

1) What is OpenStack?

Ans: 1) OpenStack is cloud operating system that controls large pools of compute, storage and networking resources throughout a datacentre, all managed and provisioned through APIs with common authentication mechanisms.

2) It provides an Infrastructure-as-a-Service (IaaS) solution through a variety of complementary services.

3) Each service offers an application programming interface (API) that facilitates this integration.

4) Major components of OpenStack are:

i) Horizon ii) Keystone iii) Networking iv) Cinder v) Nova vi) Glance vii) Swift.

2) What are the benefits of OpenStack?

Ans. Benefits of OpenStack are:

i) Enables rapid innovation

ii) Cuts down time-to-market

iii) Boosts scalability and resource utilization

iv) Eases regulatory compliance

v) Scarcity of talent

vi) Devoid of vendor lock-in

vii) Great industry support

viii) Easy to manage panel.

3) Write the steps to install OpenStack.

Ans. Steps to install OpenStack

1) Update and upgrade the system.

- update the system

sudo apt update

sudo apt -y upgrade



`sudo apt -y dist-upgrade`

- Reboot the system  $\rightarrow$  `sudo reboot`

## 2) Add stack user

`sudo useradd -s /bin/bash -d /opt/stack -m stack`

`echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo`

`tee /etc/sudoers.d/stack`

## 3) Download Devstack

`su - stack`

`sudo apt -y install git`

`git clone https://git.openstack.org/openstack-dev/devstack`

`cd devstack`

`nano local.conf`

## 4) Openstack services installation

`cd devstack ; ./stack.sh`

## 5) Verification and Access of Openstack

Once the installation is successfully completed, an address of openstack will be output. The output link should be copied and pasted into the browser to access the Openstack O's and fill the credentials.