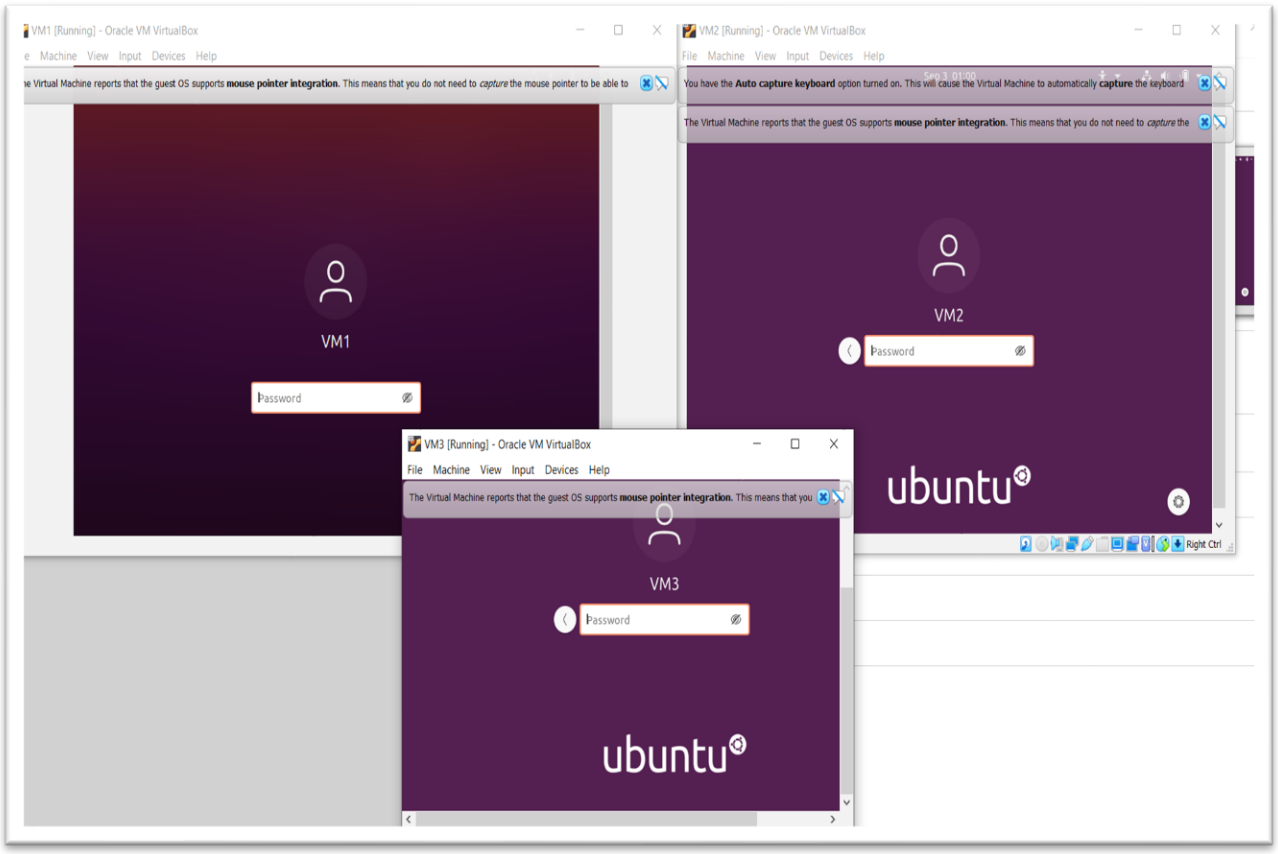
Assignment 01 – Ansible

- Deploy three (3) Virtual Machines
- Configure Ansible server on ***VM 1*** to deploy a webserver *to* ***VM2*** and ***VM3*** on port 8080 that displays the message: "Hello World from SJSU"
- Include in the Ansible playbook, plays to **deploy** and **un-deploy** all the webserver resources
- Due 9/12 (Sunday) at 11:59PM
- Submit a Word document via Canvas, with screenshots showing your work, and all ansible code/scripts via GitHub.

I. Deploying three (3) Virtual Machines



Steps for creating VMs are listed here – Deploy 3 VMs.docx

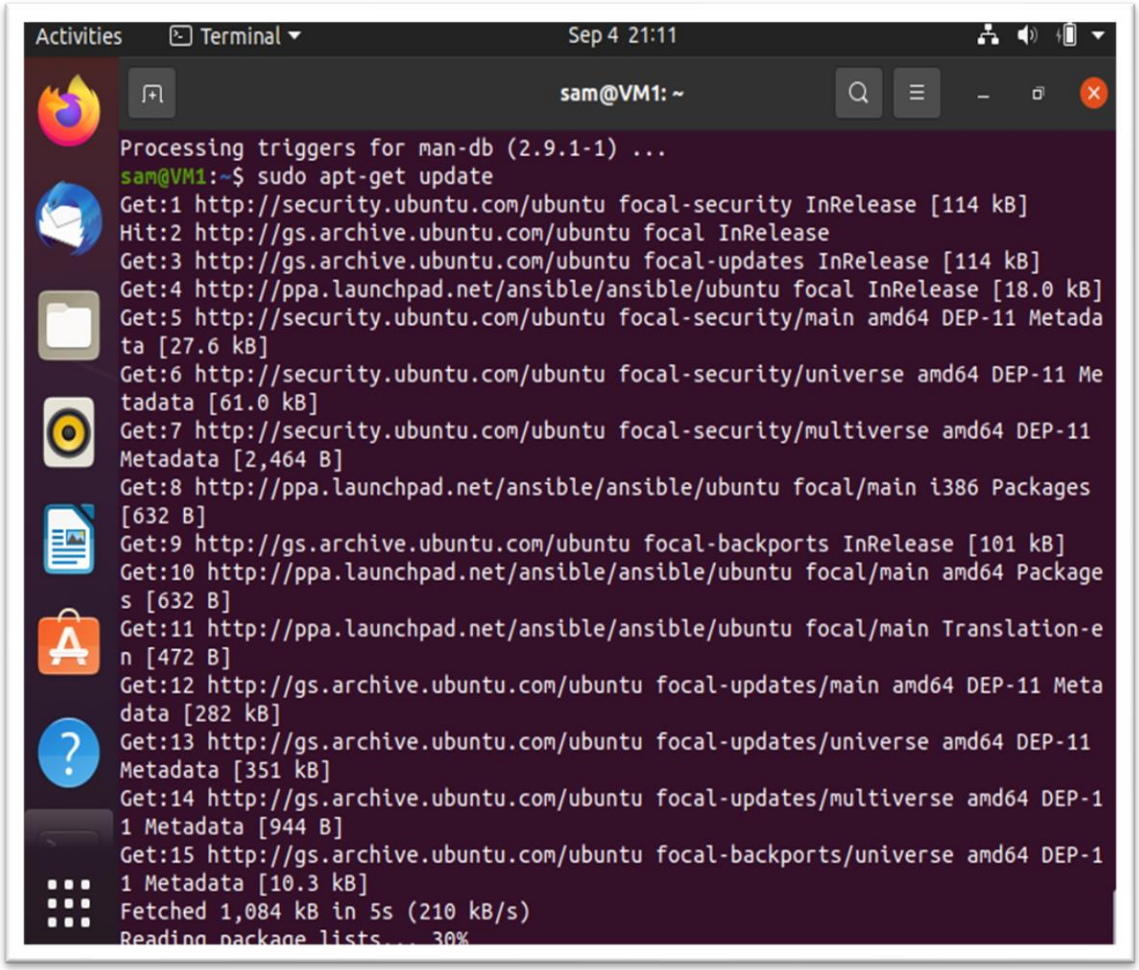
II. Configure Ansible server on VM 1 to deploy a webserver to VM2 and VM3 on port 8080 that displays the message: "Hello World from SJSU"

Following steps are performed as part of the installation of Ansible:-

A. Ansible Installation in VM1:-

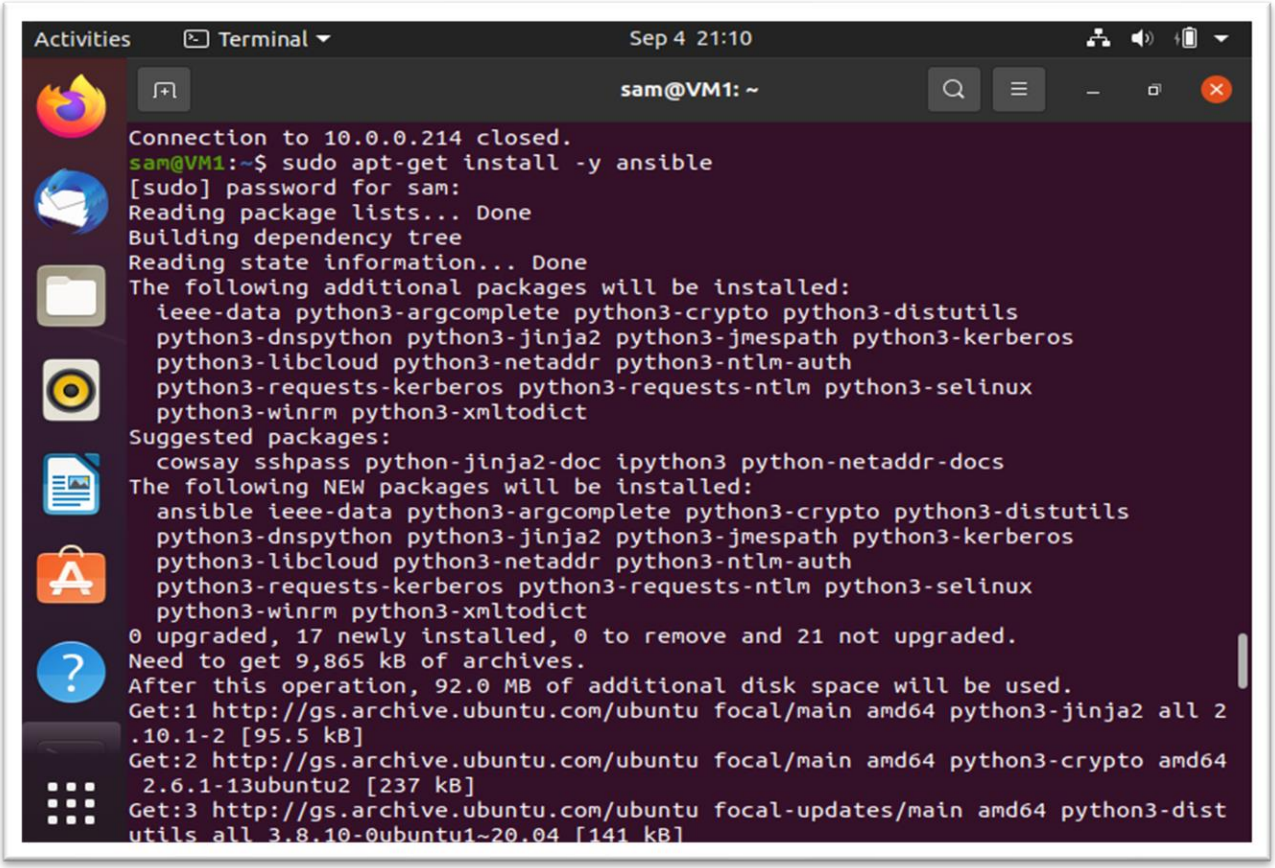
- Run below command :

```
sudo apt-get update
```



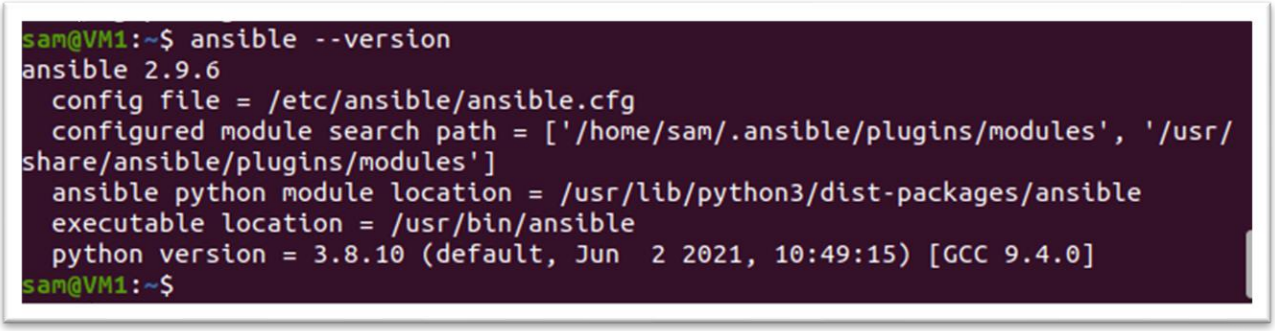
- Install ansible.

sudo apt-get install -y ansible



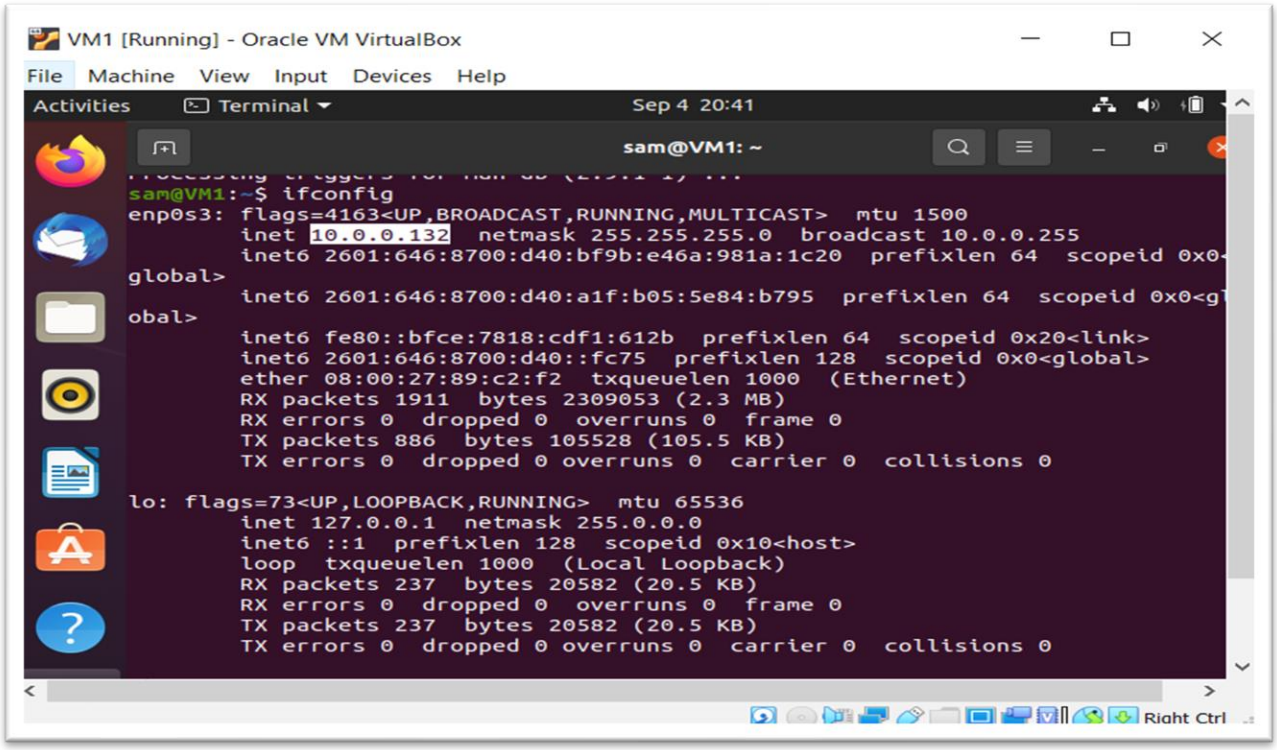
- To check whether Ansible is working.

Run command: ansible --version

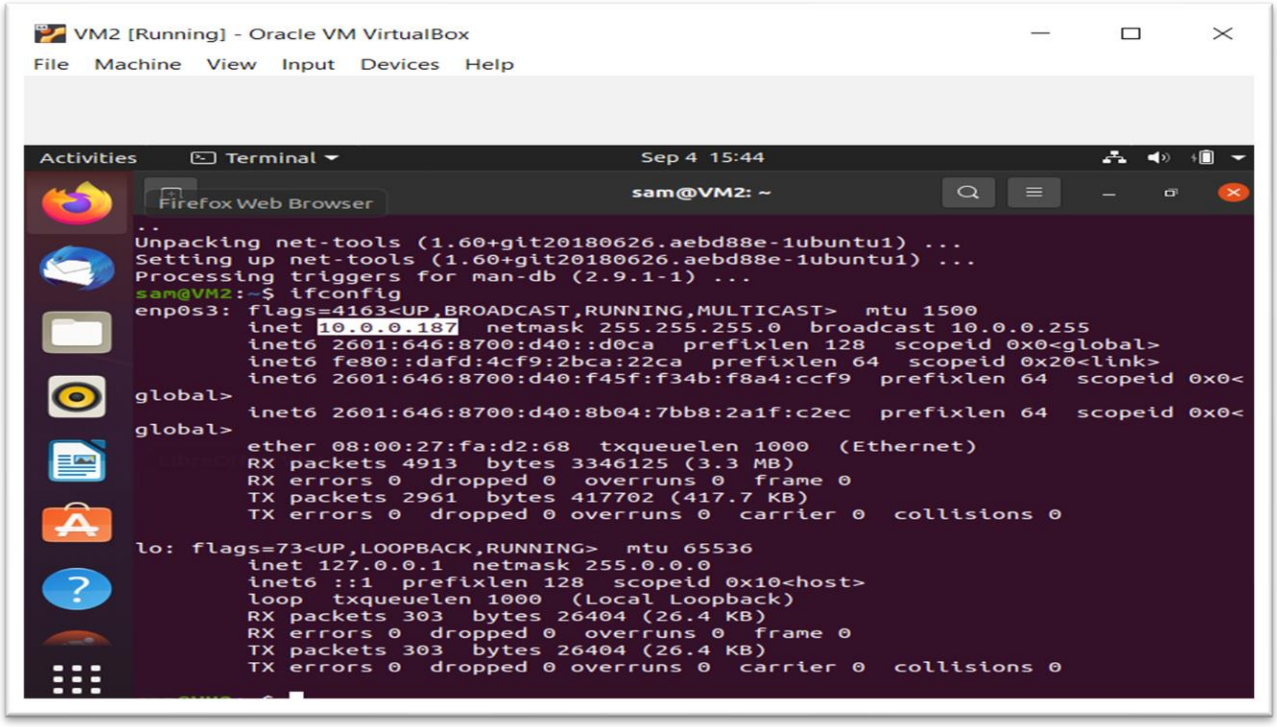


B. Get IP Addresses for VM1 , VM2 and VM3 (*by installing Net-tools)*:

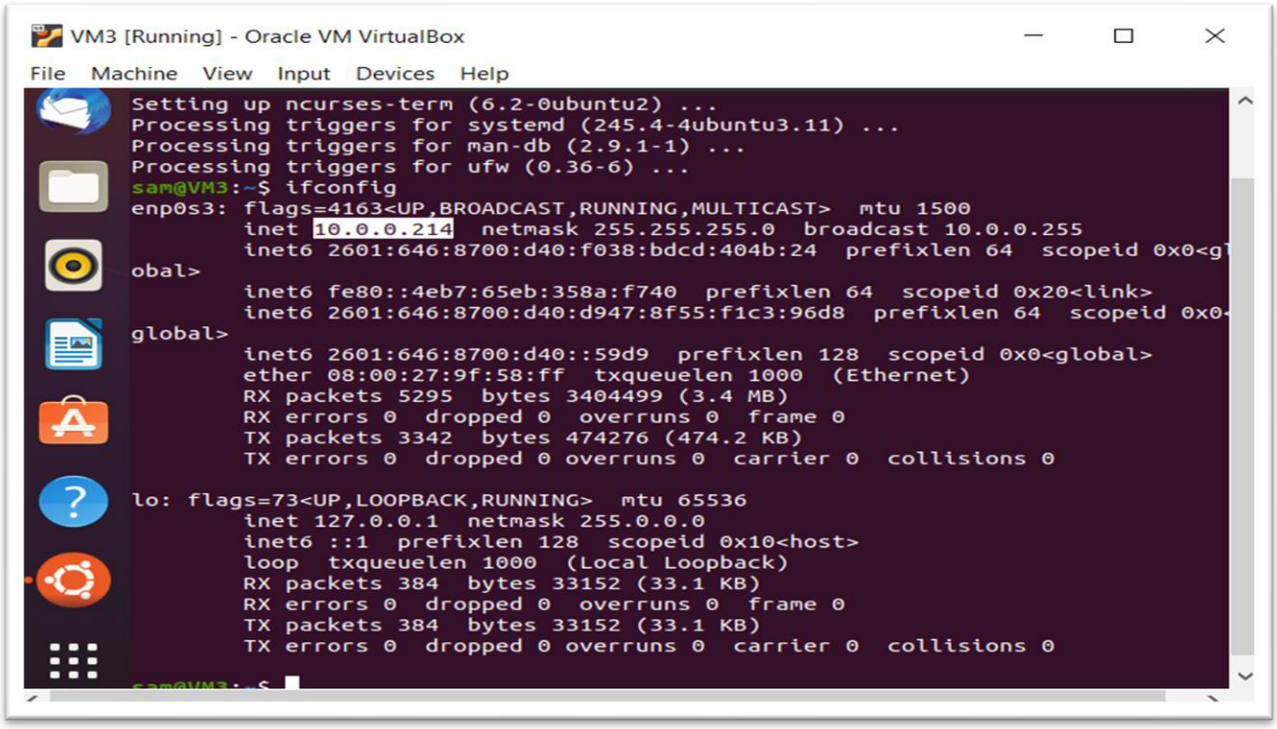
1. VM1 – 10.0.0.132



2. VM2 – 10.0.0.187

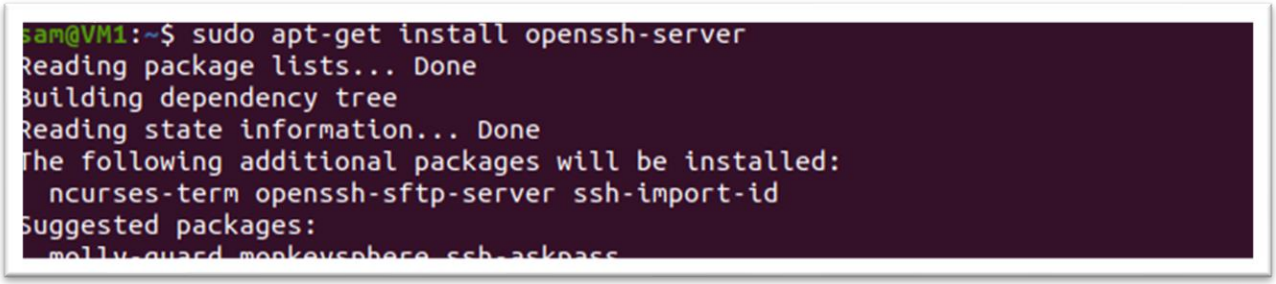


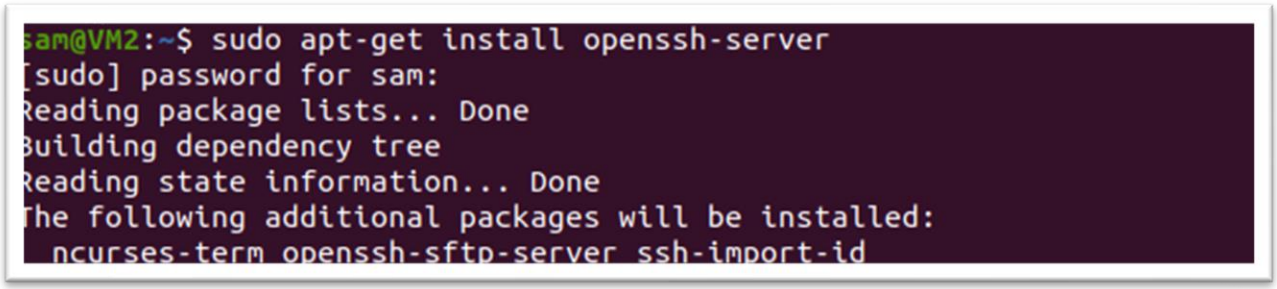
3. VM3 – 10.0.0.214



C. **Install Openssh server in all VMs before creating RSA key.** (Also Install Firewalld as well.)

sudo apt-get install openssh-server *(in all 3 VMs)*

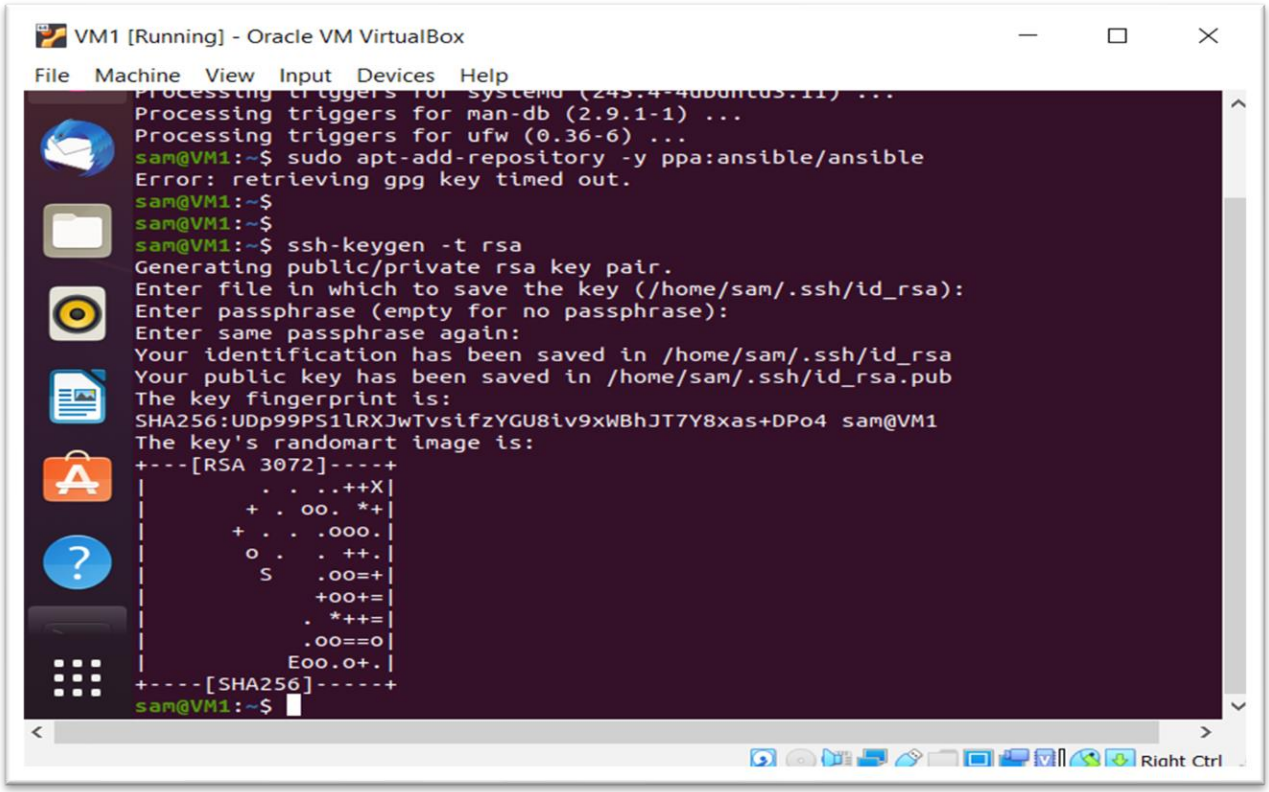




```
sam@VM3:~$ sudo apt-get install openssh-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  ncurses-term openssh-sftp-server ssh-import-id
Suggested packages:
```

Create RSA key from VM1:

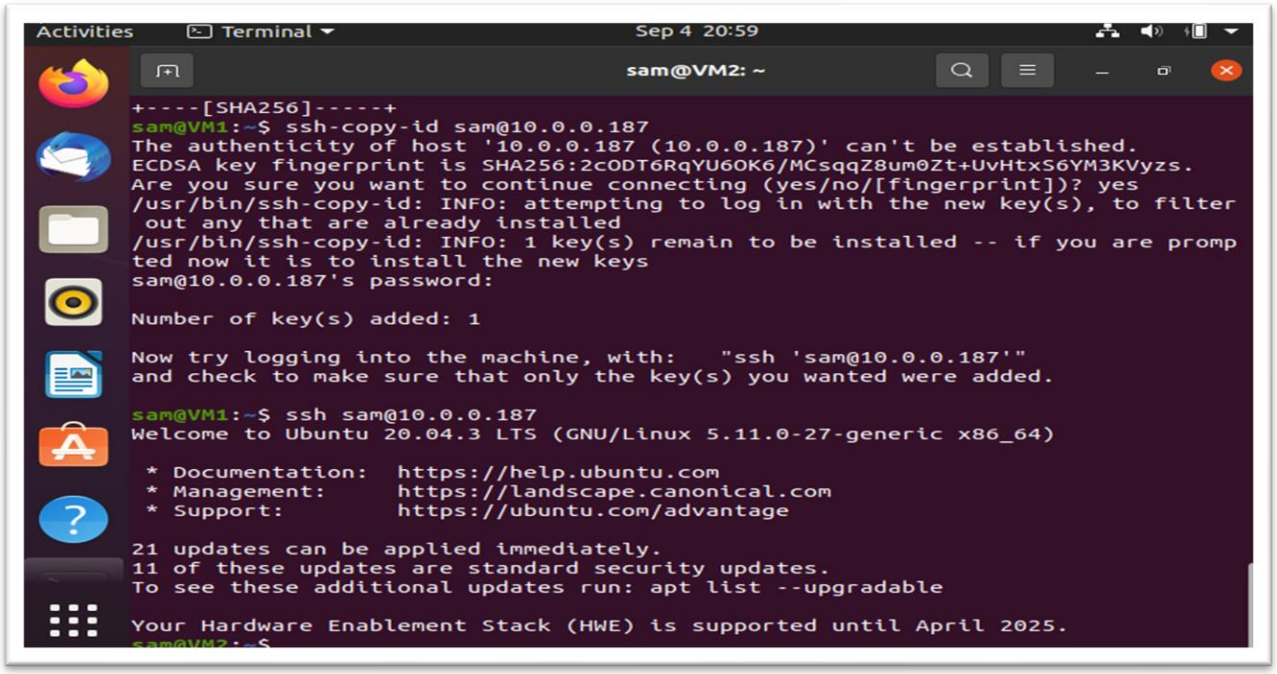
ssh-keygen -t rsa



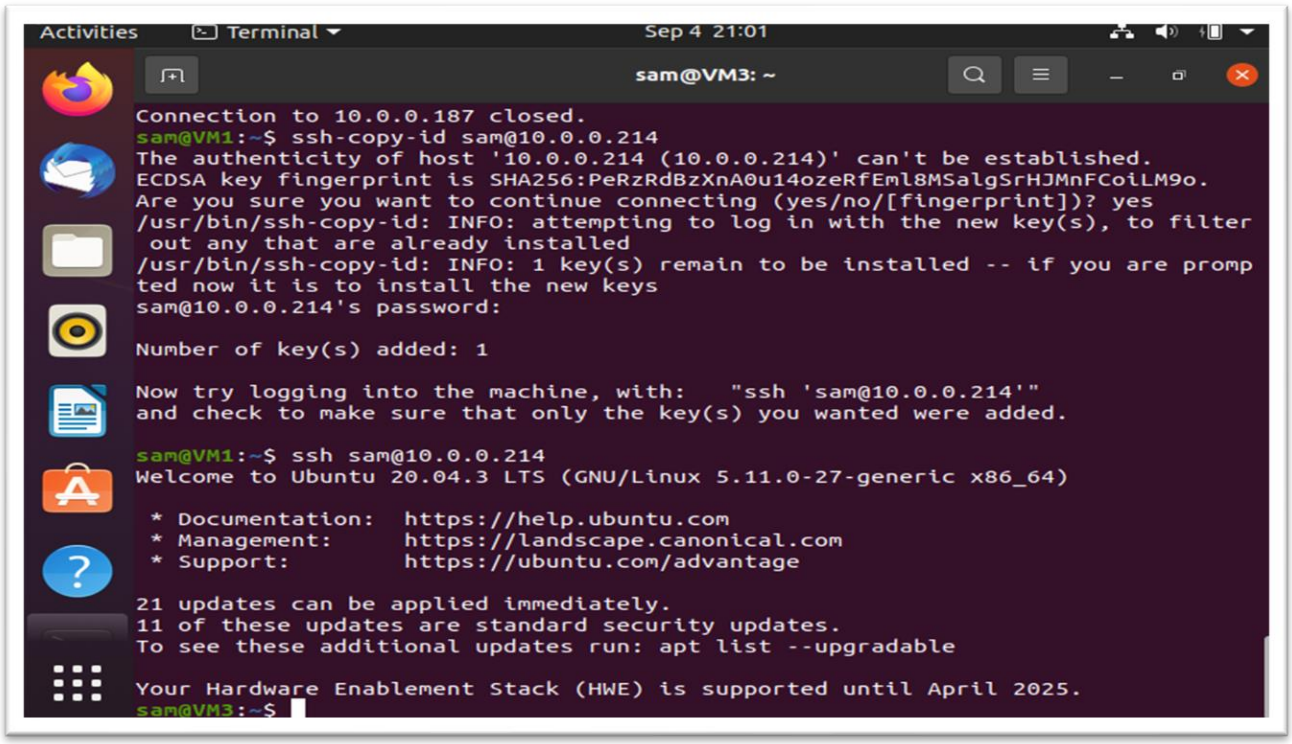
D. **SSH key copied to VM2 and VM3 respectively** and validated password-less ssh connection to VM2 (IP – 10.0.0.187) and VM3 (IP – 10.0.0.214) from VM1 (IP – 10.0.0.132).

ssh-copy-id sam@<IP adress>

- VM1 → ssh → VM2(IP – 10.0.0.187)



- VM1 → ssh → VM3(IP – 10.0.0.214)

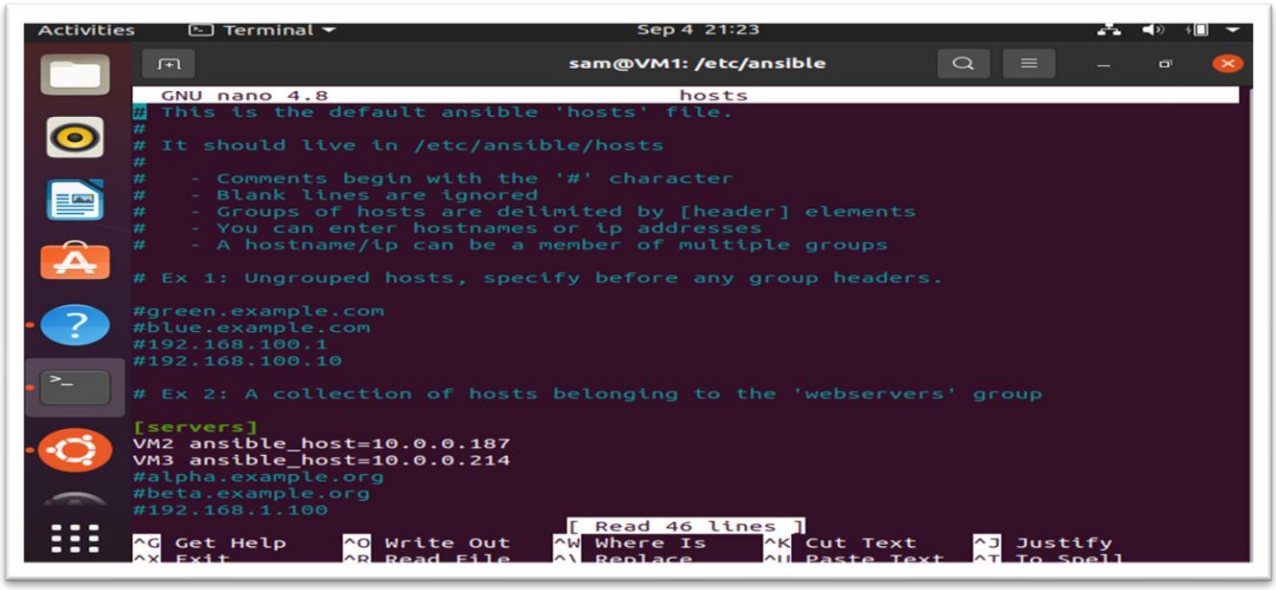


E. ANSIBLE: Ping

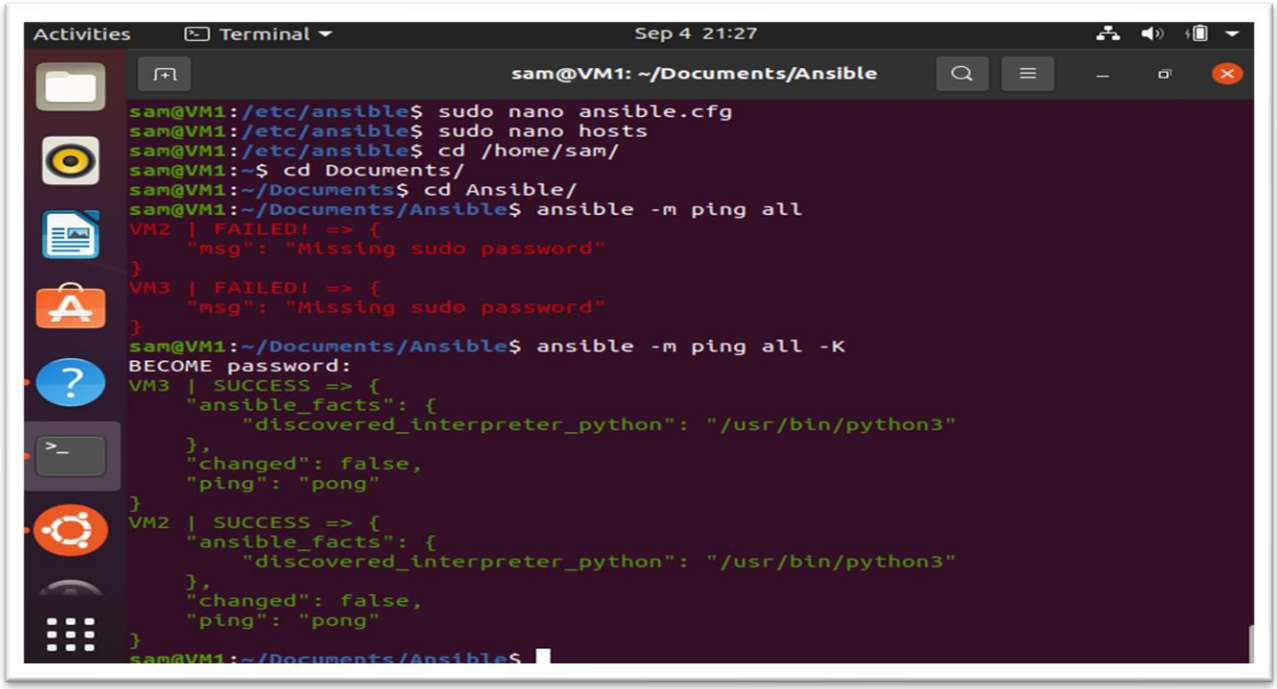
Once ansible is installed , hosts and ansible.cfg files will be present in path - /etc/ansible.

Modify the hosts file to add entries for VM2 and VM3 as shown below:-

The code is present in file path - /home/sam/Document/Ansible.

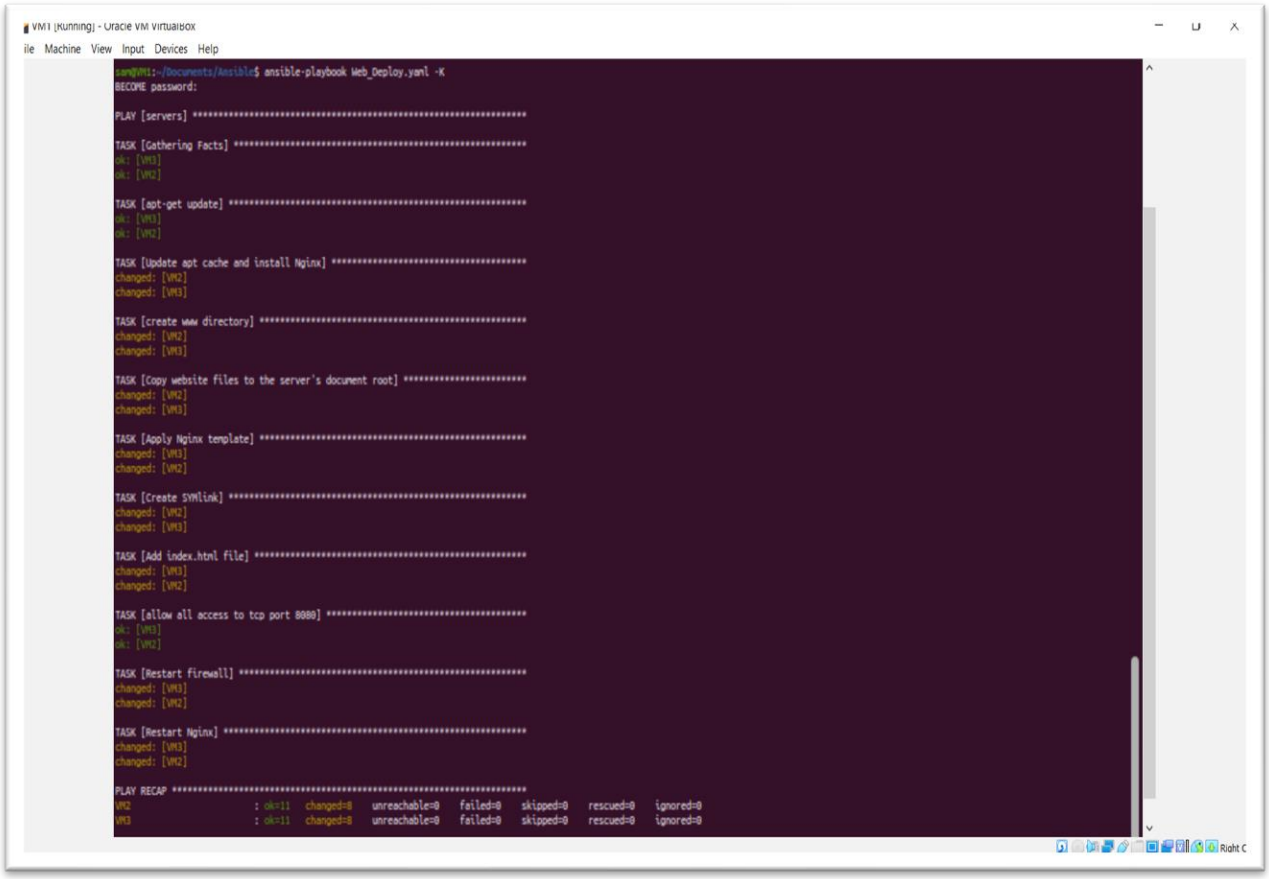


F. Test connection to host servers using **ansible -m ping all**

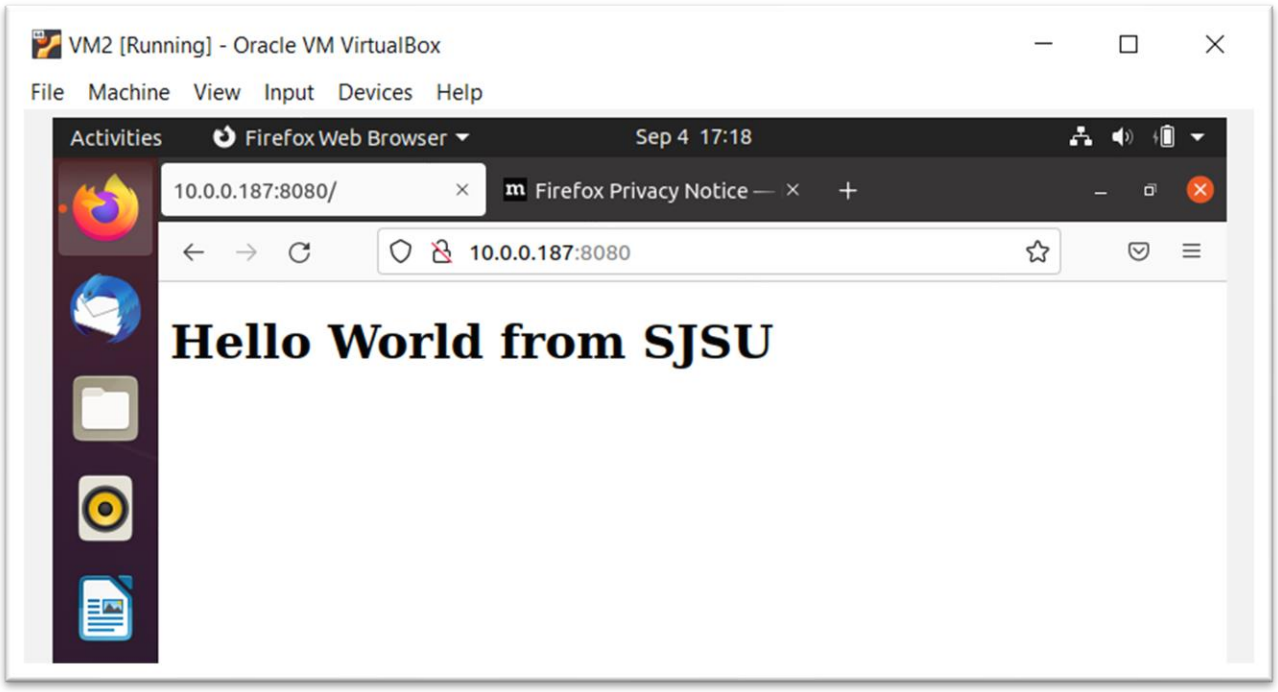


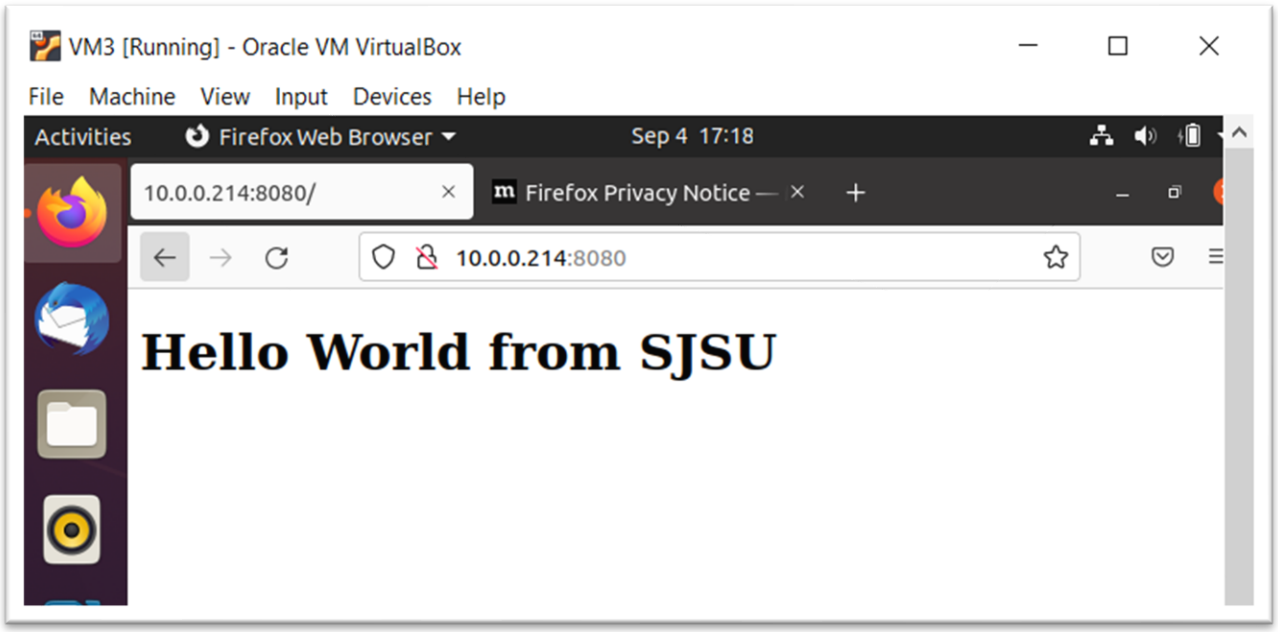
G. Run playbook named “Web_Deploy.yaml” using below command to configure Ansible server on VM1 to deploy Nginx webserver to VM2 and VM3 on port 8080 that displays the message: “Hello World from SJSU”

ansible-playbook Web_Deploy.yaml -K



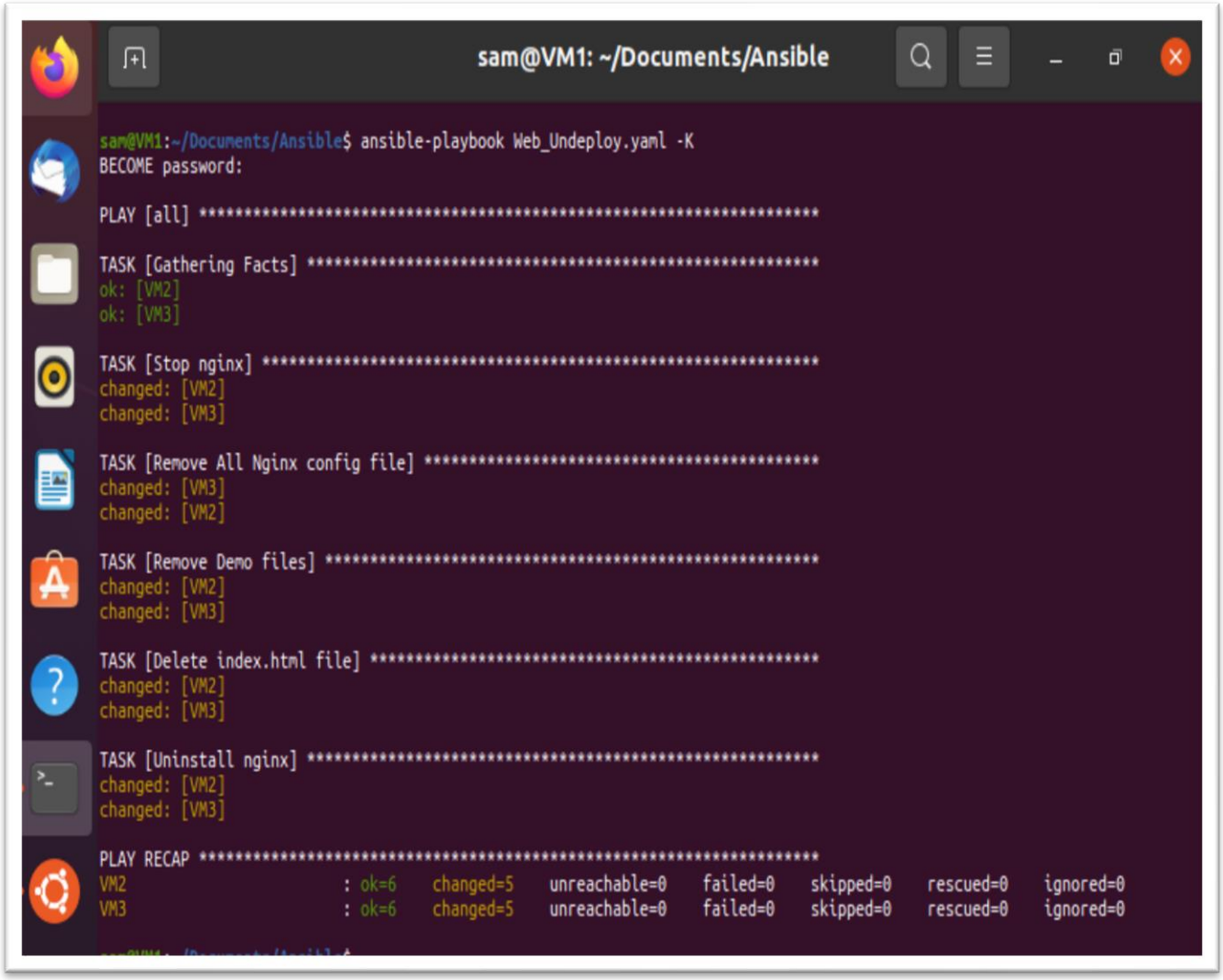
Screeenshots of webpage on VM2 and VM3:



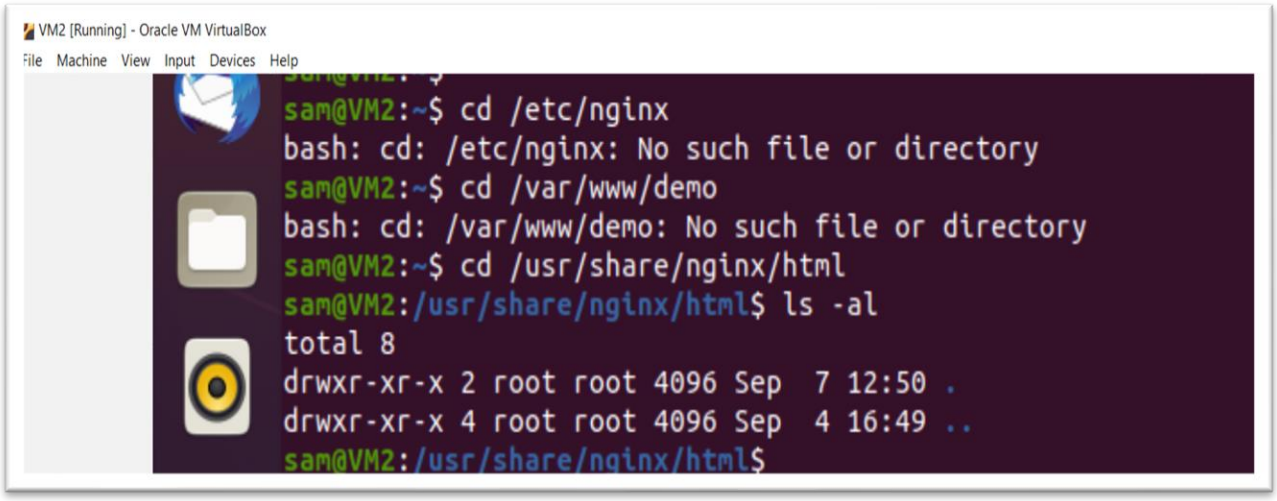


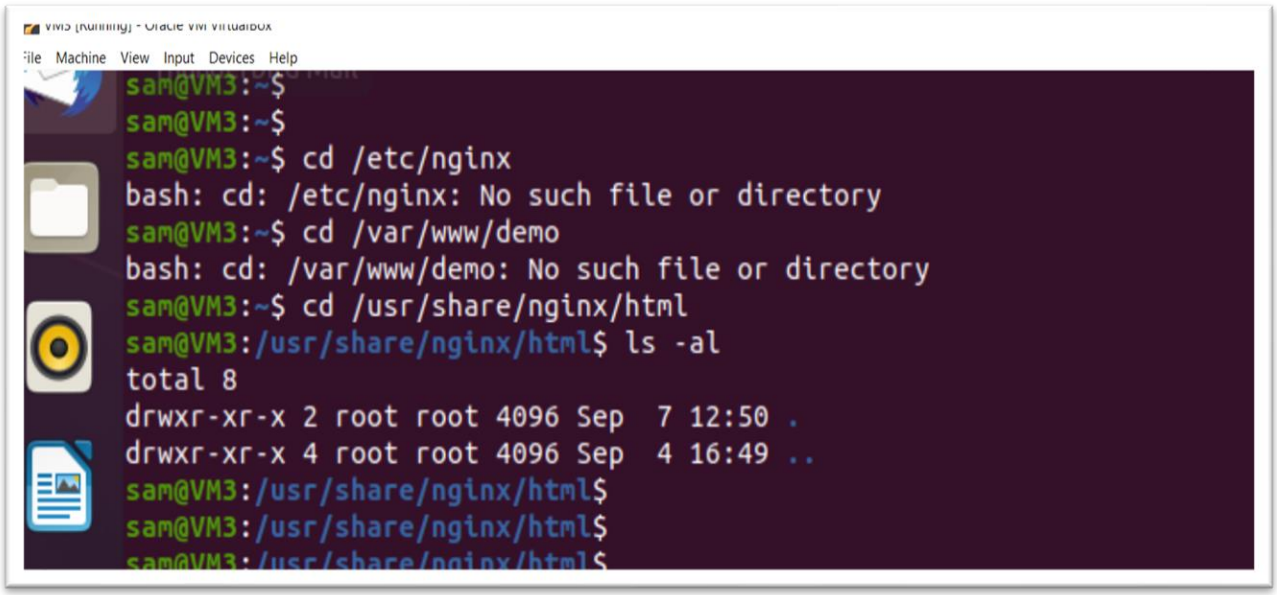
III. Run Ansible playbook – Web_Undeploy.yaml on VM1 to un-deploy all the webserver resources.

ansible-playbook Web_Undeploy.yaml -K



ALL Configuration files and resources were deleted on VM2 and VM3.





Screeenshots of webpage on VM2 and VM3 post uninstallation of Nginx server:-