Ex. No 6 **OpenStack Installation IaaS Implementation**

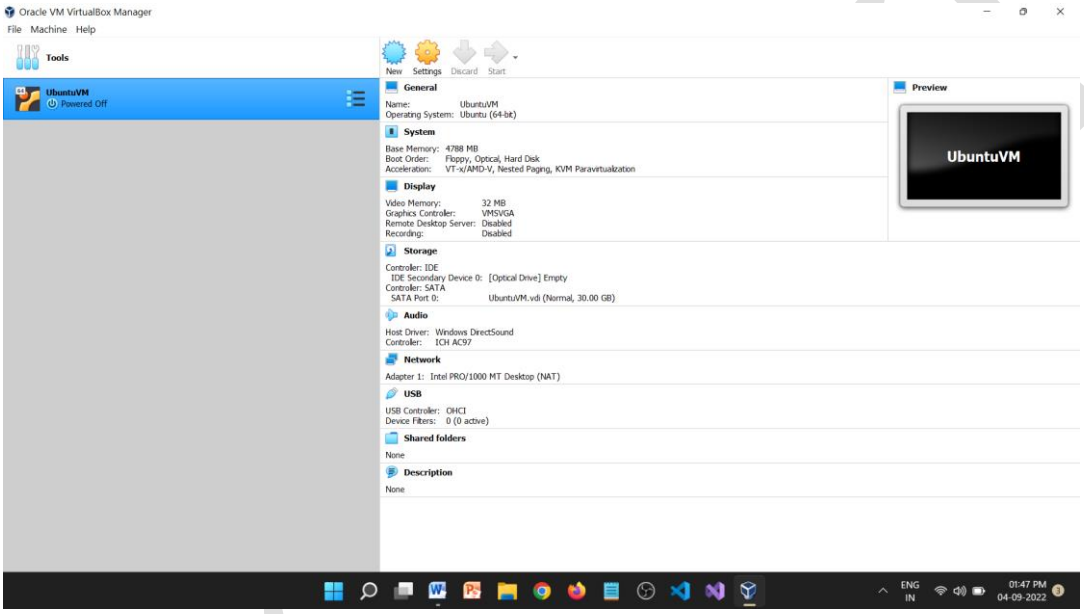
Aim: To implement IaaS by installing OpenStack.

Softwares Required

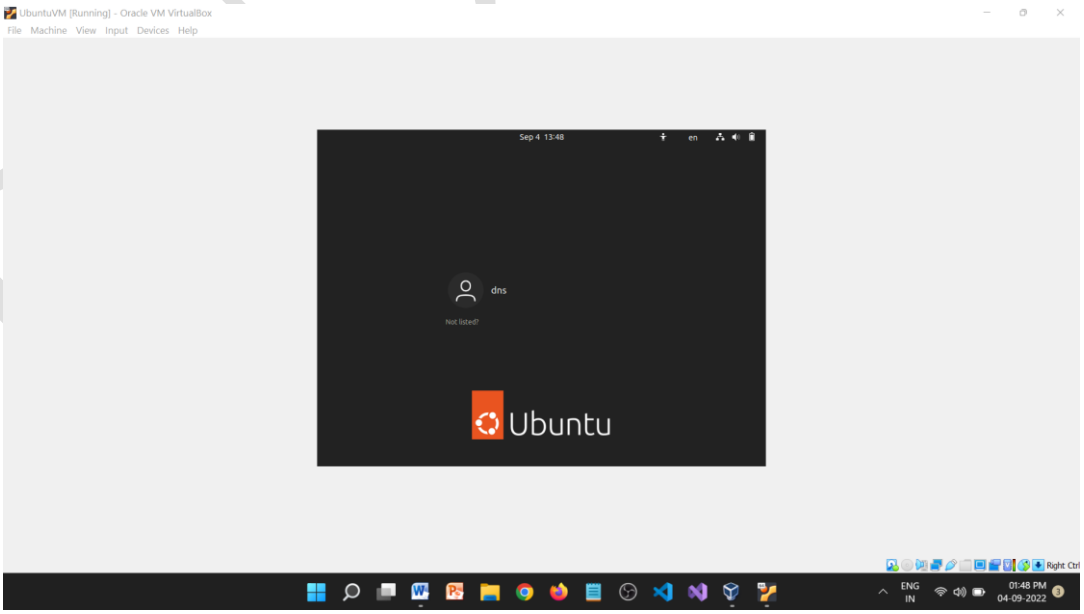
- VM VirtualBox (https://www.virtualbox.org/wiki/Downloads)
- Ubuntu OS (https://ubuntu.com/download/desktop)

Procedure:

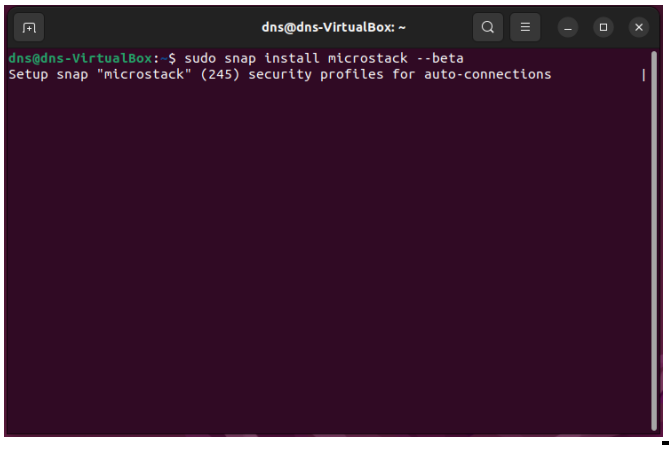
1. Open VirtualBox with Virtual Ubuntu OS installed in it.

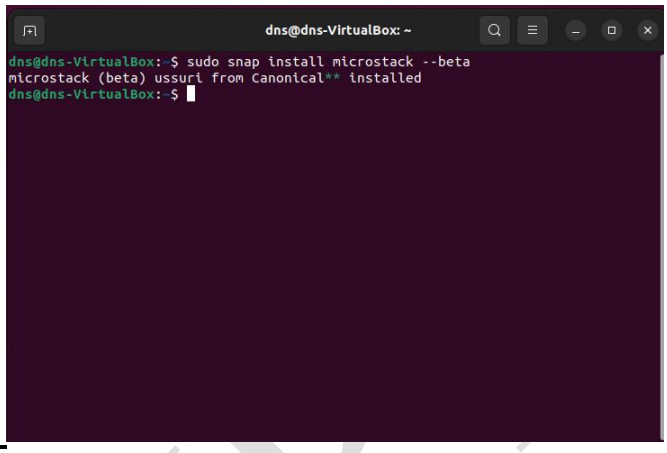


2. Login to the Ubuntu OS.

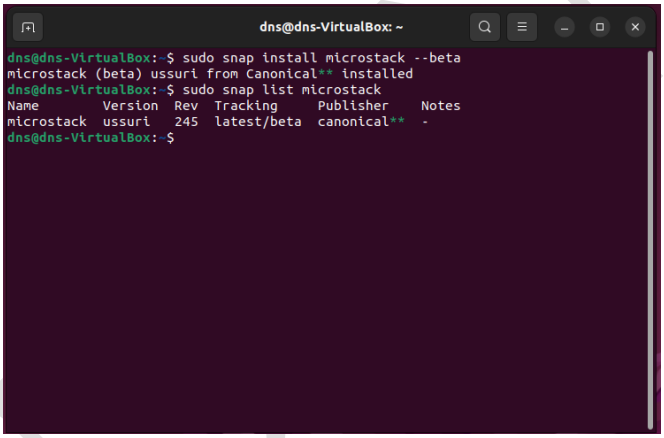


3. Open Terminal and type the command
    a. **sudo snap install microstack --beta**

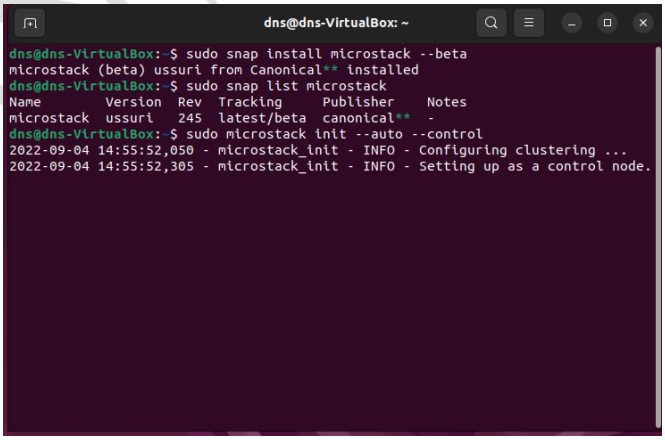




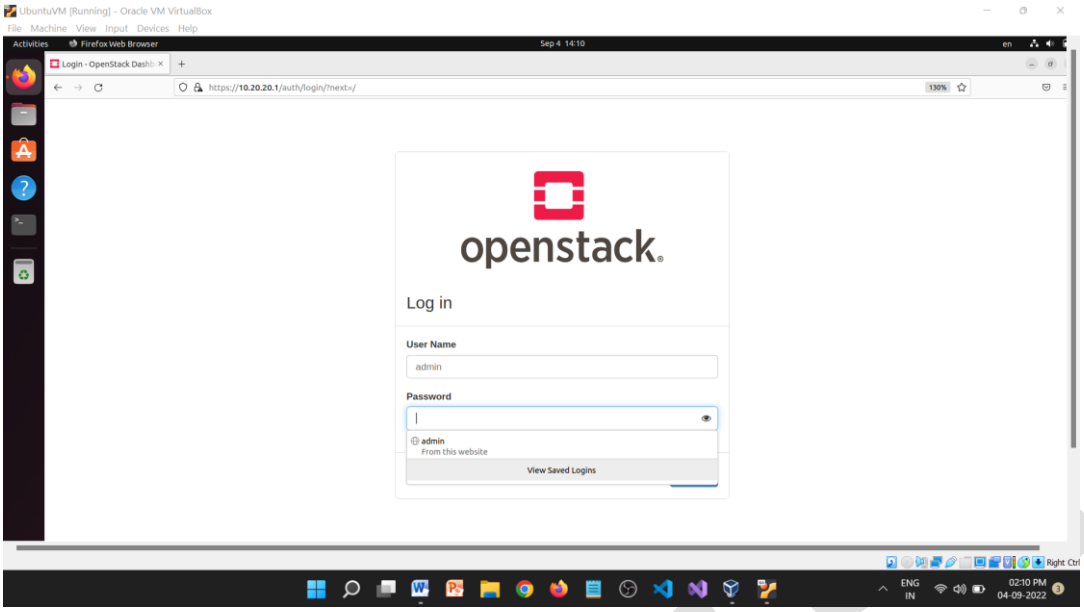
4. Check installation completion with the command
    a. **snap list microstack**



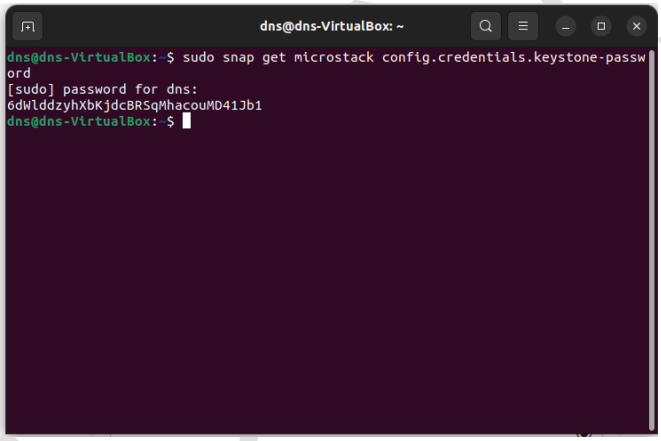
5. Initialize microstack with the command
    a. **sudo microstack init --auto –control**



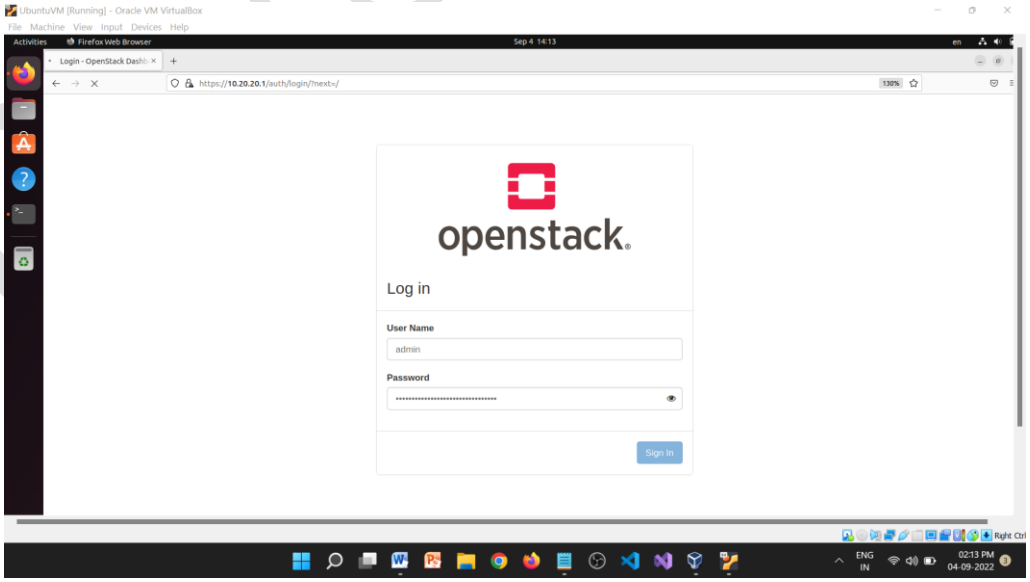
6. After initialization of OpenStack. Use browser to launch OpenStack Dashboard. Use the IP address **10.20.20.1** to login to the dashboard.

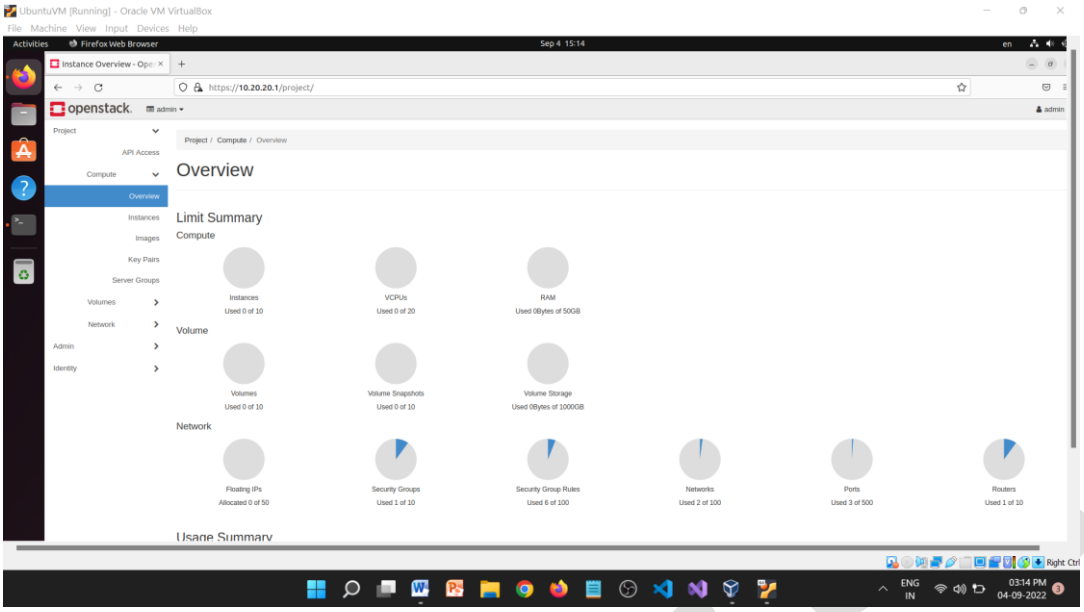


7. Use “admin” as username. Get password for the login from Terminal using the command
   a. **sudo snap get microstack config.credentials.keystone-password**

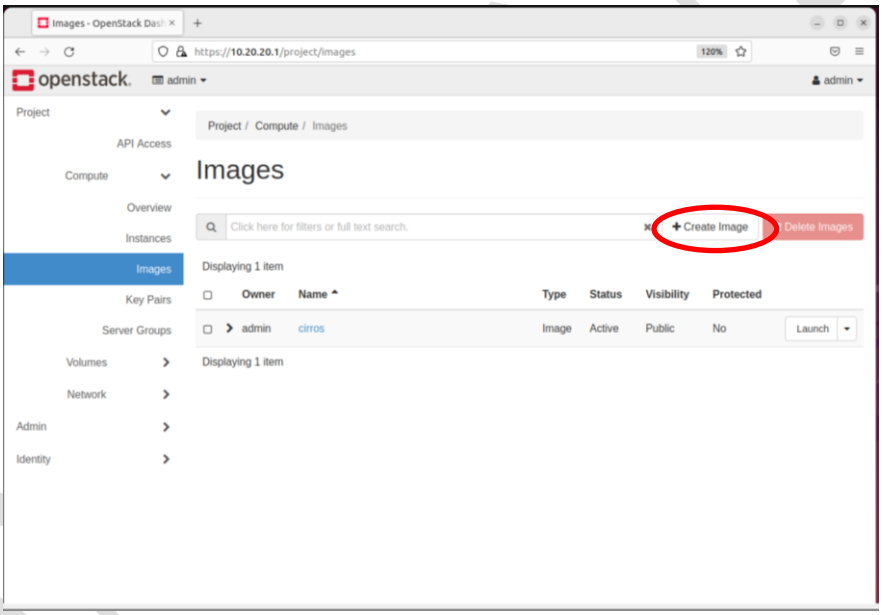


8. Copy the password and use it to login to the dashboard.



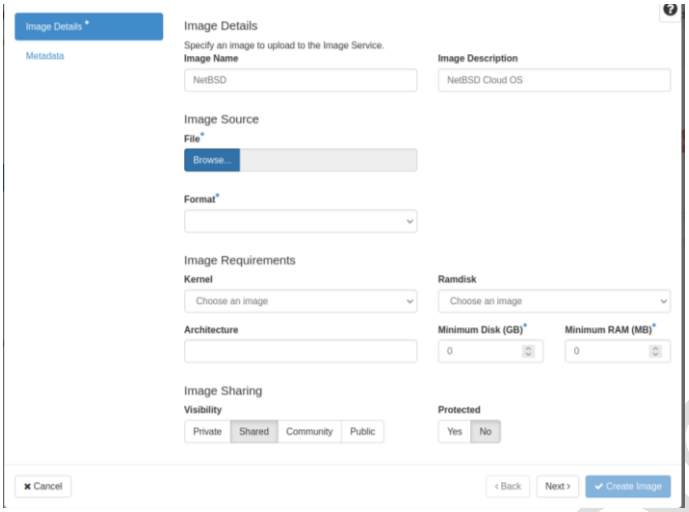


9. Open Images Tab and click Create Image

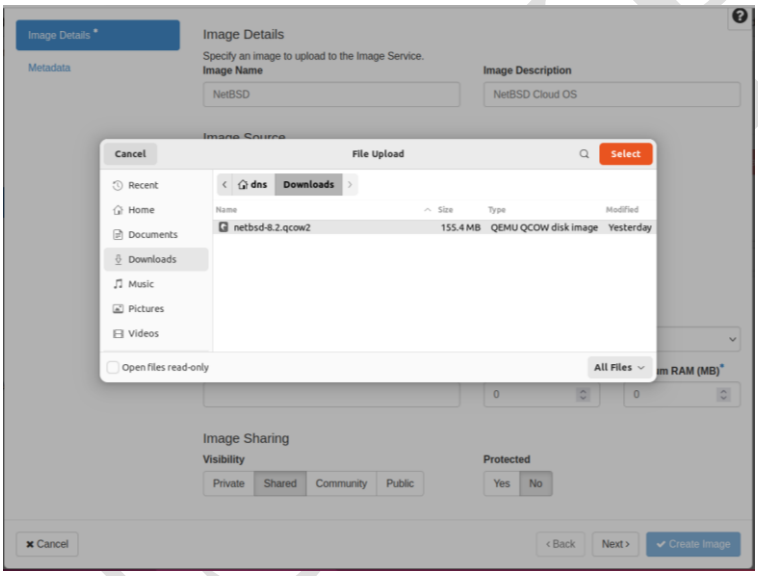


10. Provide the Image downloaded from https://docs.openstack.org/image-guide/obtain-images.html to create a new image.

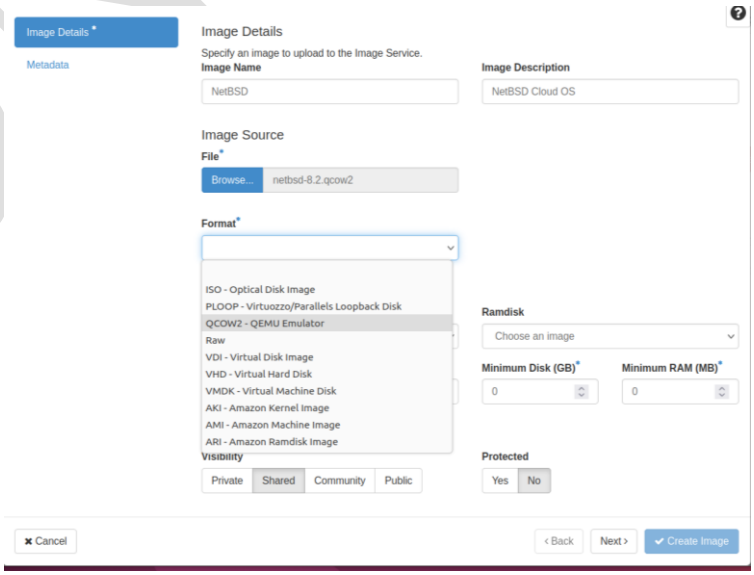
a. Provide Image Name



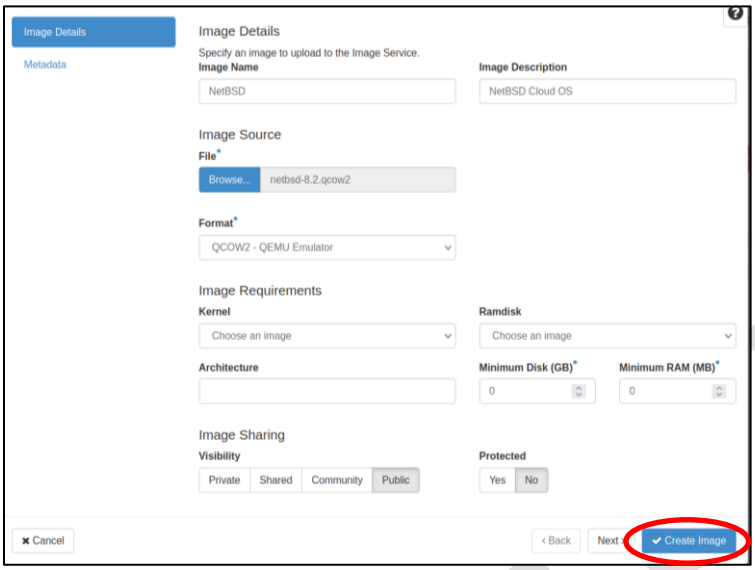
b. Choose Image Source – Downloaded Cloud OS Image

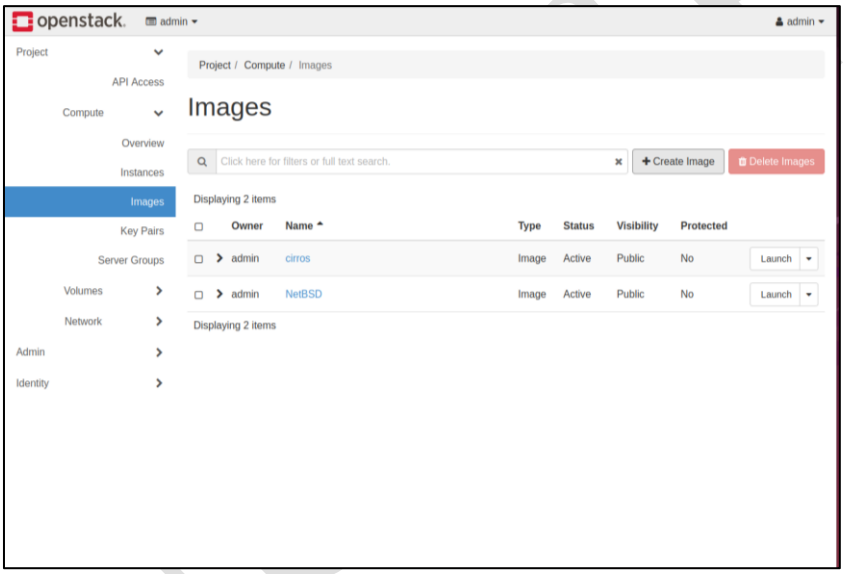


c. Choose File Format **QCOW2**



d. Choose Visibility **Public** and Create Image

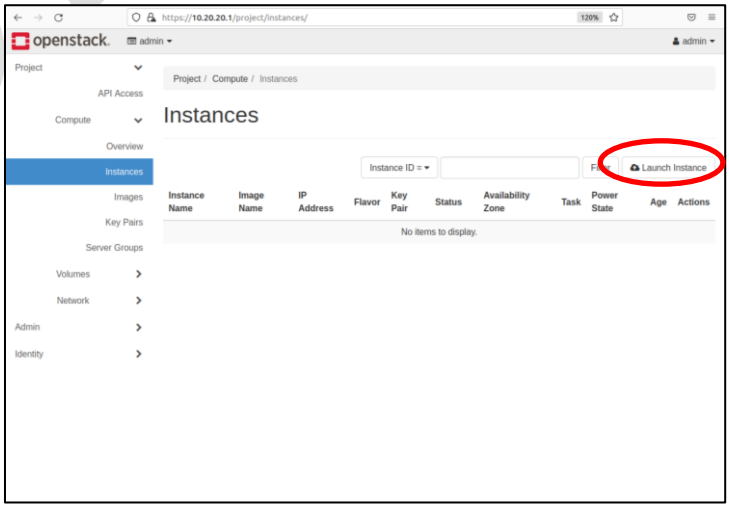




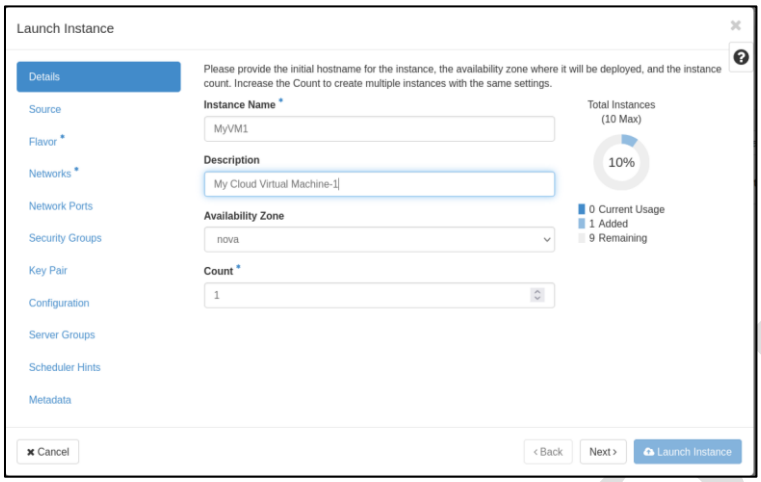
11. Create Instance from the available Images using web interface or Terminal Interface.

12. Instance Creation Using Web Interface

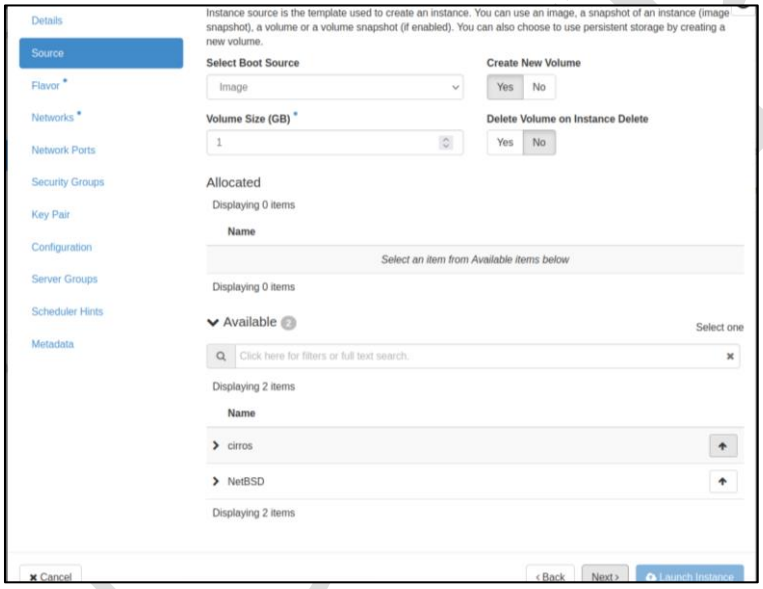
a. Open Interfaces section and select Launch Instance

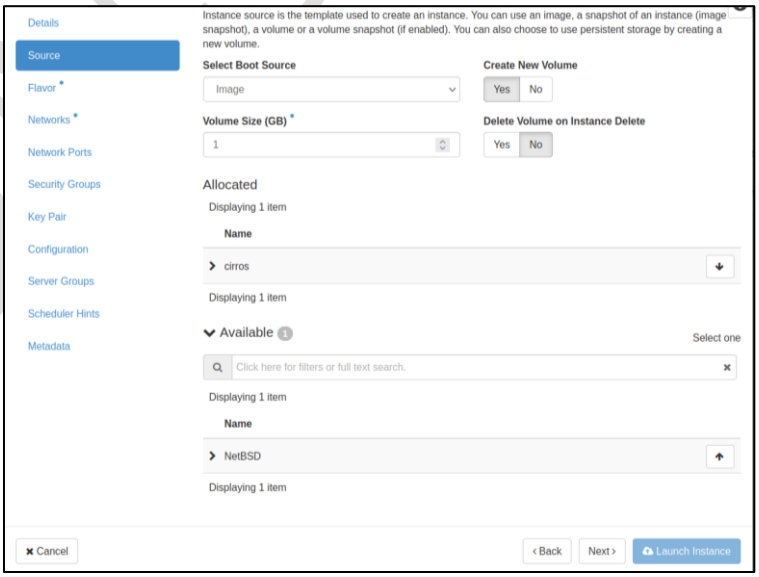


b. Provide Instance Name and select Next

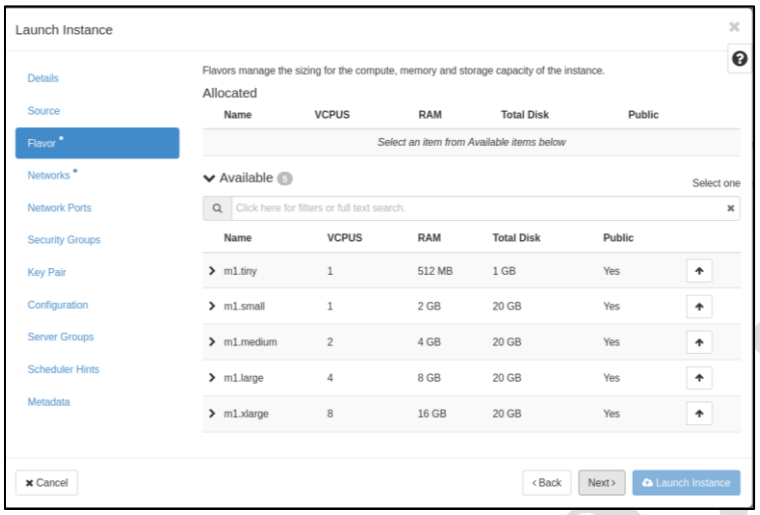


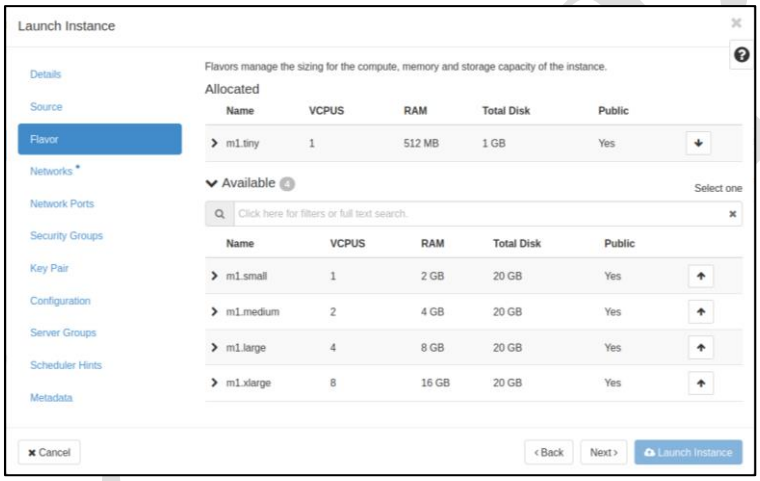
c. Select “cirros” as source form the available images



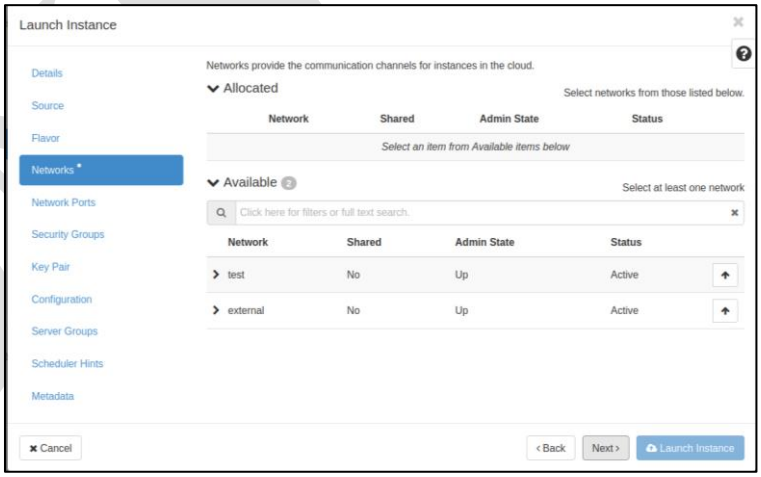


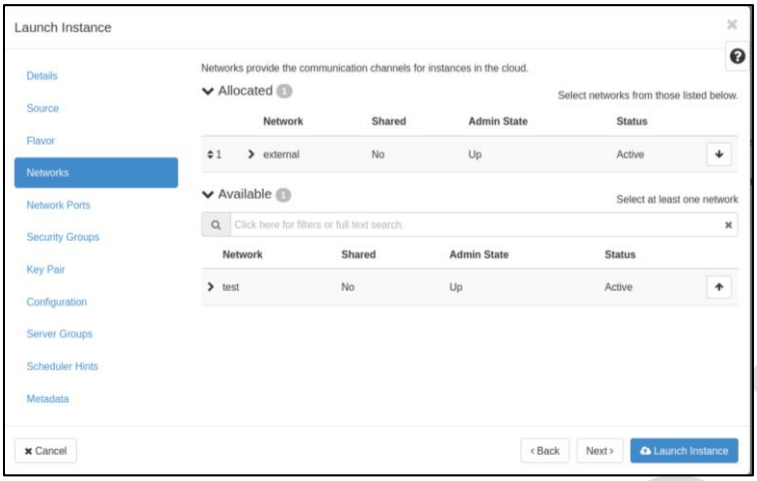
d. Select Flavor “m1.tiny” from the available Flavors



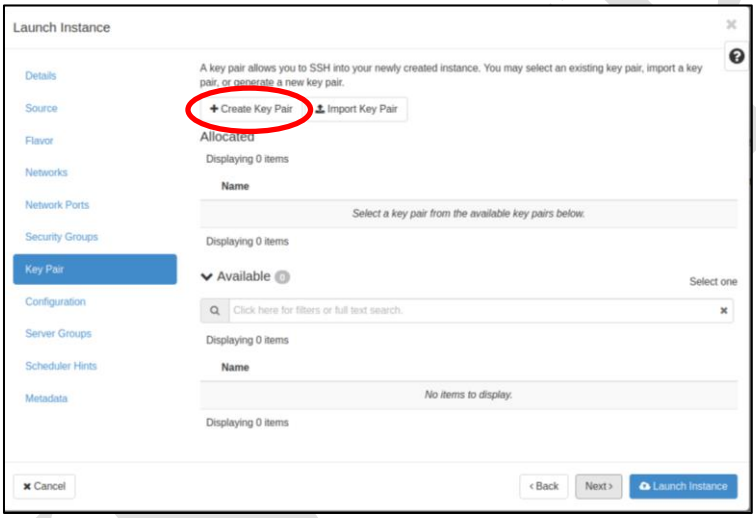


e. Select “external” network as the network for the Instance

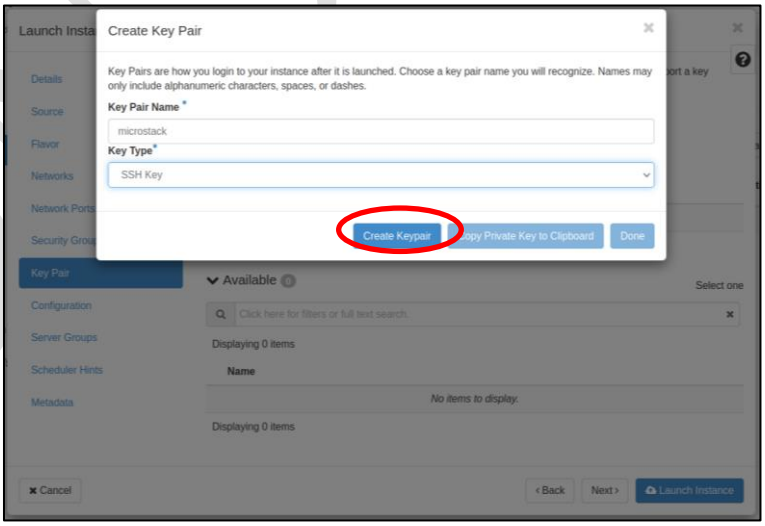


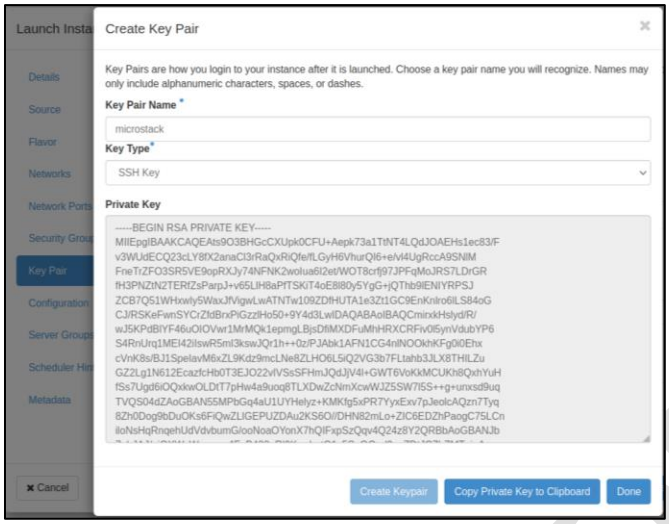


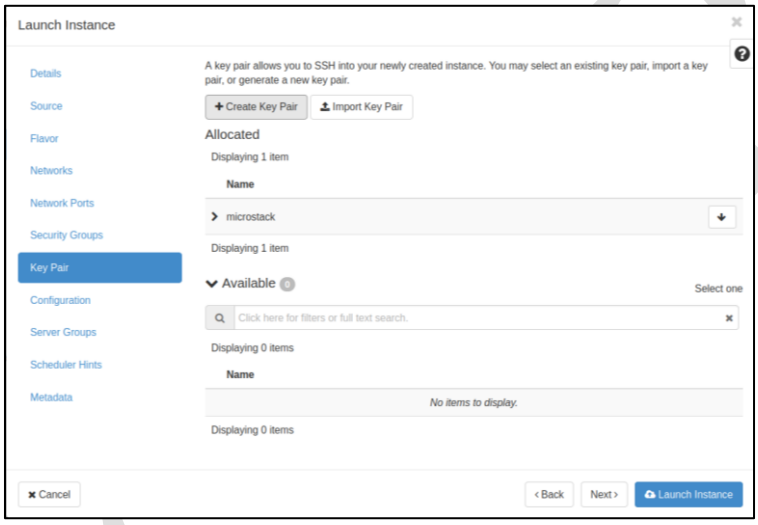
f. Network Ports and Security Group use the default Options. In Key Pair Section Create a new SSH Key Pair with name “microstack” and select it.



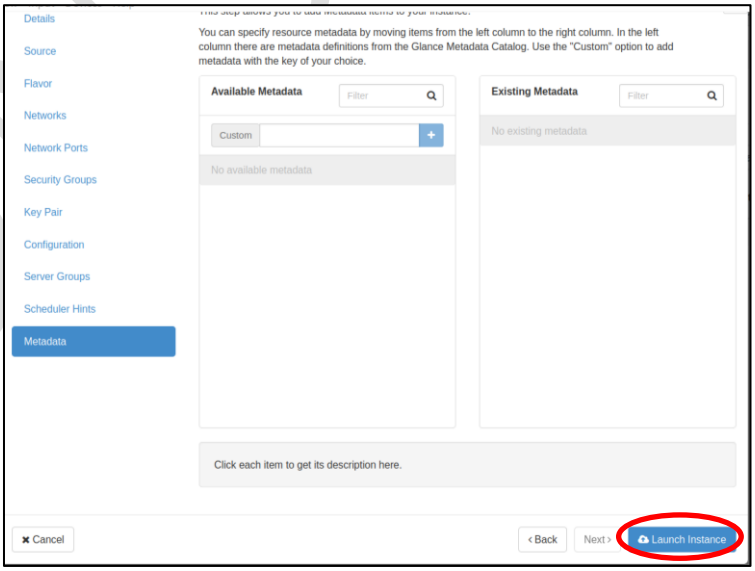
g. Provide Key Name “microstack” and Choose Key Type as “SSH”.

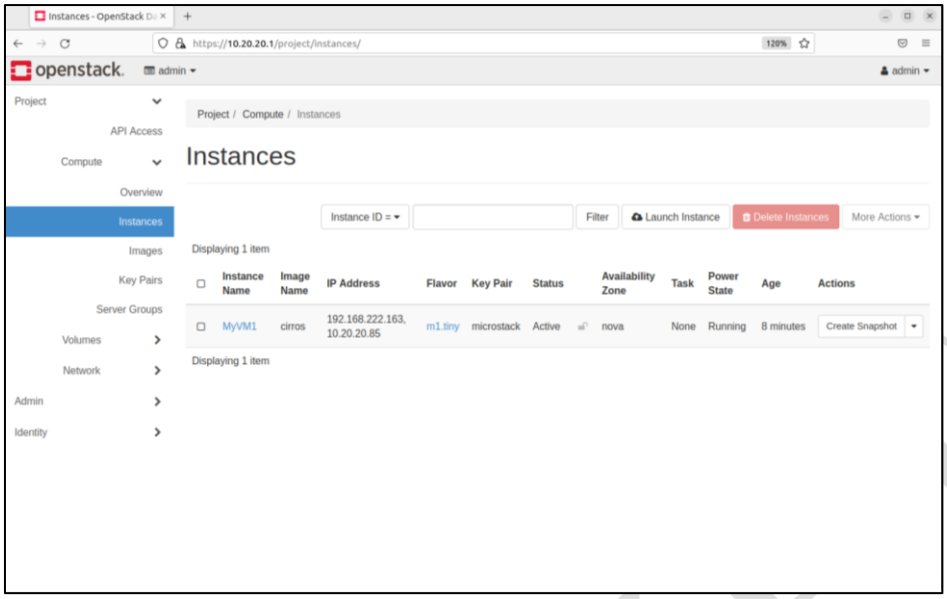






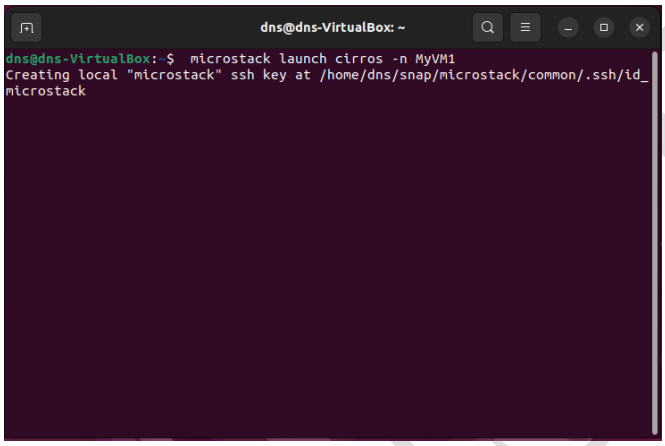
h. Remaining Options “Configuration”, “Server Groups”, “Scheduler Hints” and “Metadata” keep the default values. Launch the Instance.

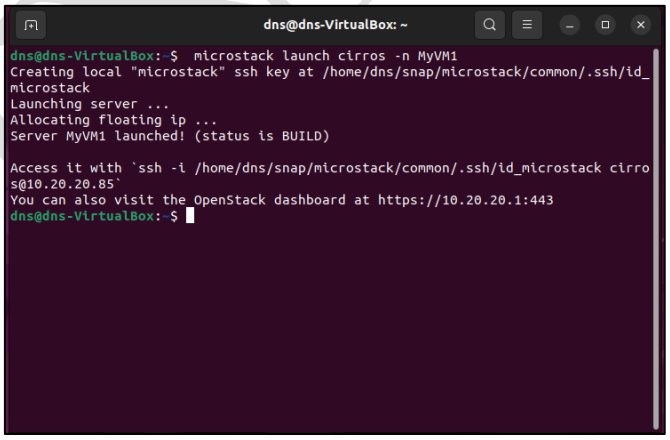




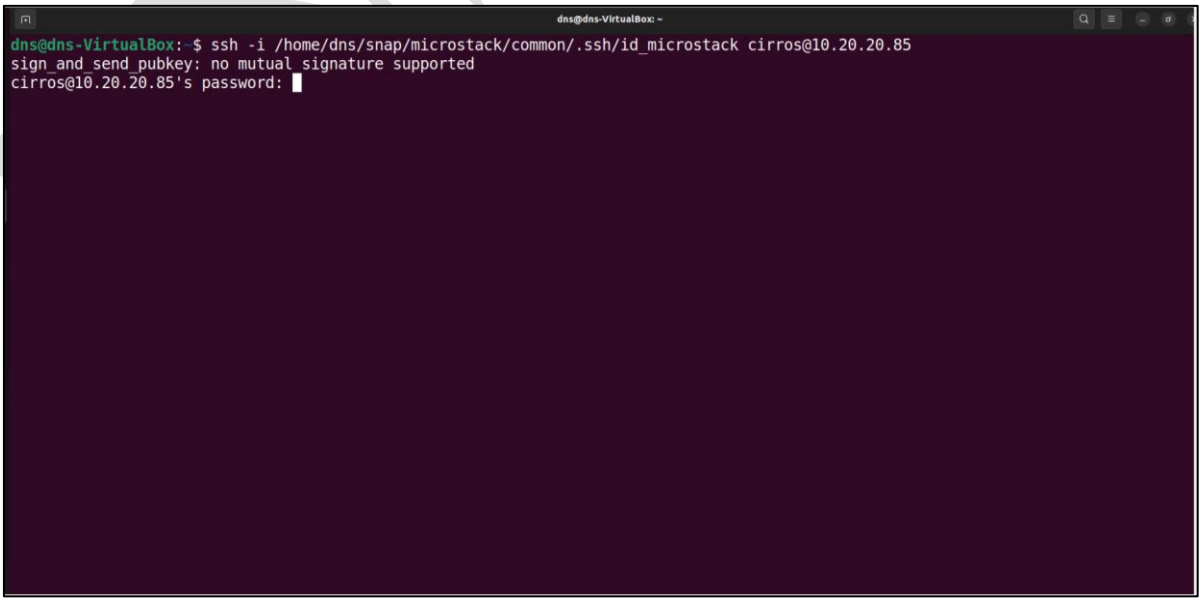
13. Instance Creation using Terminal Interface using the given command

a. microstack launch cirros -n MyVM1

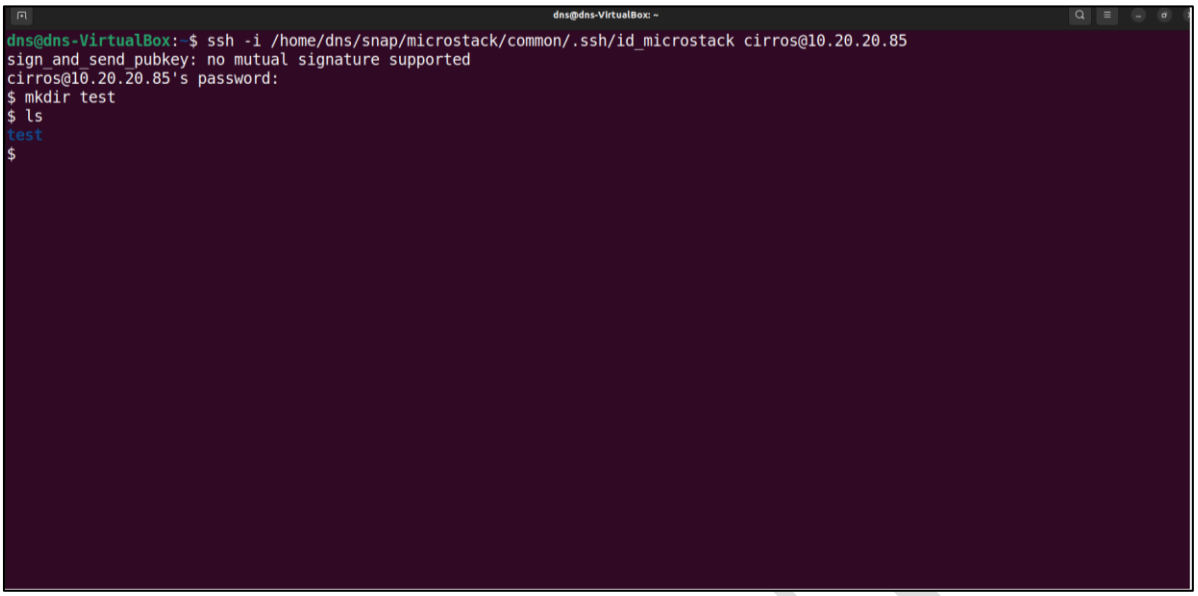




14. Type the “ssh” command created to login to the system

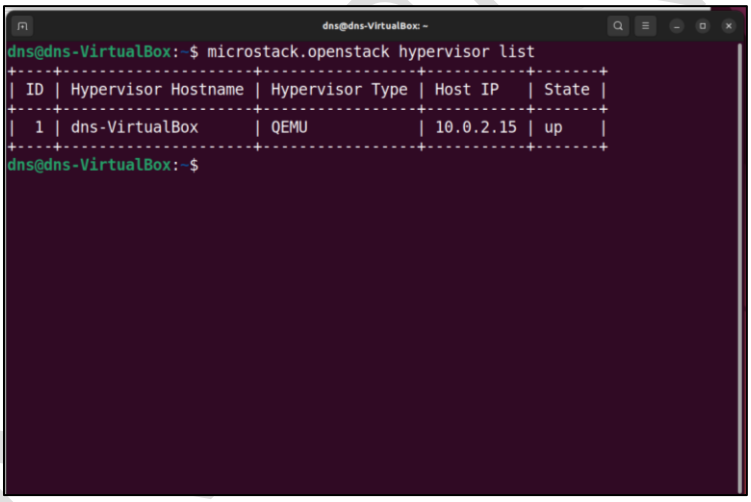


15. Enter “gocubsgo” as the password to login to the instance. Create a folder “test” and display it.

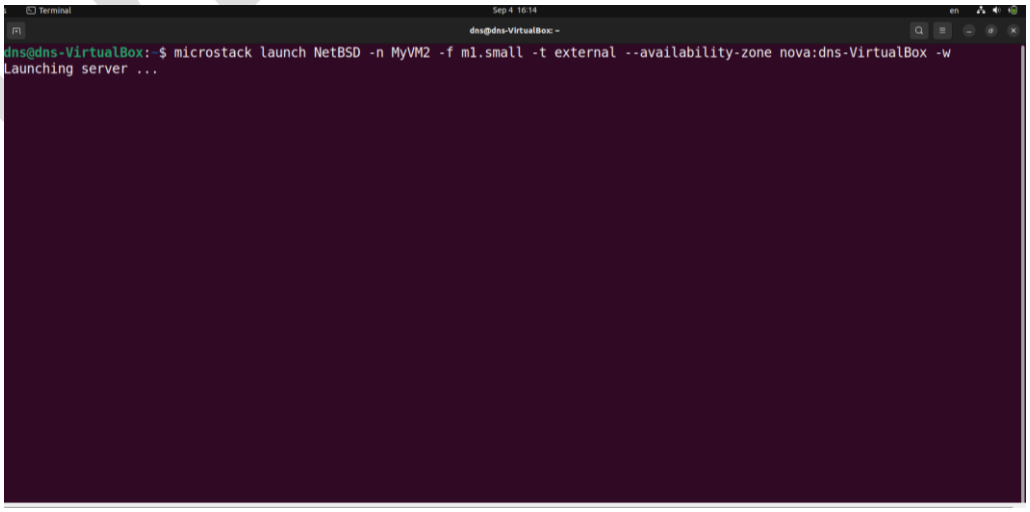


16. Try Creating another Instance with NetBSD Image using the Command

a. Get the host name using **microstack.openstack hypervisor list**



b. Use the Terminal Command **microstack launch NetBSD -n MyVM2 -f m1.small -t external --availability-zone nova:dns-VirtualBox**



Result:

Thus implementation of OpenStack installation to realize IaaS is completed and verified.