Experiment No:4

**Aim:** Study and implementation of Infrastructure as a Service.

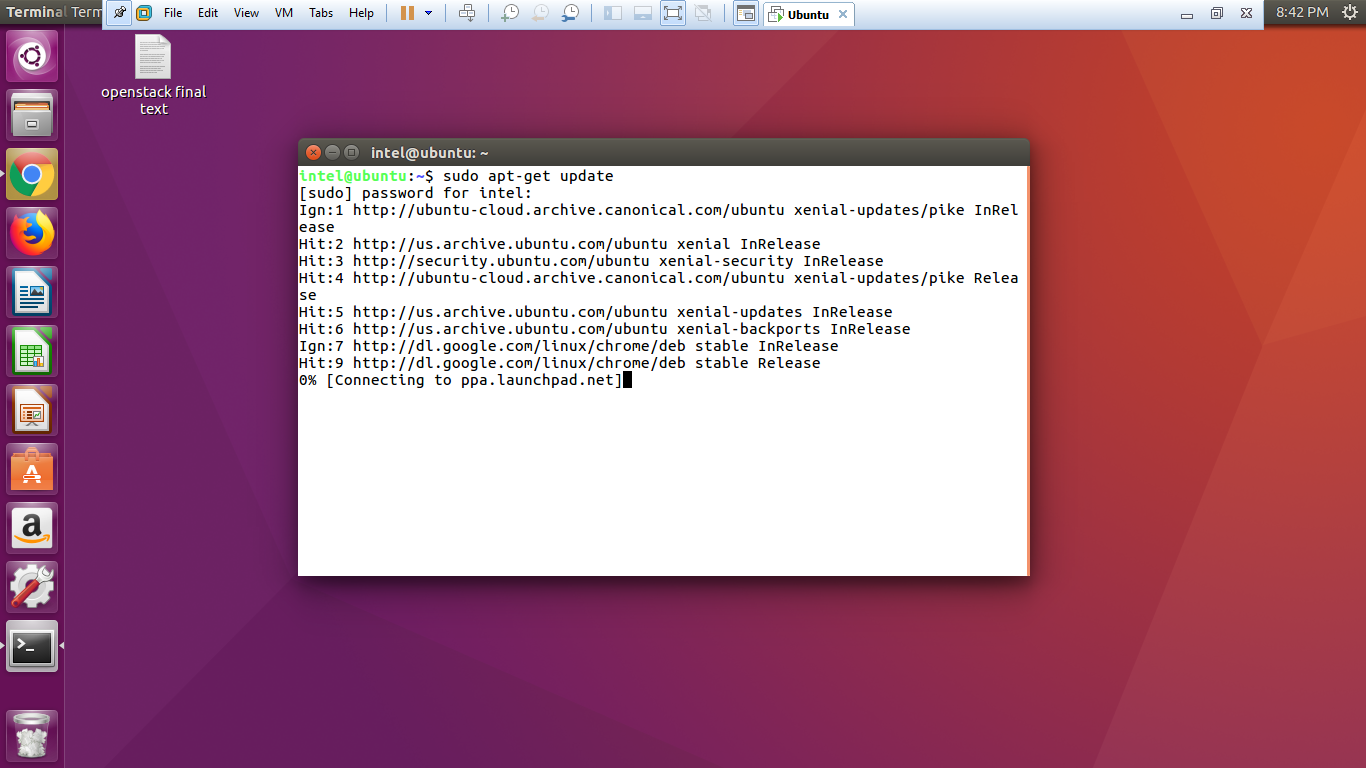
**Theory:**

OpenStack is a set of software tools for building and managing cloud computing platforms for public and private clouds. Backed by some of the biggest companies in software development and hosting, as well as thousands of individual community members, many think that OpenStack is the future of cloud computing. OpenStack is managed by the OpenStack Foundation, a non-profit that oversees both development and community-building around the project.

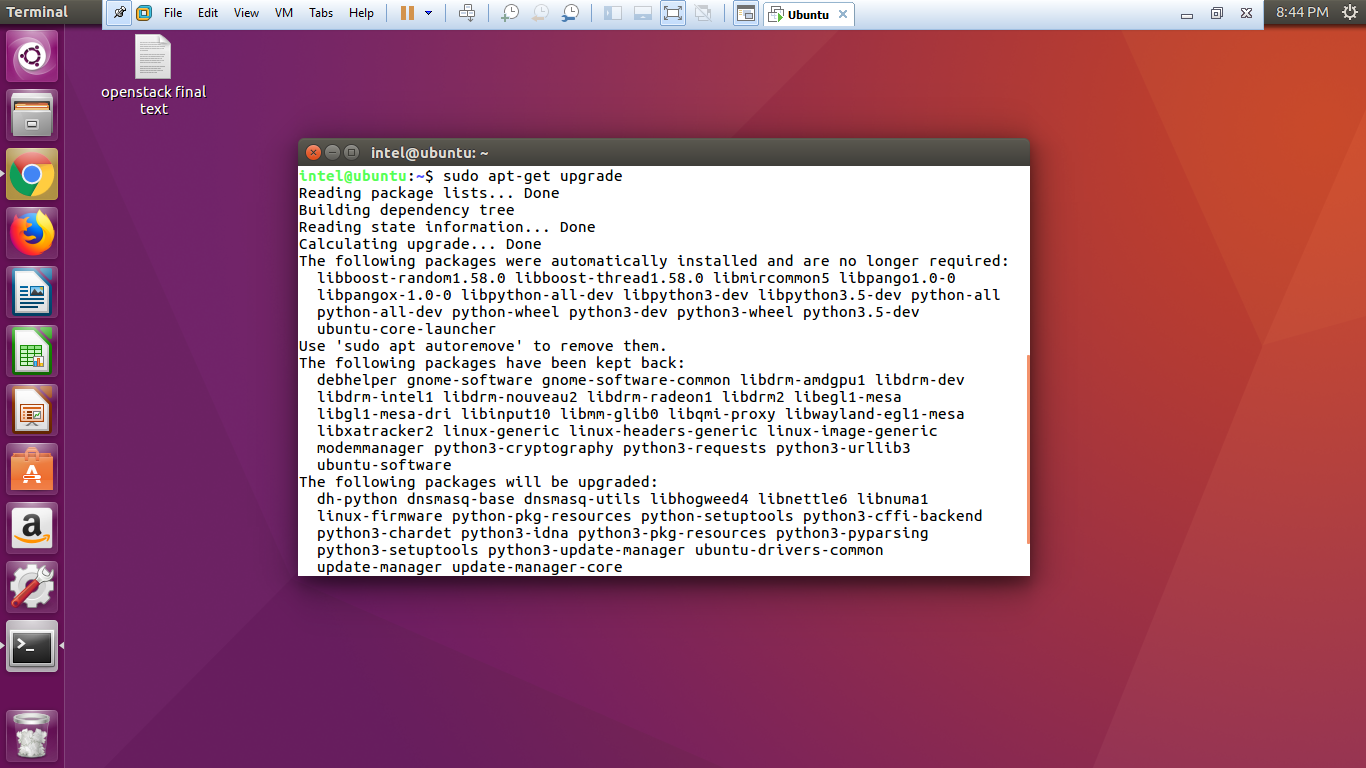
**Steps to Install OpenStack on Ubuntu 16.04:**

**Step 1: Update and install dependencies**

*sudo apt-get update*



*sudo apt-get upgrade*



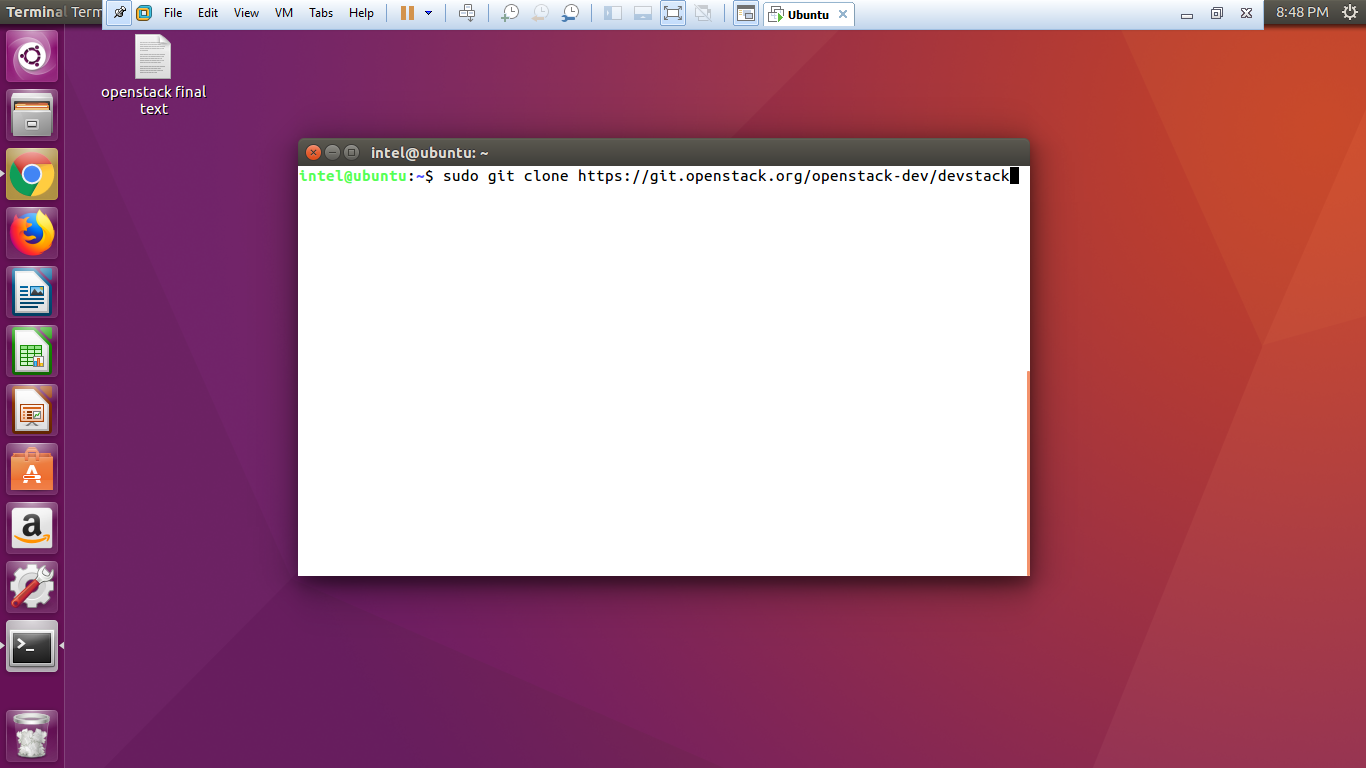
**Step 2: Install git if not installed**

*sudo apt-get install git*

**Step 3: Clone devstack:**

*cd /*

*​sudo git clone https://git.openstack.org/openstack-dev/devstack master*



**Step 4: Copy the sample configuration file and set a password to be used for automated deployment:**

To complete this task, issue the following commands:

*cd devstack*

*​sudo cp samples/local.conf local.conf*

**Step 5: Open the local.conf file:**

*sudo nano local.conf*

Search for the password variable section and ensure it reflects the following (YOURPASSWORD is the actual password you want to use):

ADMIN\_PASSWORD=YOURPASSWORD

​MYSQL\_PASSWORD=$ADMIN\_PASSWORD

​RABBIT\_PASSWORD=$ADMIN\_PASSWORD

​SERVICE\_PASSWORD=$ADMIN\_PASSWORD

**Step 6: Create a user and start the installation:**

It's time to run a few scripts. The first script will create a new user for devstack. The command to run this script is:

*sudo /devstack/tools/create-stack-user.sh*

**Step 7: Change the permissions of the devstack folder:**

*sudo chown -R stack:stack /devstack*

**Step 8: run the installation script:**

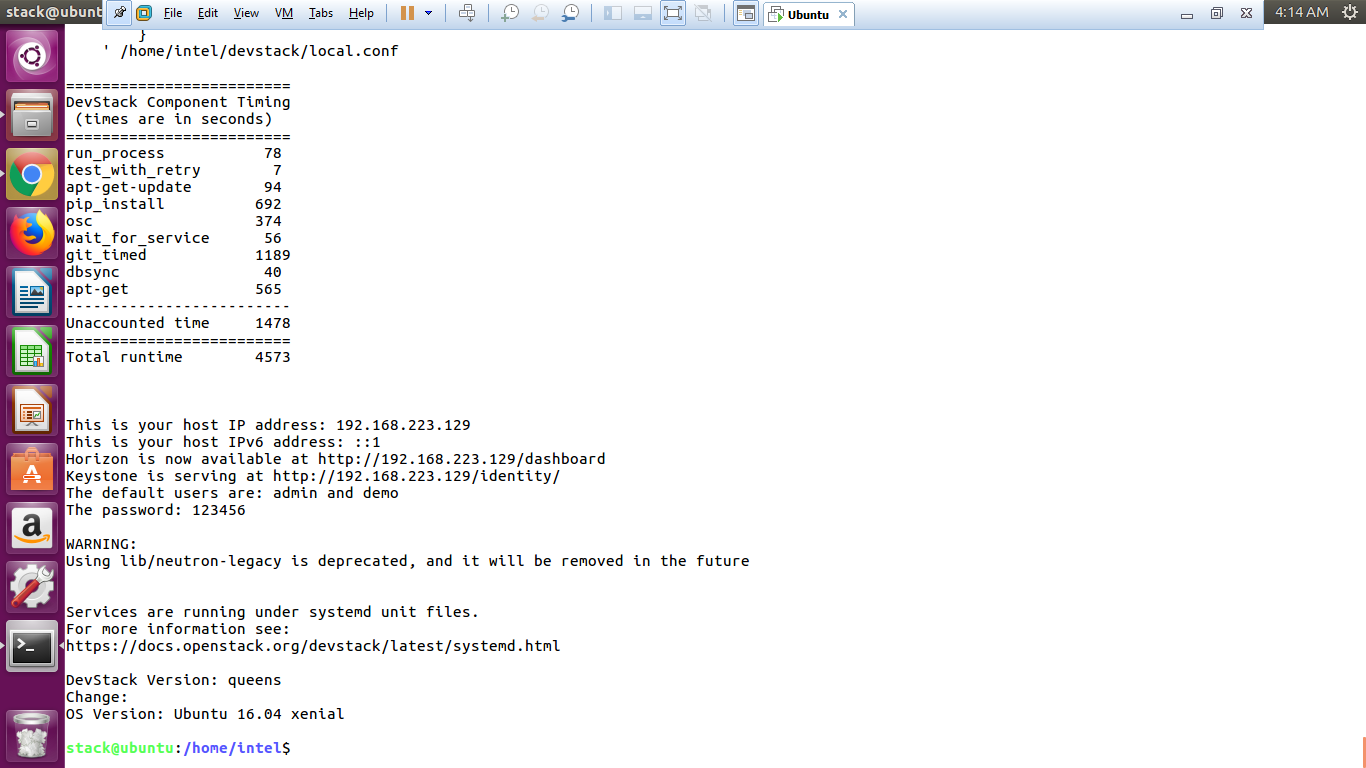
This must be run as the stack user by first issuing the command.

*sudo su stack*

**Step 9:Install OpenStack:**

*devstack/stack.sh*

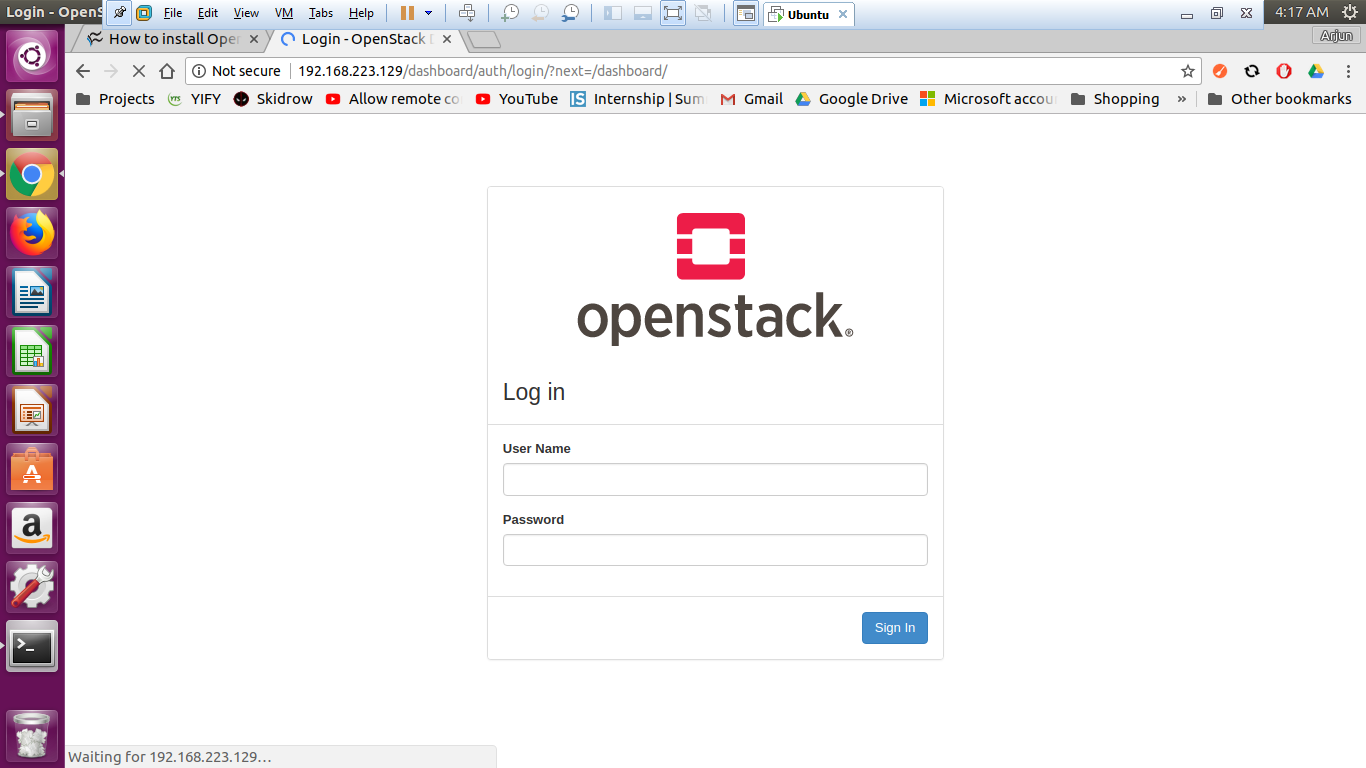
When the command finally completes, you will be given an IP address (the address of the server), as well as two usernames (the admin password was created in the local.conf file). Open a browser, point it to http://SERVER\_IP\_ADDRESS/dashboard, and log in with the given credentials. You will be presented with the OpenStack Dashboard.



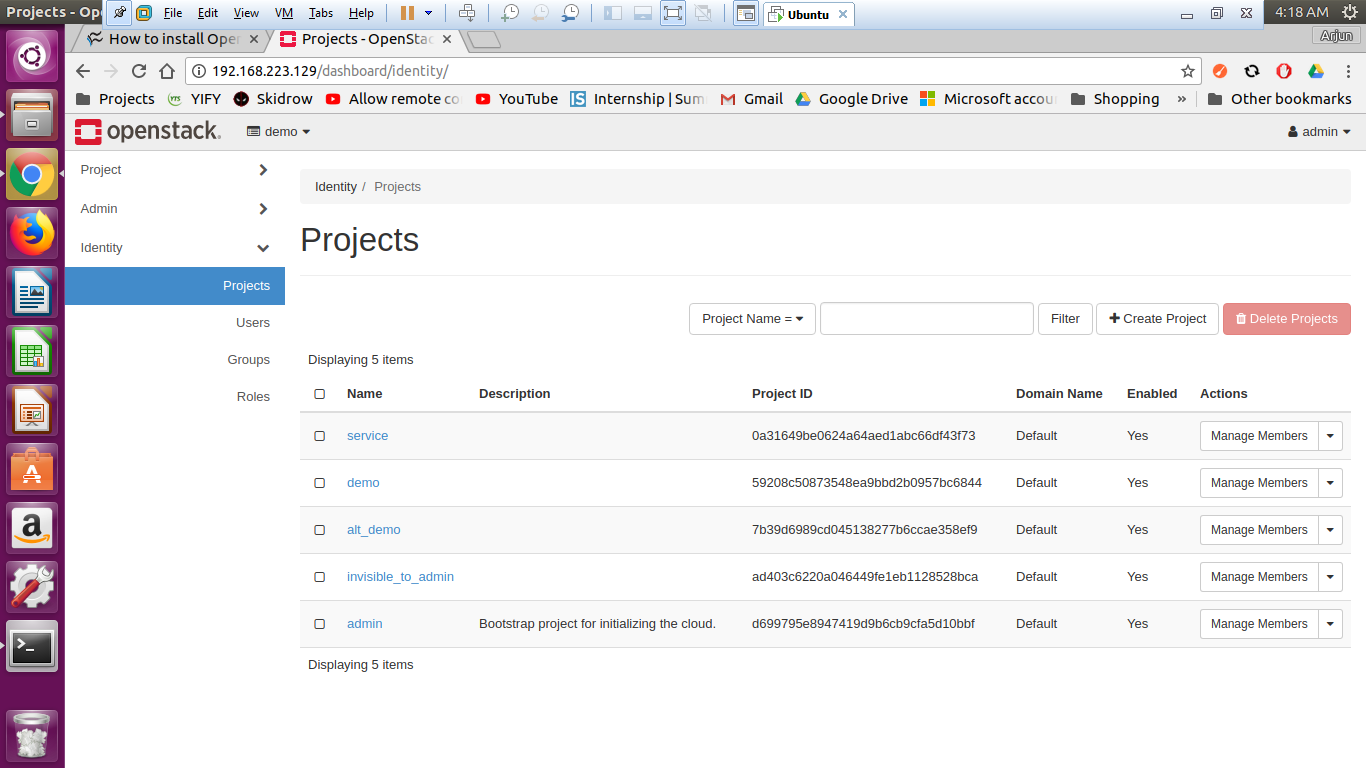
So, in our case,

* This is your host IP address: 192.168.223.129
* This is your host IPv6 address: ::1
* Horizon is now available at http://192.168.223.129/dashboard
* Keystone is serving at http://192.168.223.129/identity/
* The default users are: admin and demo
* The password: 123456

**On browsing http://192.168.223.129/dashboard .**



**After Logging In as “Admin” with password “1232456”,**



**Conclusion:**

Thus, OpenStack Tool has been installed successfully and used to implement Infrastructure as a Service.