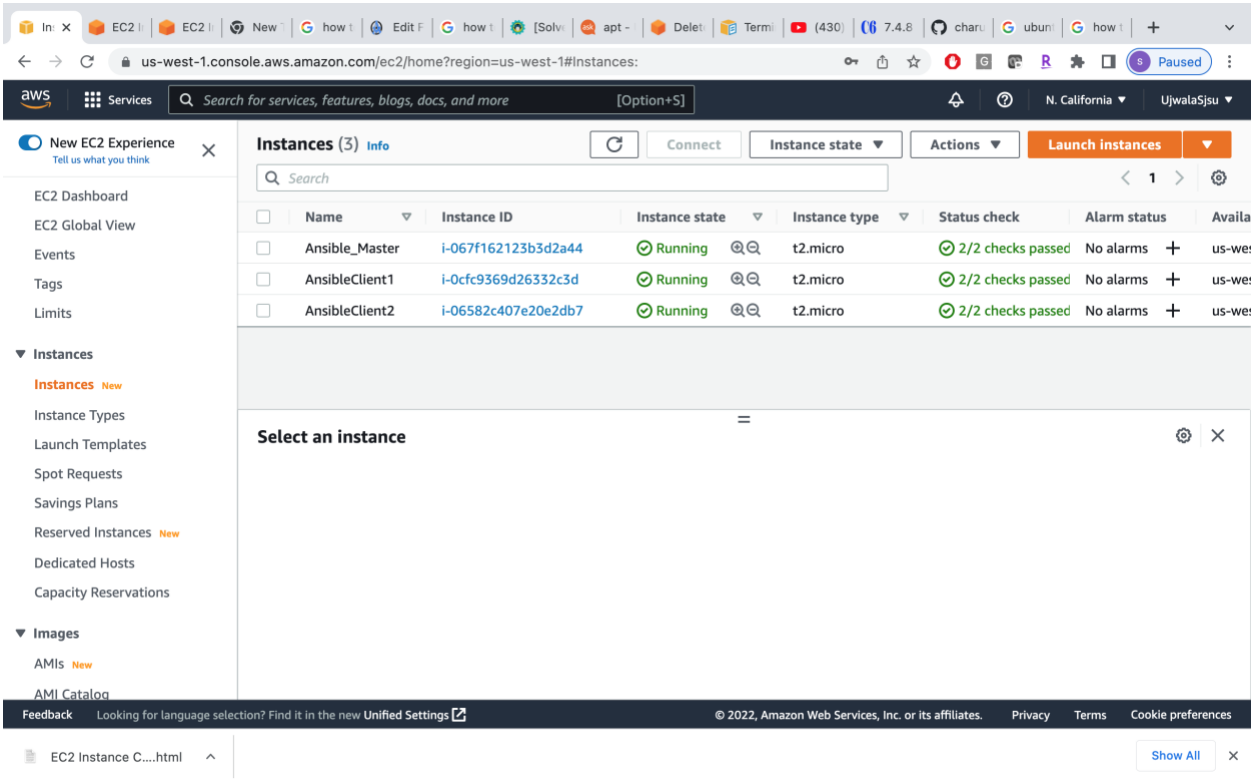
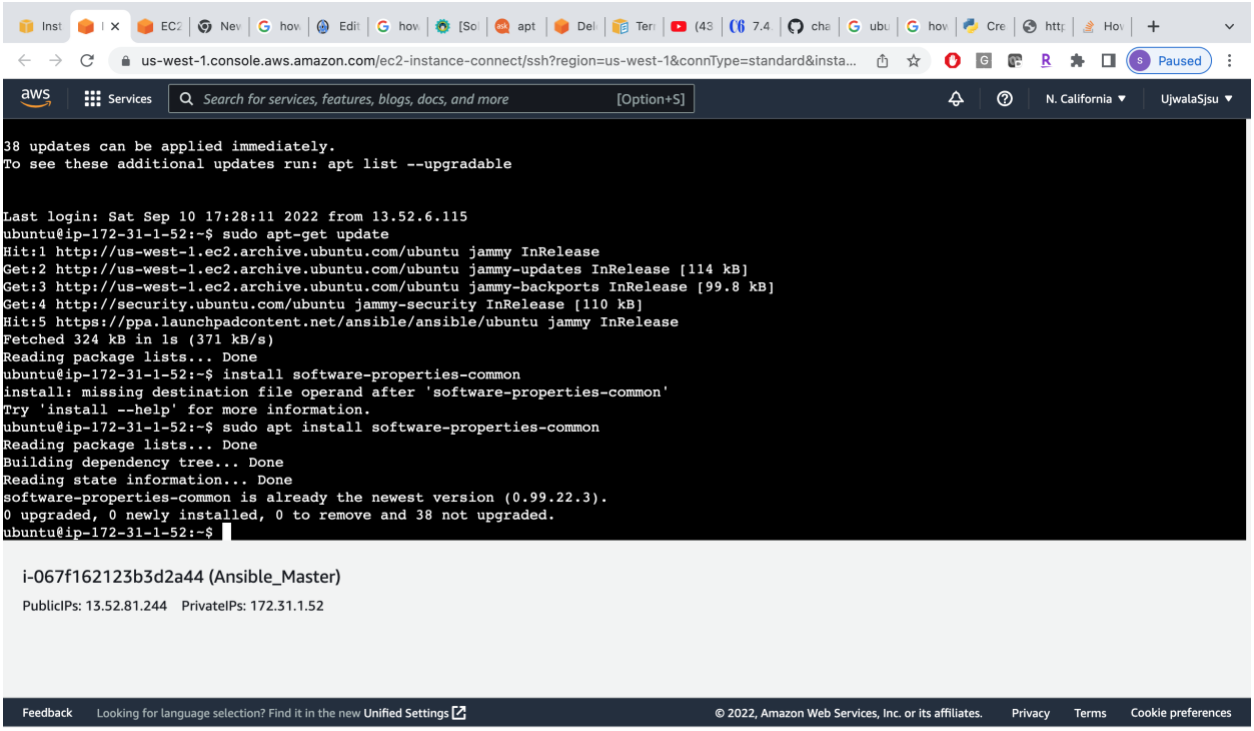
Name : UJWALA MOTE
Student Id : 016711396

Github link : https://github.com/moteujjwala19/Ansible-CMPE-272

1. Created 3 EC2 instances in AWS named as Ansible_Master which is ansible server and AnsibleClient1 and AnsibleClient2 are hosts as shown below.



2. Updated all machines created in above step by using update command.


us-west-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-west-1&connType=standard&insta...
Paused
aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
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38 updates can be applied immediately.
To see these additional updates run: apt list --upgradable
Last login: Sat Sep 10 17:28:11 2022 from 13.52.6.115
ubuntu@ip-172-31-1-52:~$ sudo apt-get update
Hit:1 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]
Get:3 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Hit:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy InRelease
Fetched 324 kB in 1s (371 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-1-52:~$ install software-properties-common
install: missing destination file operand after 'software-properties-common'
Try 'install --help' for more information.
ubuntu@ip-172-31-1-52:~$ sudo apt install software-properties-common
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.22.3).
0 upgraded, 0 newly installed, 0 to remove and 38 not upgraded.
ubuntu@ip-172-31-1-52:~$
i-067f162123b3d2a44 (Ansible_Master)
PublicIPs: 13.52.81.244 PrivateIPs: 172.31.1.52
Feedback
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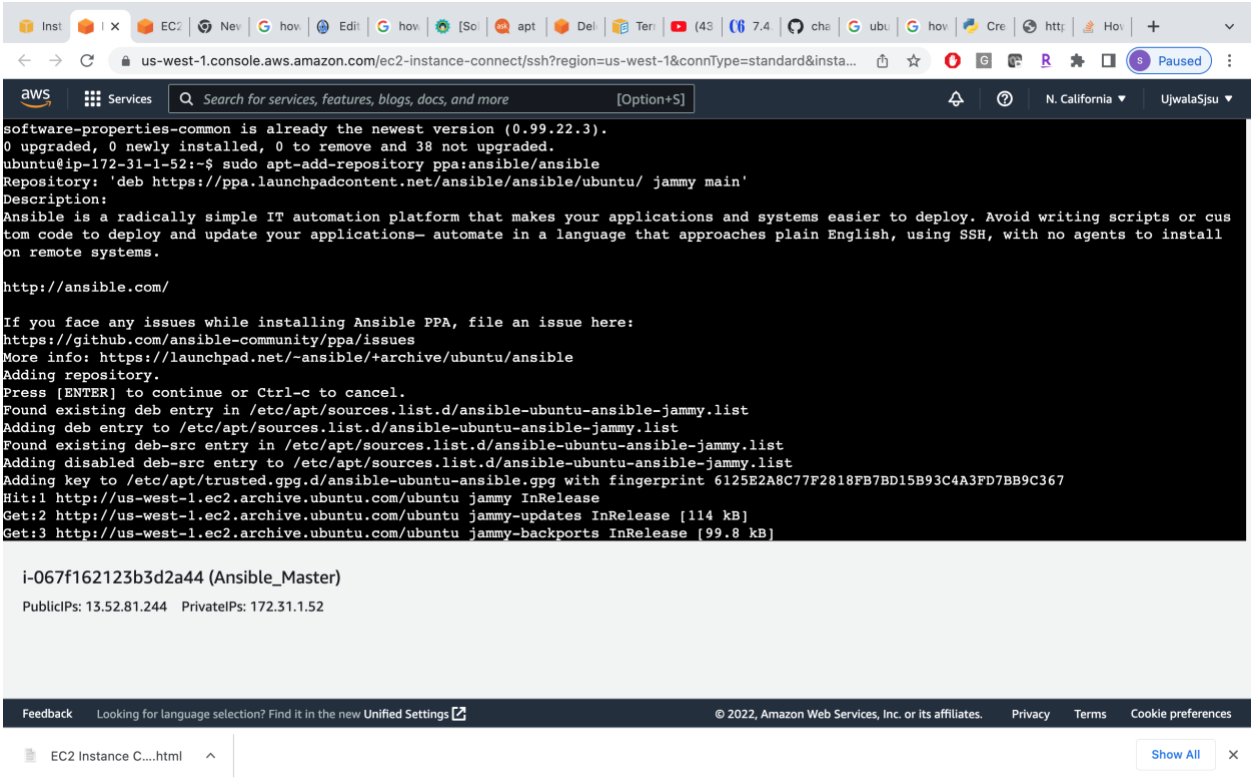
EC2 Instance C....html
Show All


us-west-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-west-1&connType=standard&insta...
Paused
aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
N. California
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software-properties-common is already the newest version (0.99.22.3).
0 upgraded, 0 newly installed, 0 to remove and 38 not upgraded.
ubuntu@ip-172-31-1-52:~$ sudo apt-add-repository ppa:ansible/ansible
Repository: 'deb https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/ jammy main'
Description:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or cus
tom code to deploy and update your applications— automate in a language that approaches plain English, using SSH, with no agents to install
on remote systems.
http://ansible.com/
If you face any issues while installing Ansible PPA, file an issue here:
https://github.com/ansible-community/ppa/issues
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Found existing deb entry in /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Adding deb entry to /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Found existing deb-src entry in /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Adding disabled deb-src entry to /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Adding key to /etc/apt/trusted.gpg.d/ansible-ubuntu-ansible.gpg with fingerprint 6125E2A8C77F2818FB7BD15B93C4A3FD7BB9C367
Hit:1 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]
Get:3 http://us-west-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
i-067f162123b3d2a44 (Ansible_Master)
PublicIPs: 13.52.81.244 PrivateIPs: 172.31.1.52
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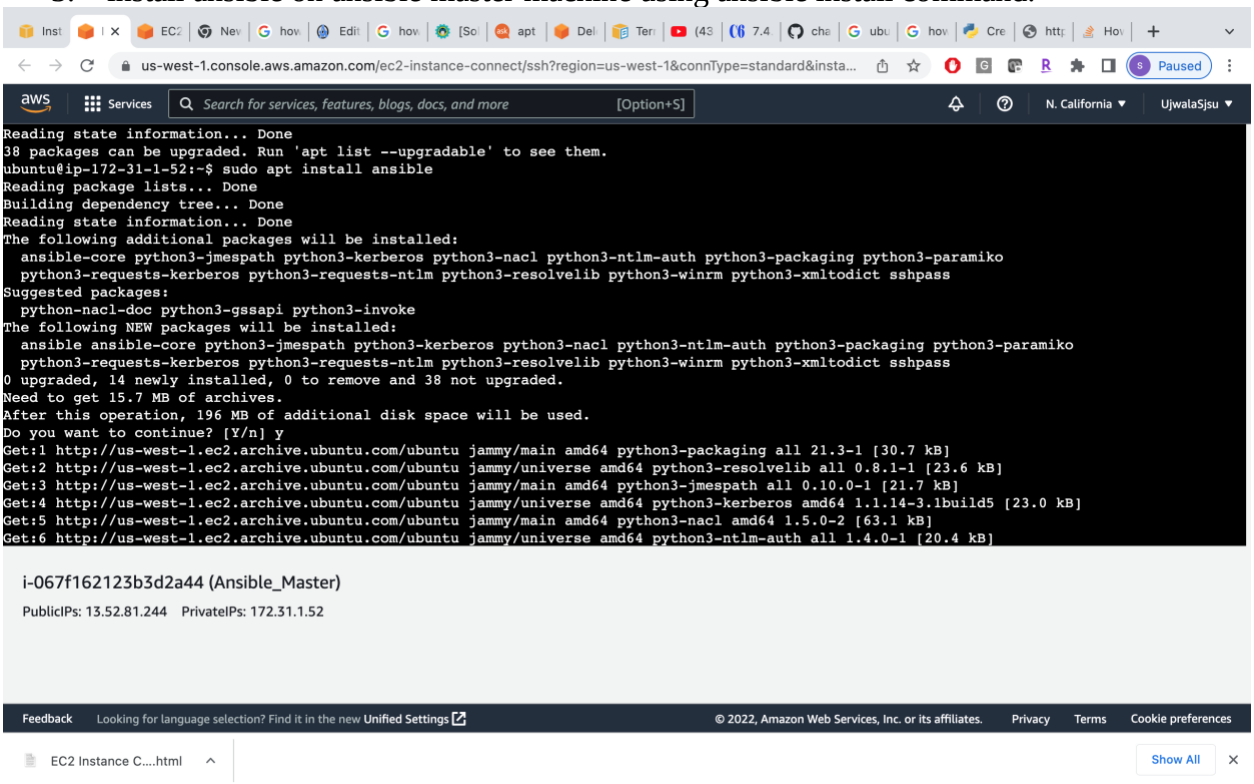
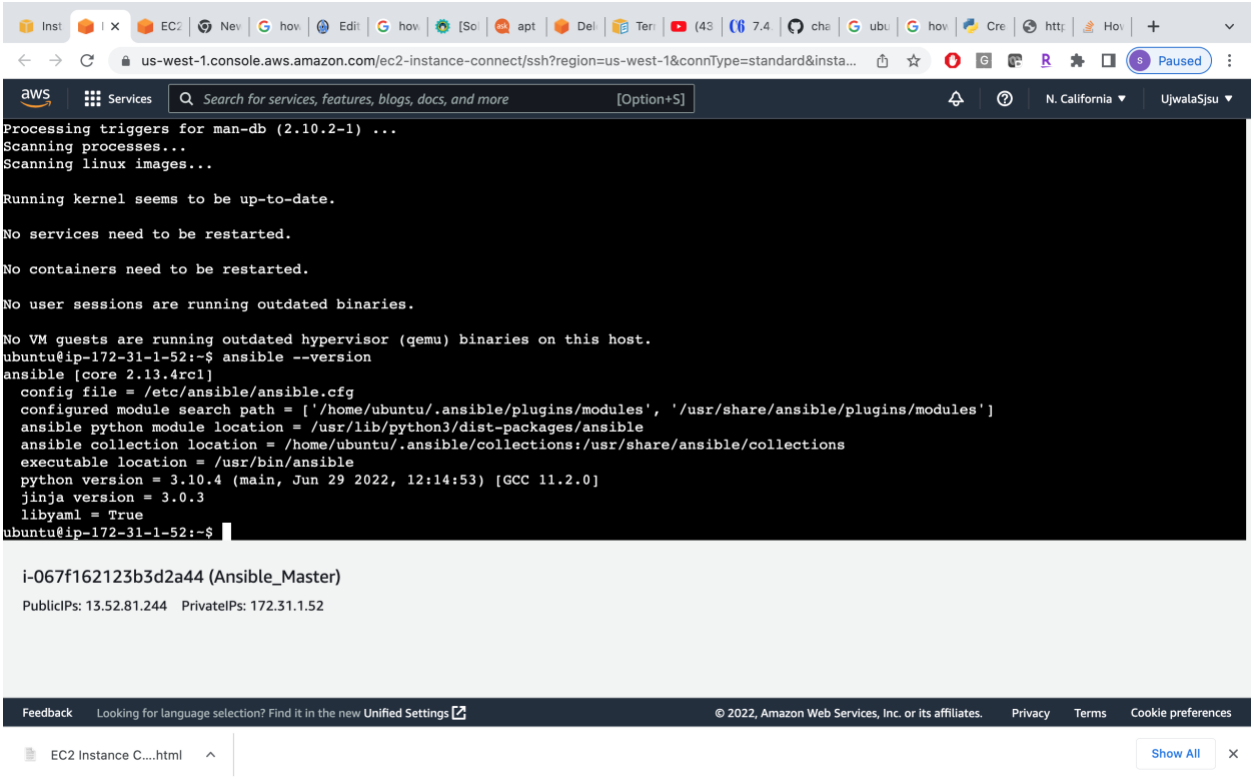
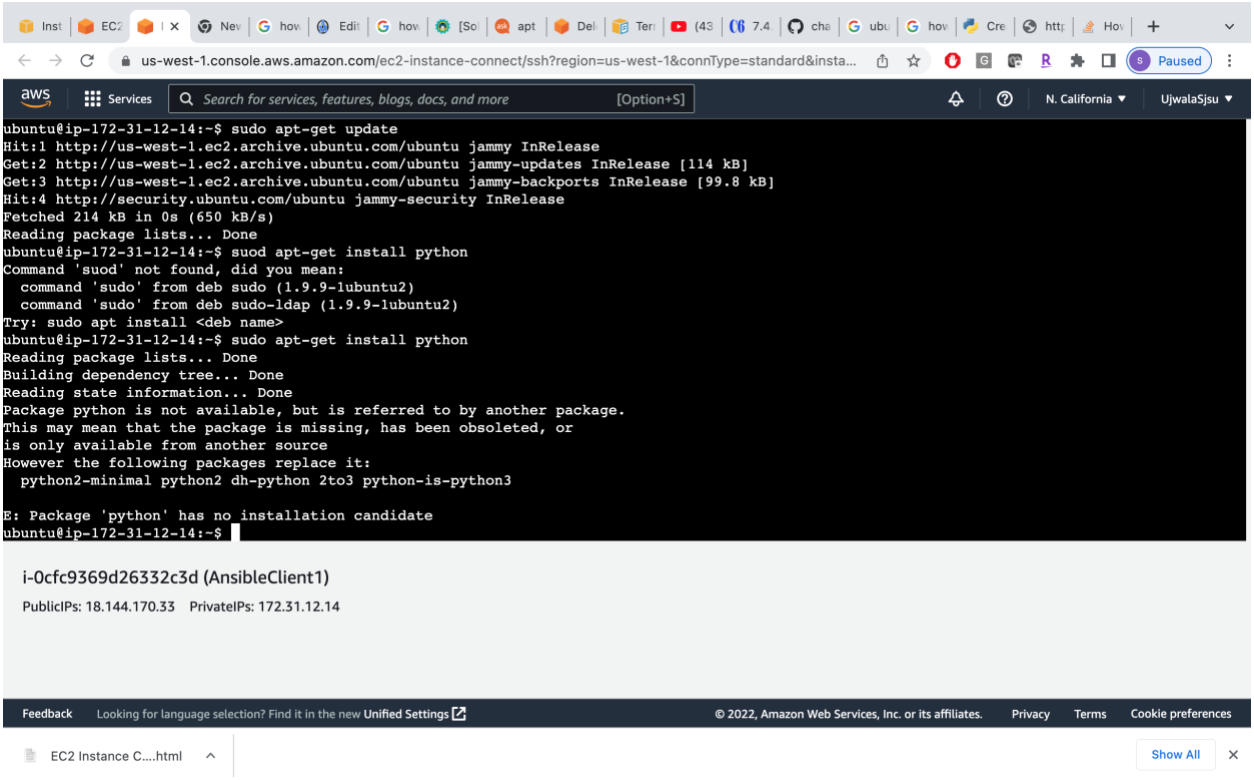
3. install ansible on ansible master machine using ansible install command.



4. Verified if ansible installation is successful using command : ansible --version

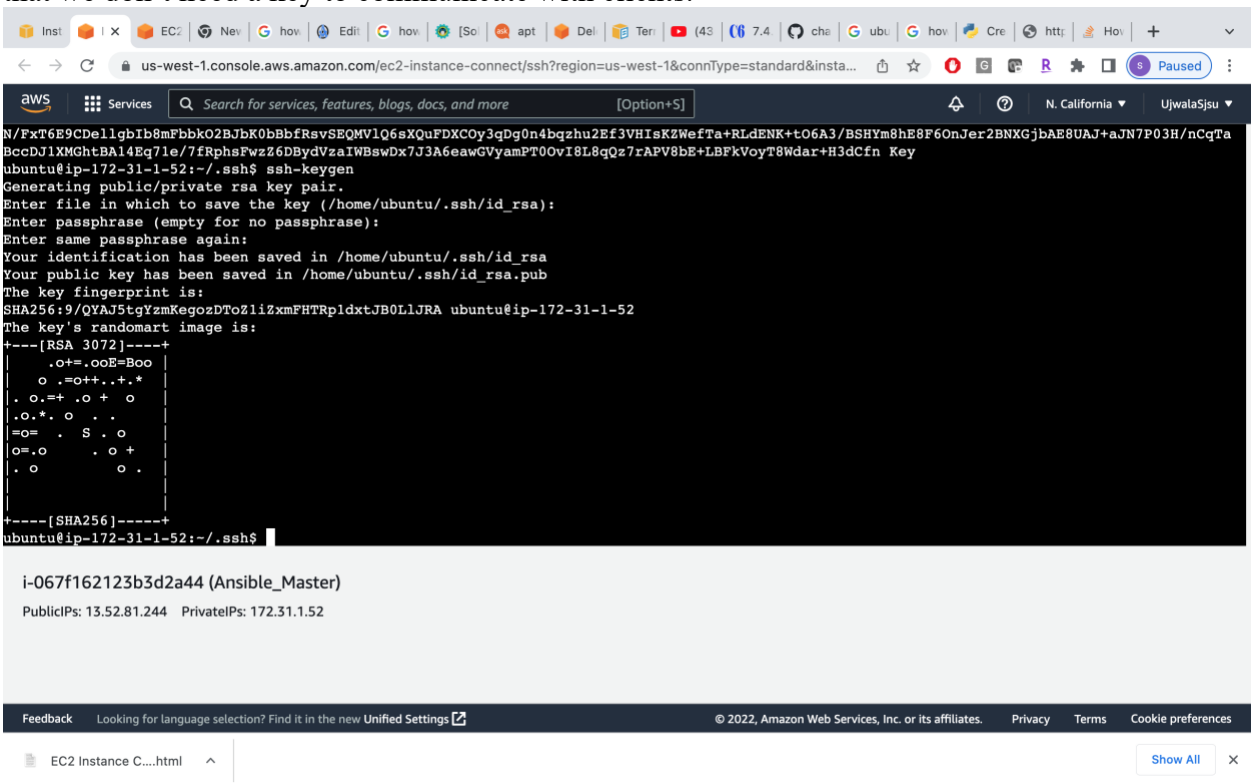


5. Installed python on both client VMs as python will be used for server deployment.

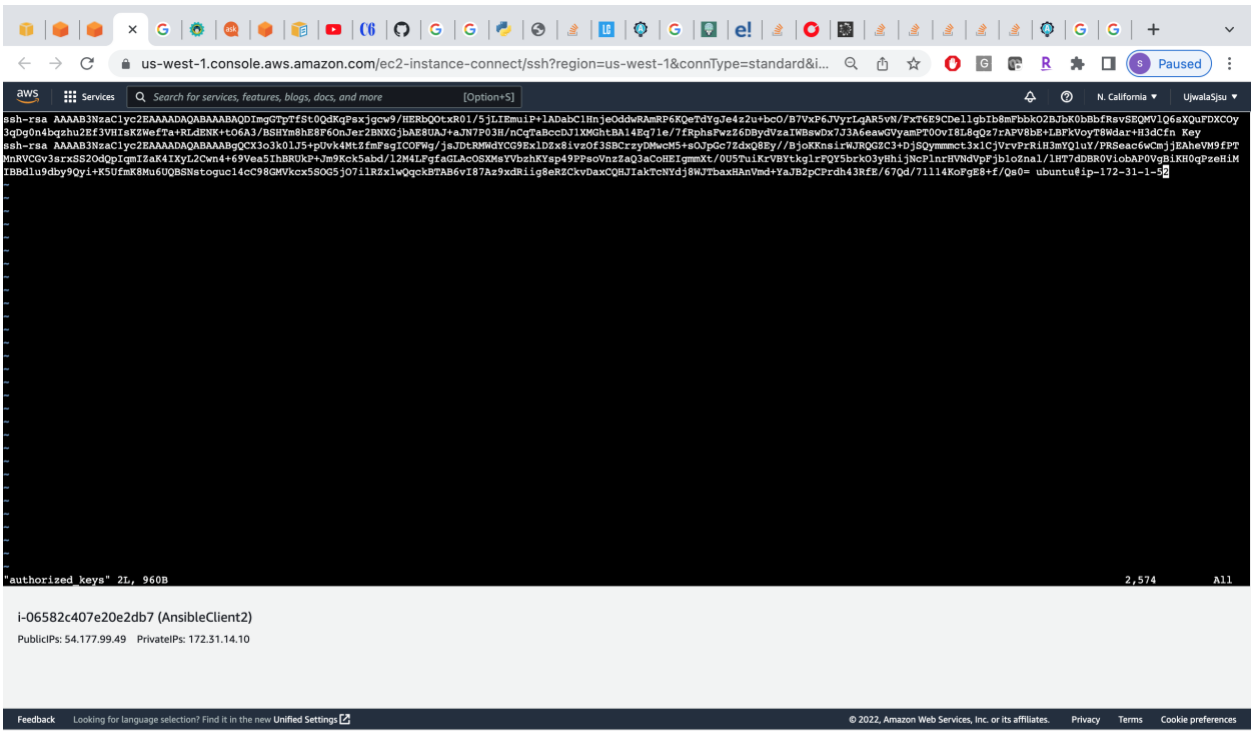


6. Next step is configuring SSH to establish a connection between clients and master VM

First, we need to generate a key on master as shown below which we will put in both client so that we don't need a key to communicate with clients.



7. Added above-generated key on both client VM in authorized_key file which is located in .ssh folder using vi authorized_key command as shown below. And verified if key is saved using cat command.


us-west-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-west-1&connType=standard&i...
Paused
aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
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ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDImgGTpTfSt0QdKqPaxjgcw9/HERbQOtxR0l/5jLIEmuiP+lADabC1HnjeOddwRAmRP6KQeTdYgJe4z2u+bcO/B7VxP6JVyrLgAR5vN/FxT6E9CDellgbIb8mFbbkO2BJbK0bBbfRsvSEQMVlQ6sXQuFDXCOy
3qDg0n4bqzhu2Ef3VHIsKZWefTa+RLdENK+tO6A3/BSHYm8hE8F6OnJer2BNXGjbAE8UAJ+aJN7P03H/nCqTa
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCX3o3k0lJ5+pUvk4MtZfmFsgICOFWg/jsJDtRMWdYCG9ExlDZx8ivzOf3SBCrzyDMwcM5+sOJpGc7ZdxQ8Ey//BjoKKnsirWJRQGZC3+DjSQymmmct3xlCjVrvPrRiH3mYQluY/PRSeac6wCmjjEAheVM9fPT
MnRVCGv3srxSS2OdQpIqmIZaK4IXyL2Cwn4+69Vea5IhBRUkP+Jm9Kck5abd/l2M4LFgfaGLAcOSXMsYVbzhKYsp49PPsoVnzZaQ3aCoHEIgmmXt/0U5TuiKrVBYtkglrFQY5brkO3yHhijNcPlnrHVNdVpFjbloZnal/lHT7dDBR0ViobAP0VgBiKH0qPzeHiM
IBBdlu9dby9Qyi+K5UfmK8Mu6UQBSNstoguc14cC98GMVkcx5SOG5jO7ilRZxlwQqckBTAB6vI87Az9xdRiig8eRZCkvDaxCQHJIakTcNYdj8WJTbaxHAnVmd+YaJB2pCPrdh43RfE/67Qd/71114KoFgE8+f/Qs0= ubuntu@ip-172-31-1-52
"authorized_keys" 2L, 960B
2,574
All
i-06582c407e20e2db7 (AnsibleClient2)
PublicIPs: 54.177.99.49 PrivateIPs: 172.31.14.10
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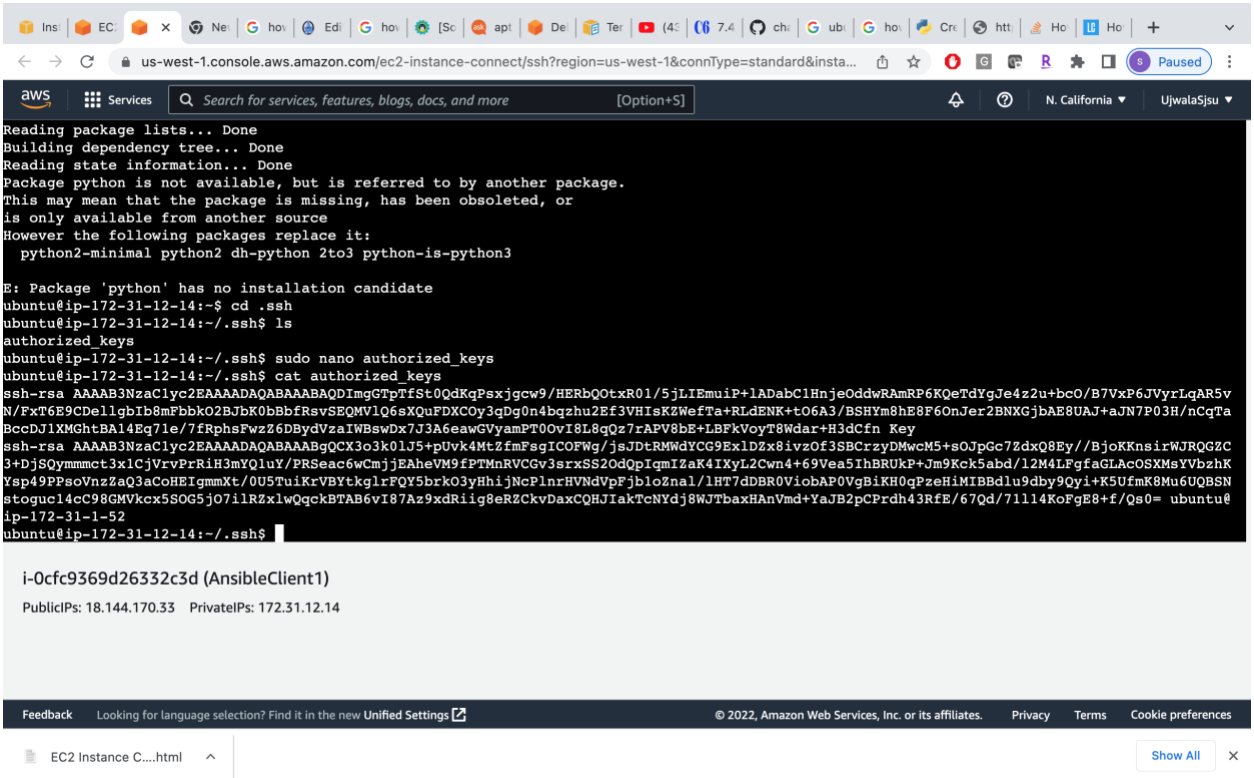
us-west-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-west-1&connType=standard&insta...
Paused
aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
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Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package python is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source
However the following packages replace it:
python2-minimal python2 dh-python 2to3 python-is-python3
E: Package 'python' has no installation candidate
ubuntu@ip-172-31-12-14:~$ cd .ssh
ubuntu@ip-172-31-12-14:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-12-14:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-12-14:~/.ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDImgGTpTfSt0QdKqPsxjgcw9/HERbQOtxR01/5jLIEmuiP+lADabC1HnjeOddwRAmRP6KQeTdYgJe4z2u+bcO/B7VxP6JVyrLqAR5v
N/FxT6E9CDellgbIb8mFbbkO2BJbK0bBbfRsvSEQMVlQ6sXQuFDXCOy3qDg0n4bqzhu2Ef3VHIsKZWefTa+RLdENK+tO6A3/BSHYm8hE8F6OnJer2BNXGjbAE8UAJ+aJN7P03H/nCqTa
BccDJ1XMGhtBA14Eq71e/7fRphsFwzZ6DBydVzaIWBswDx7J3A6eawGVyamPT0OvI8L8qQz7rAPV8bE+LBFkVoyT8Wdar+H3dCfn Key
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQCX3o3k0lJ5+pUvk4MtZfmFsgICOFWg/jsJDtRMWdYCG9ExlDZx8ivzOf3SBCrzyDMwcM5+sOJpGc7ZdxQ8Ey//BjoKKnsirWJRQGZC
3+DjSQymmmct3xlCjVrvPrRiH3mYQluY/PRSeac6wCmjjEAheVM9fPTMnRVCGv3srxSS2OdQpIqmIZaK4IXyL2Cwn4+69Vea5IhBRUkP+Jm9Kck5abd/l2M4LFgfaGLAcOSXMsYVbzhK
Ysp49PPsoVnzZaQ3aCoHEIgmmXt/0U5TuiKrVBYtkglrFQY5brkO3yHhijNcPlnrHVNdVpFjbloZnal/lHT7dDBR0ViobAP0VgBiKH0qPzeHiMIBBdlu9dby9Qyi+K5UfmK8Mu6UQBSN
stoguc14cC98GMVkcx5SOG5jO7ilRZxlwQqckBTAB6vI87Az9xdRiig8eRZCkvDaxCQHJIakTcNYdj8WJTbaxHAnVmd+YaJB2pCPrdh43RfE/67Qd/71114KoFgE8+f/Qs0= ubuntu@
ip-172-31-1-52
ubuntu@ip-172-31-12-14:~/.ssh$
i-0cfc9369d26332c3d (AnsibleClient1)
PublicIPs: 18.144.170.33 PrivateIPs: 172.31.12.14
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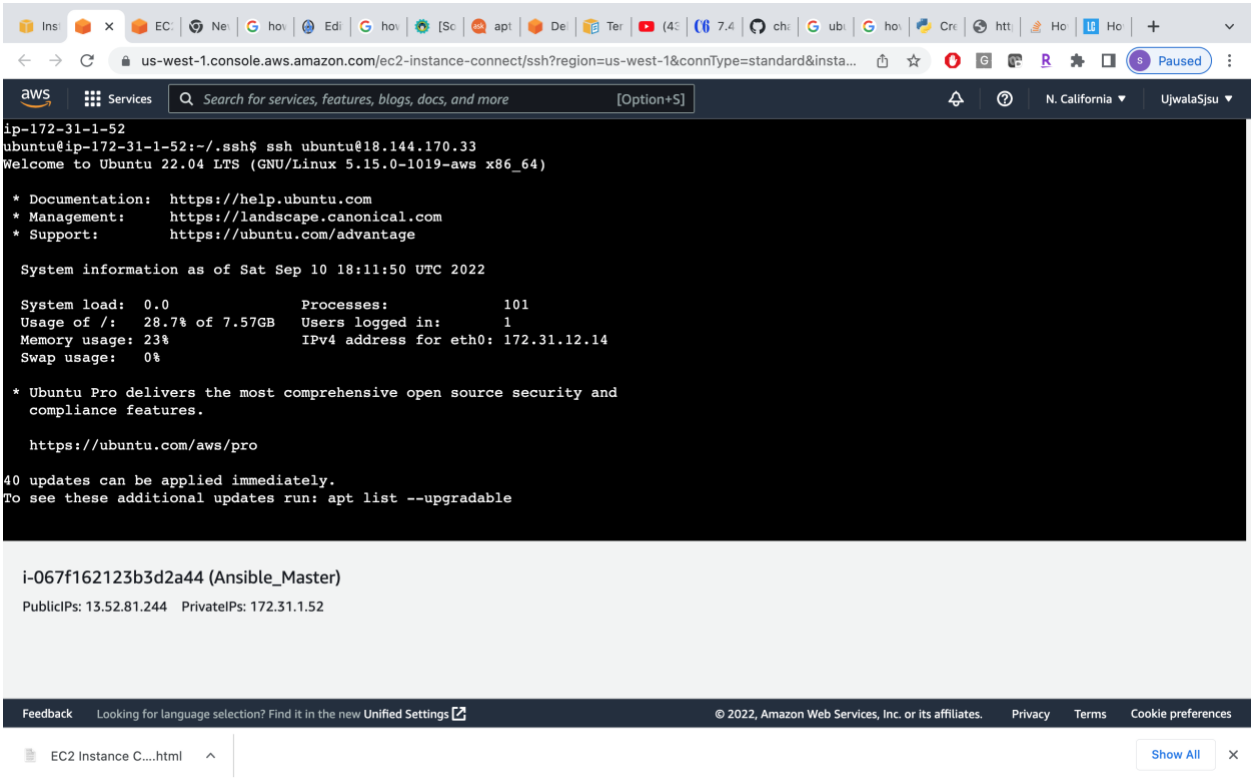
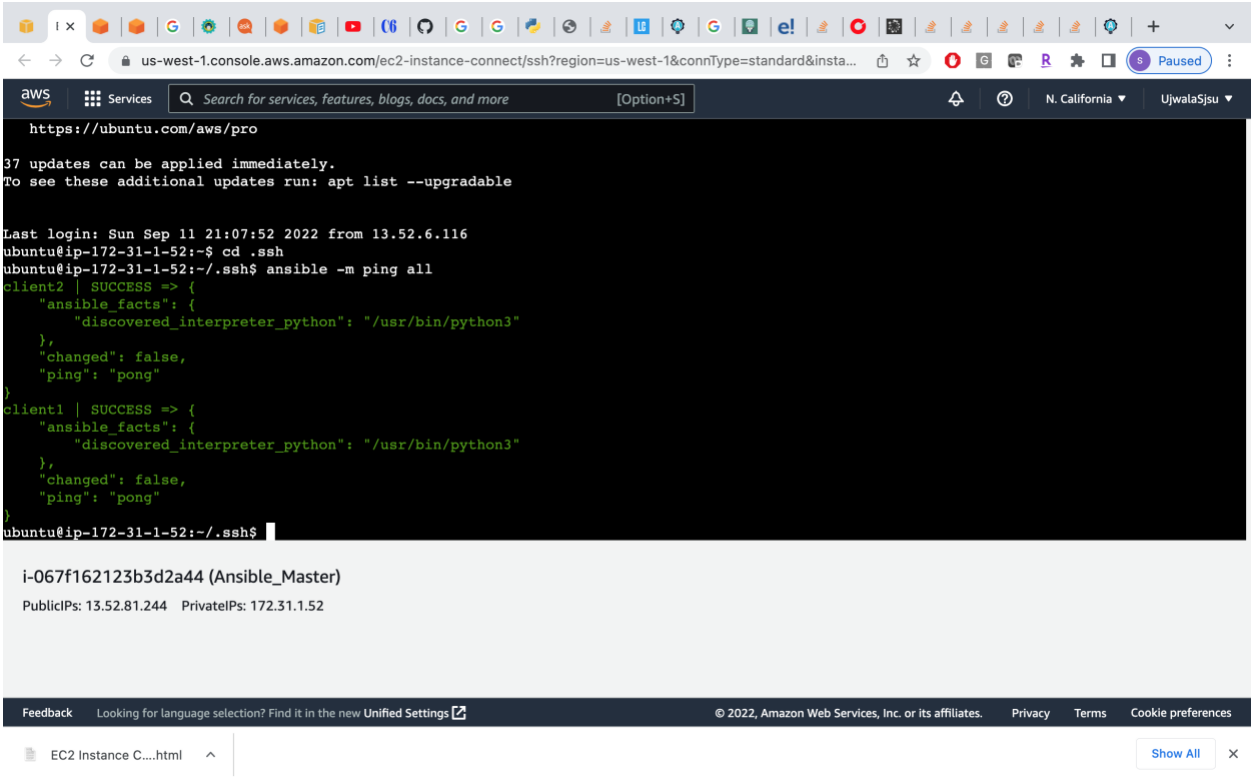
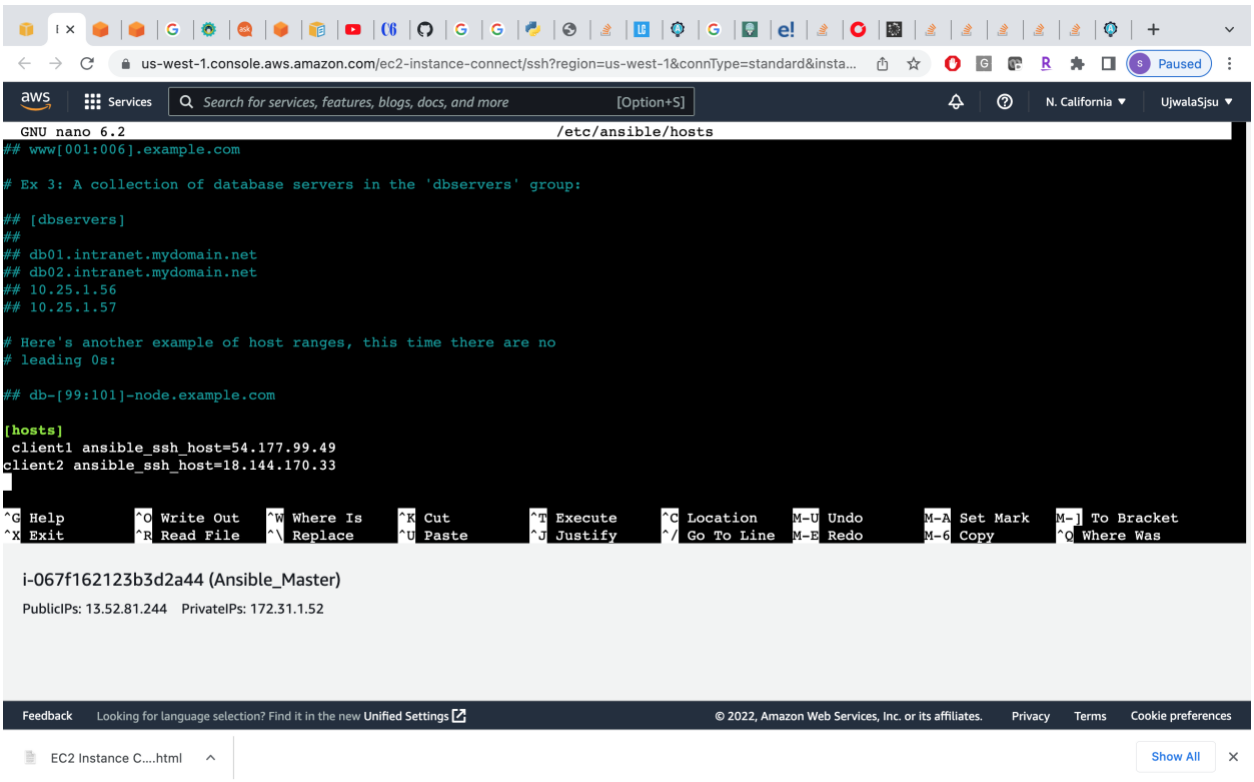
8. Verified if SSH successful as shown below.



9. Also, check the connection by using ping command. Success response from both clients as shown below after running the ping command.

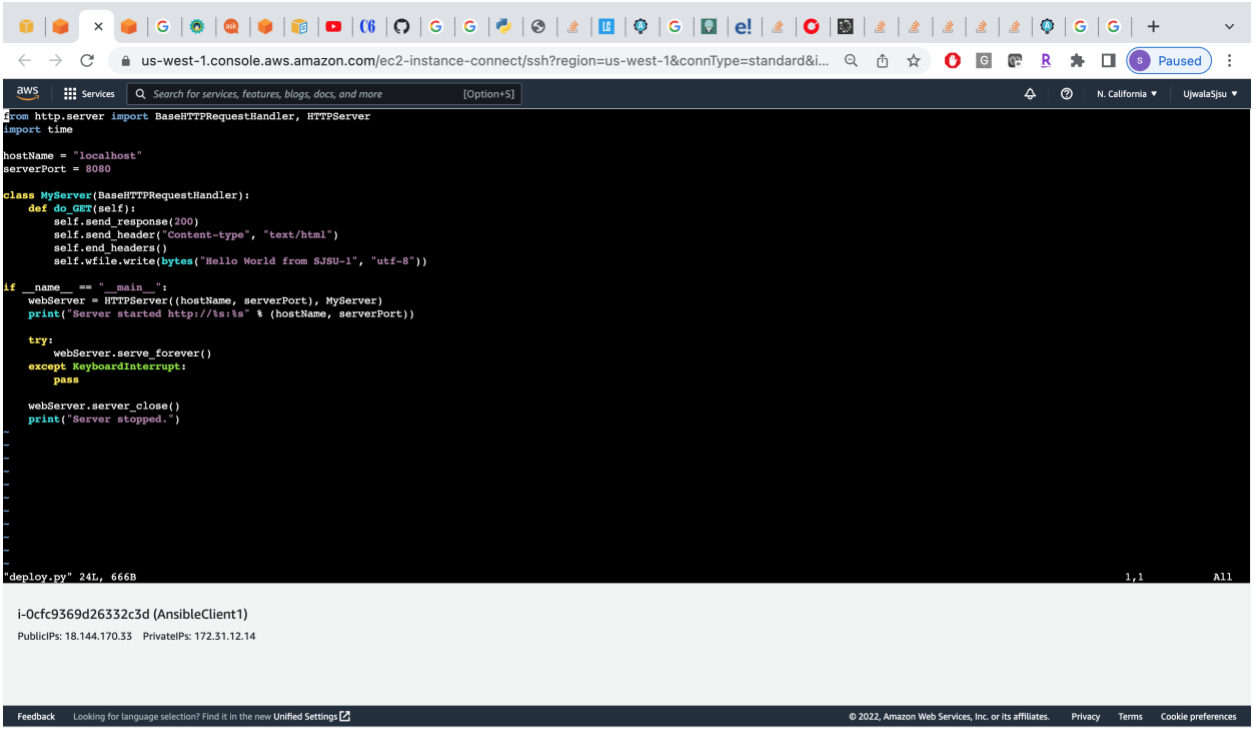


10. To set up an ansible host added host details in server's host file located under /etc/ansible repo.

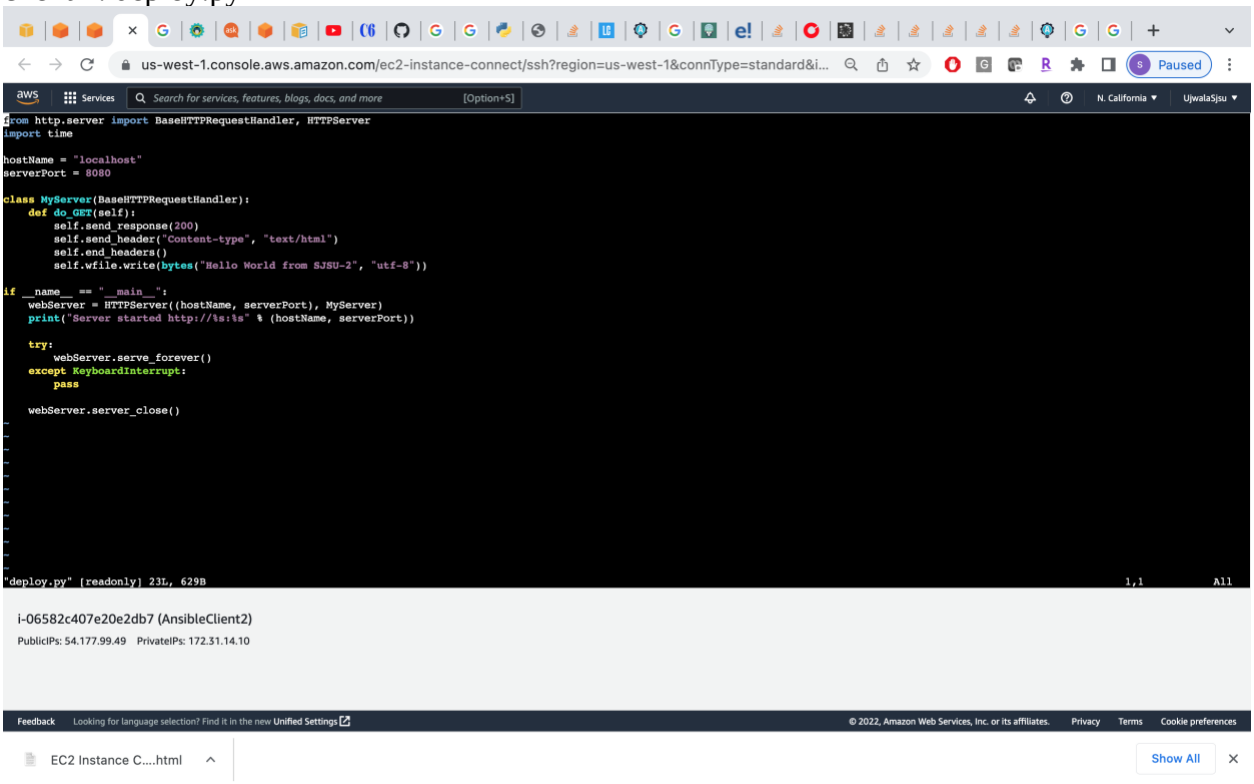


11. created below python file on both webservers to display msg on screen when it gets a request from ansible server via playbook.

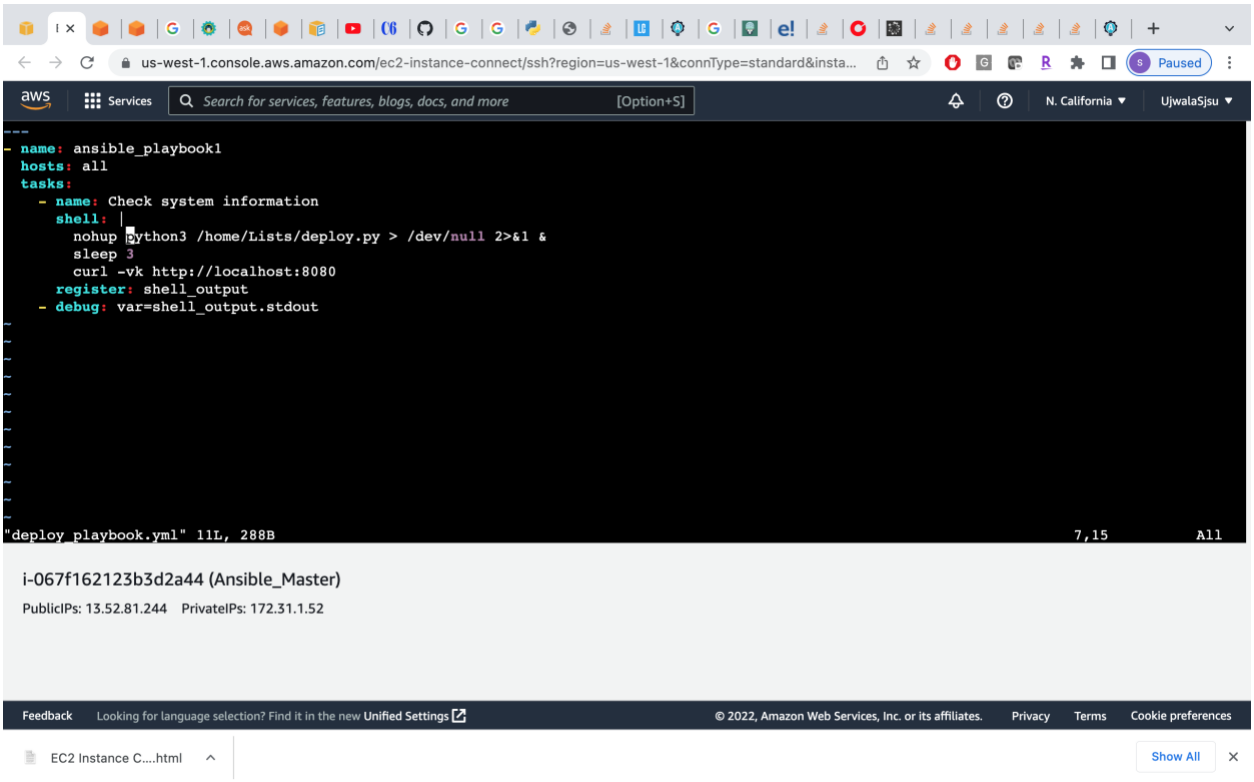
Client1:deploy.py



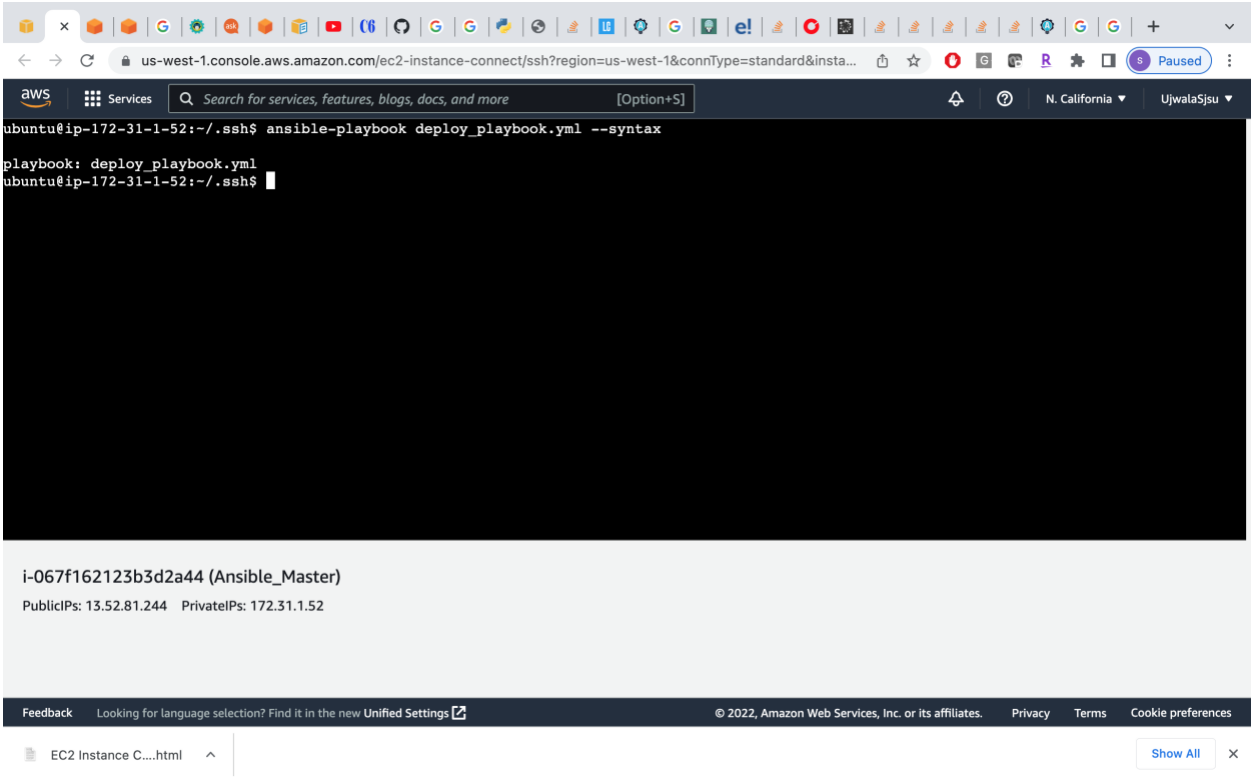
client2 : deploy.py



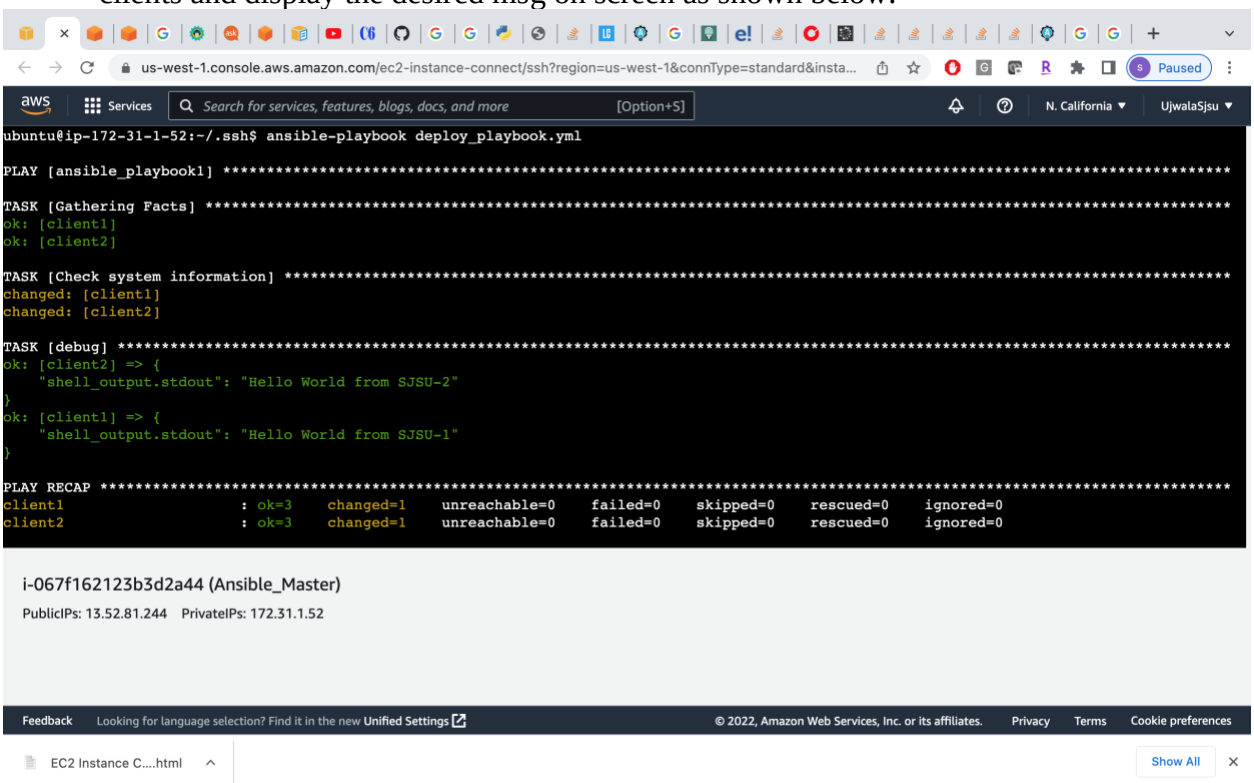
12. Created following deploy_playbook.yml which has a set of commands to run the python file on both the clients. As hosts value is ‘all’ in yml file it will include all the hosts added in ansible host config file which was done in earlier step.



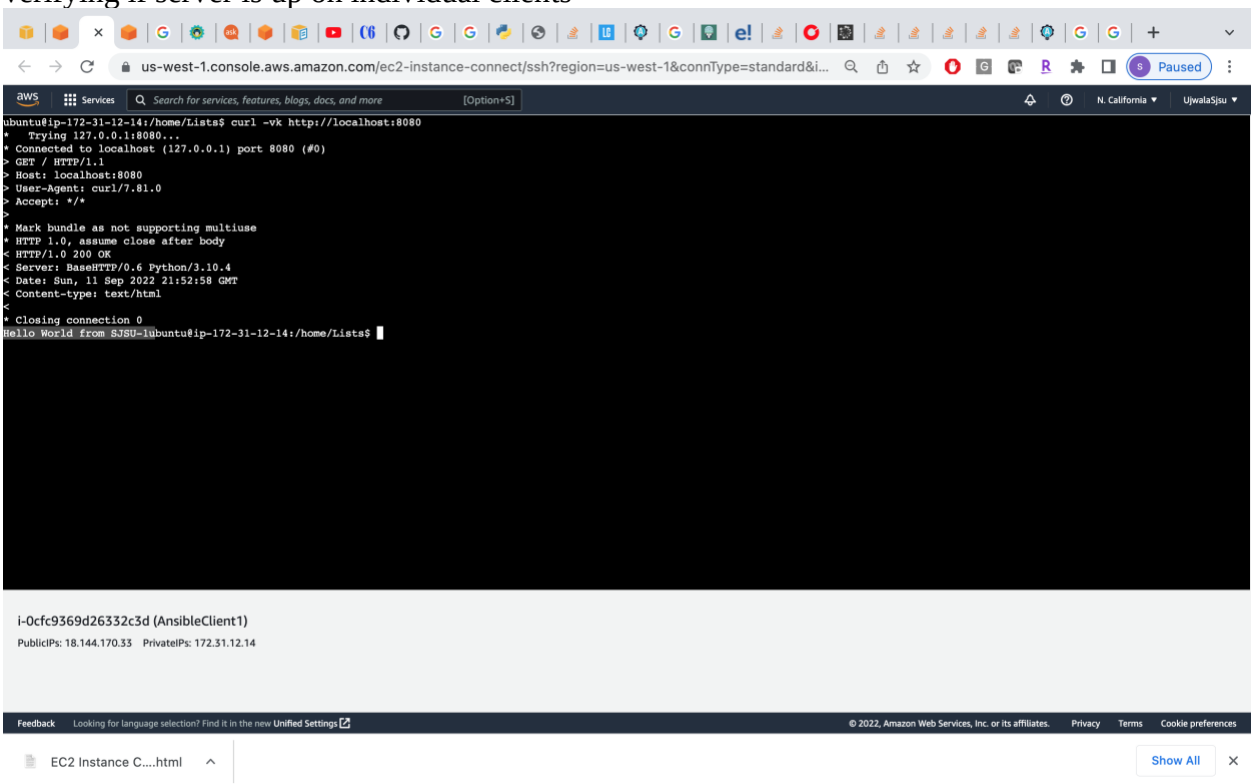
13. check if syntax is correct by executing below command. If nothing comes on screen but the name that means there are no syntactical issues in file.

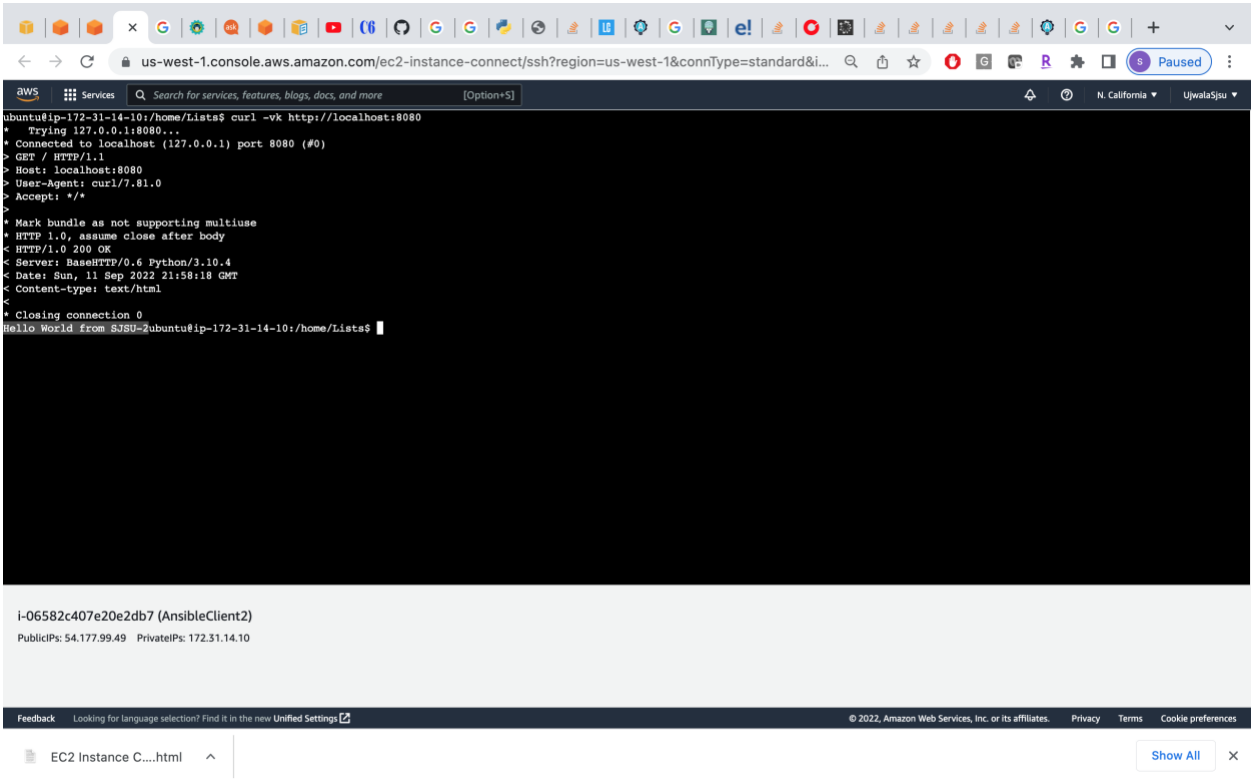


14. Next step is to execute deploy_playbook.yml which will deploy webserver on both clients and display the desired msg on screen as shown below.

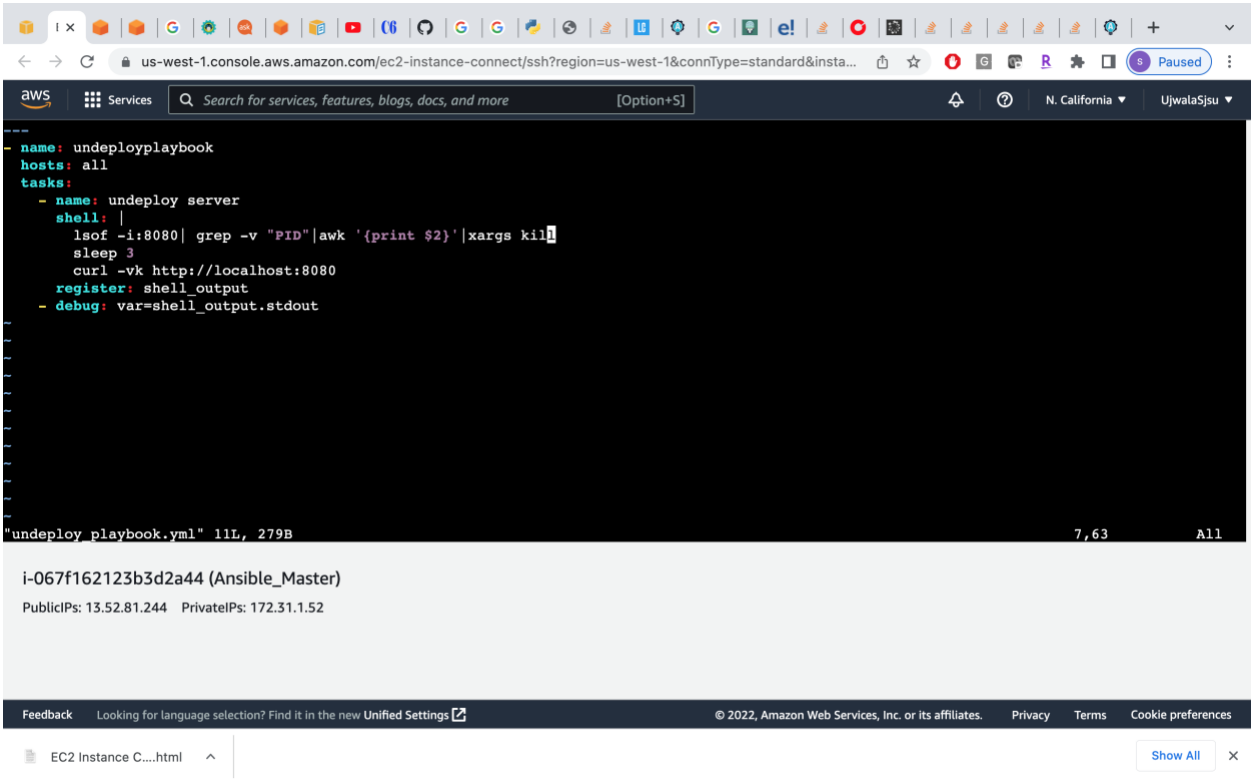


verifying if server is up on individual clients

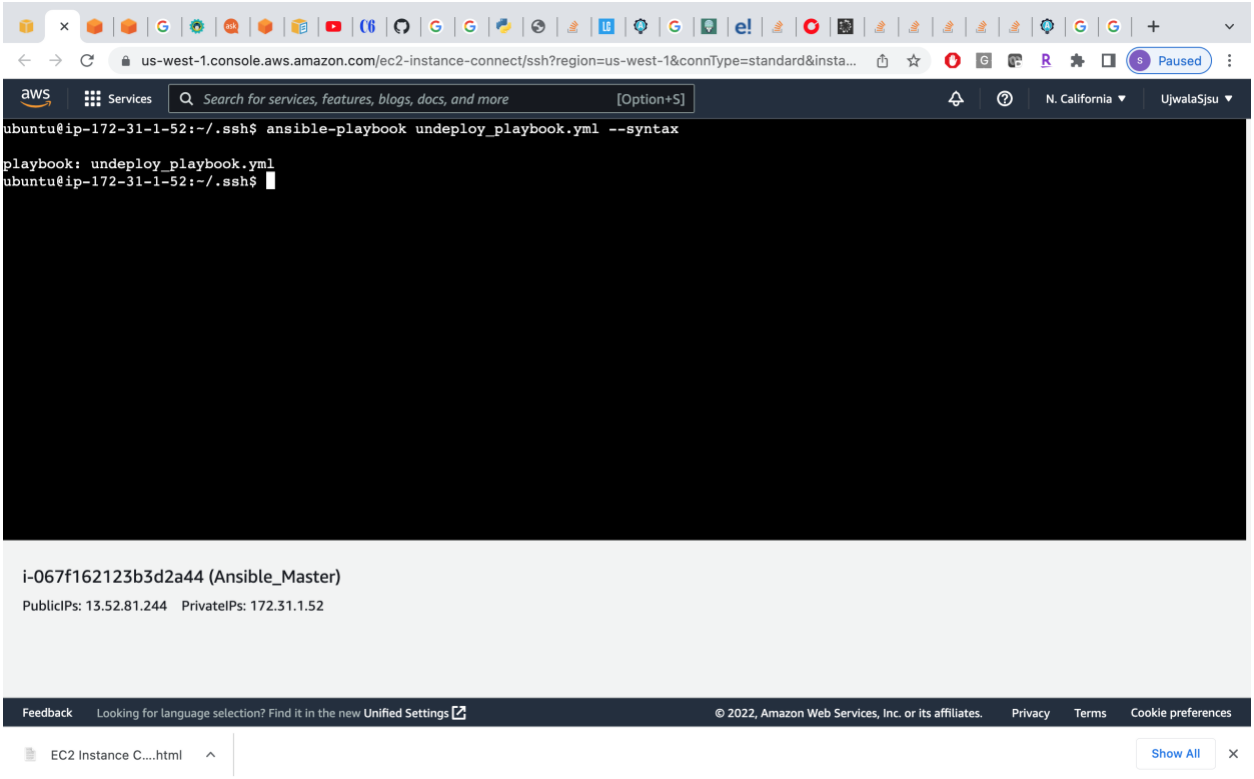




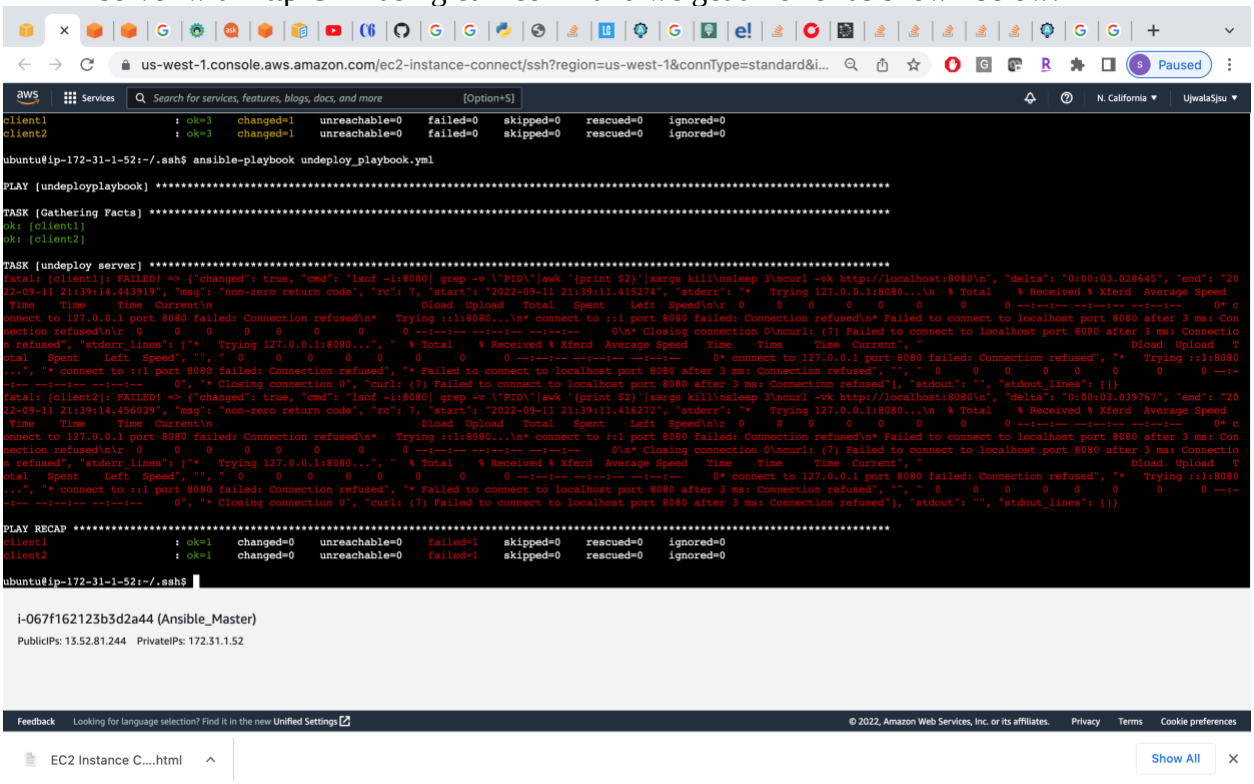
15. created undeploy_playbook.yml with commands to undeploy server as shown below



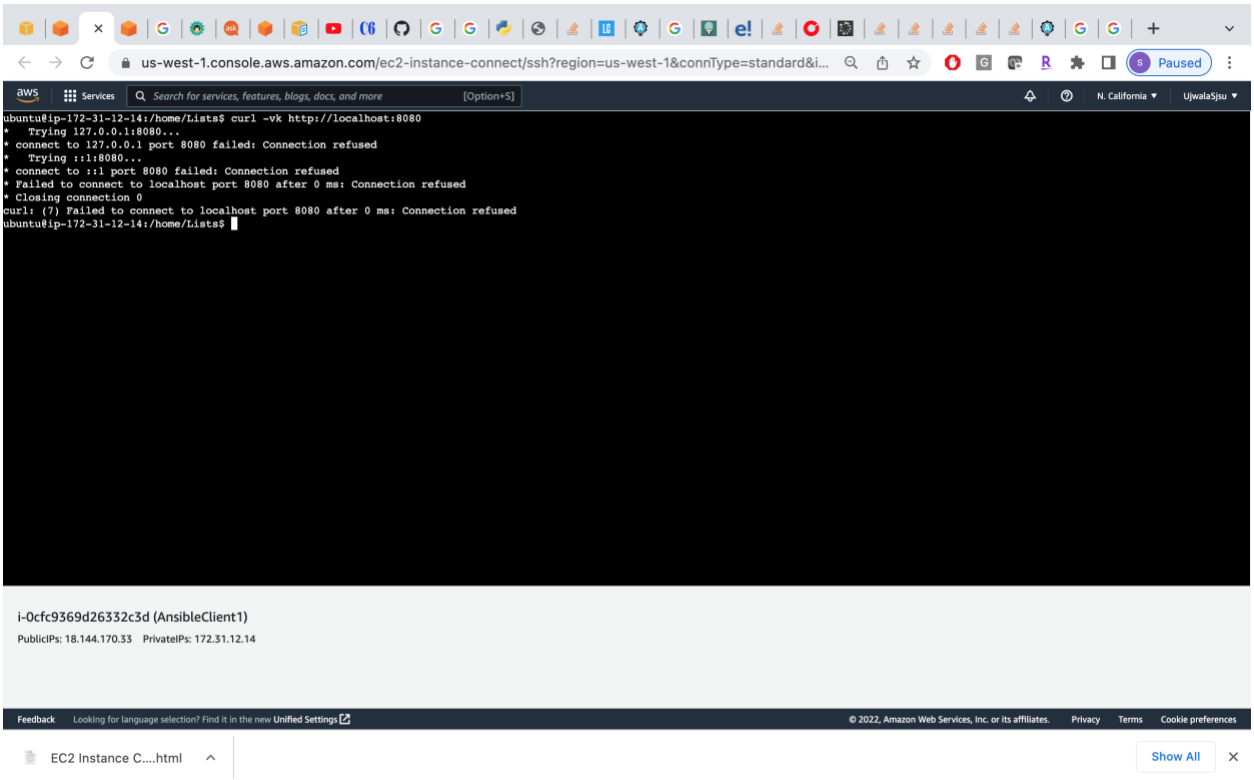
check syntax of undeploy_playbook.yml file using ansible syntax command

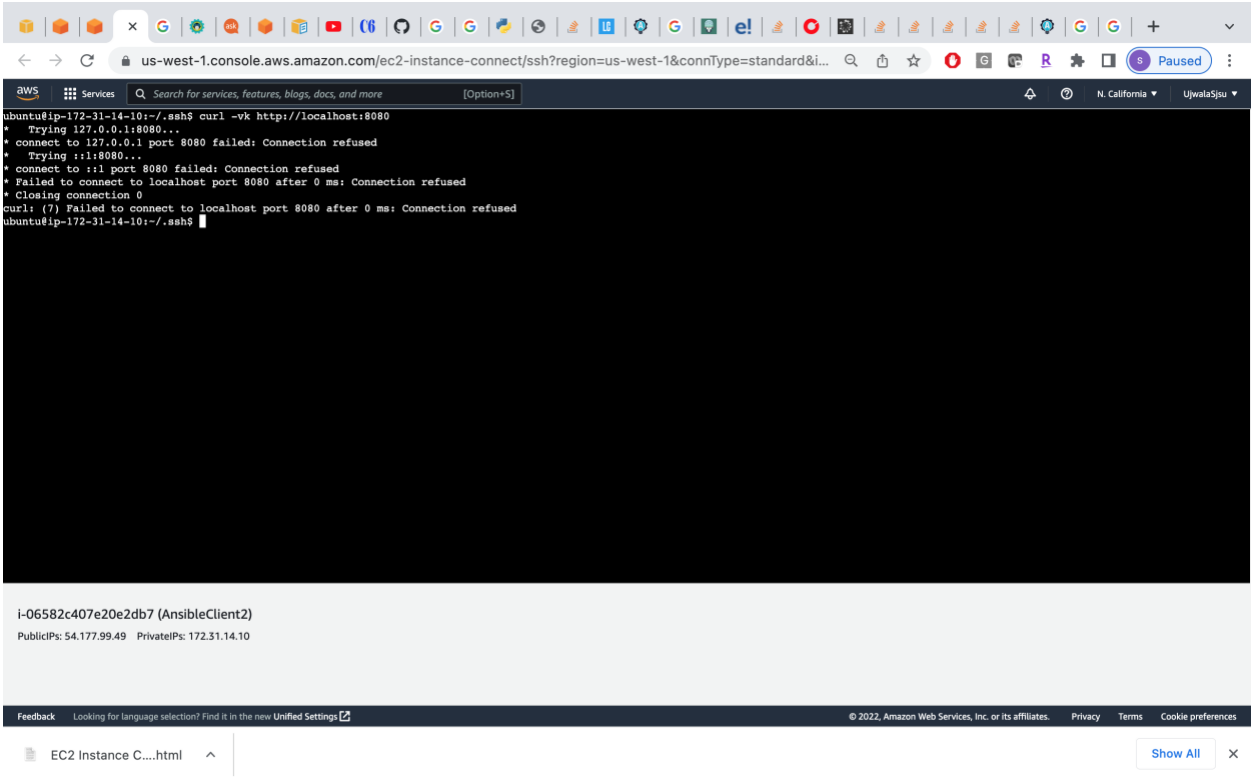


16. Once we run undeploy_playbook.yml it will kill the webserver and when we try to reach server with http GET using curl command we get an error as shown below.



screenshots from client machines showing connection refused after undeployment playbook execution




us-west-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-west-1&connType=standard&i...
Paused
aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
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UjwalaSjsu
ubuntu@ip-172-31-14-10:~/.ssh$ curl -vk http://localhost:8080
*   Trying 127.0.0.1:8080...
* connect to 127.0.0.1 port 8080 failed: Connection refused
*   Trying ::1:8080...
* connect to ::1 port 8080 failed: Connection refused
* Failed to connect to localhost port 8080 after 0 ms: Connection refused
* Closing connection 0
curl: (7) Failed to connect to localhost port 8080 after 0 ms: Connection refused
ubuntu@ip-172-31-14-10:~/.ssh$
i-06582c407e20e2db7 (AnsibleClient2)
PublicIPs: 54.177.99.49 PrivateIPs: 172.31.14.10
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