# Installation Steps for OpenStack?

There are different ways to install Open stack some are listed below.

## DevStack (Specially for Ubuntu)

A series of extensible scripts used to quickly bring up a complete OpenStack environment based on the latest versions of everything from git master. It is used interactively as a development environment and as the basis for much of the OpenStack project’s functional testing.

The source is available at <https://git.openstack.org/cgit/openstack-dev/devstack>.

For installation refer to <https://docs.openstack.org/developer/devstack/>

If you do not have a preference, **Ubuntu 16.04** is the most tested, and will probably go the smoothest.

## Mirantis

To gain experience with the installation and deployment process, most users start by installing OpenStack on their laptop or desktop computer. Mirantis recommends automated installation using OpenStack Fuel and Virtual Box.

**Prerequisites** A 64-bit host OS with at least 8 GB RAM and 300 GB of free space. Virtualization must be enabled in the BIOS. If you use Microsoft Windows, use Cygwin.

For installation refer to<https://www.mirantis.com/how-to-install-openstack/>

## PackStack

*A utility that uses Puppet modules to deploy various parts of OpenStack on multiple pre-installed servers over SSH automatically. Currently only CentOS, Red Hat Enterprise Linux (RHEL) and compatible derivatives of both are supported.*

**Prerequisites** Machine with at least 4GB RAM, preferably 6GB RAM, processors with hardware virtualization extensions, and at least one network adapter.

**Note** - Here we will mainly focus on how to install OpenStack via PackStack.

## Steps to Install PackStack: -

* Install Centos 7 with Virtual Box.
* Give it 6-8GB memory and 4-6 CPUs.
* 1 NIC .
* 20 GB disk space at least.
* If you plan on having external network access to the server and instances, this is a good moment to properly configure your network settings. A static IP address to your network card, and disabling Network Manager are good ideas.

$ sudo systemctl disable firewalld

$ sudo systemctl stop firewalld

$ sudo systemctl disable NetworkManager

$ sudo systemctl stop NetworkManager

$ sudo systemctl enable network

$ sudo systemctl start network

* If you are using non-English locale make sure your /etc/environment is populated:

LANG=en\_US.utf-8

LC\_ALL=en\_US.utf-8

* Install the latest version of Opnstack release.

$ sudo yum install -y centos-release-openstack-ocata

$ sudo yum update -y

$ sudo yum install -y openstack-packstack

* Once all these packages installed you can go for all-in-one approach or you can install specific components for your environment. Below is all-in-one approach.

$ sudo packstack –allinone

OR

$sudo packstat –gen-answer-file=answer.txt

This will create “answer.txt” file in your current directory.

$vim answer.txt

Here in “answer.txt” file you can choose which component you want you can add multiple compute nodes, network nodes, and storage nodes as per your requirement.

Once you are ready run the below command.

$sudo packstack –answer-file=answer.txt

Make sure you give 10GB to cinder volume you can give more default is 20GB.

Note- It will take 30-40 minutes to install. For more info on installation refer to<https://www.rdoproject.org/install/quickstart/>

* After installation finish you can see file “keystone\_admin” in your current working directory. This file will have dashboard url and admin user password.

$sudo source keyston\_admin   
$sudo nova list

* Make changes in the **/etc/libvirt/qemu.conf** file set these parameters as mentioned below. (Find and change as below).

user=root

group=root

clear\_emulator\_capabilities=0

* Run the below commands:

#systemctl restart libvirtd

#chown –R nova:nova /var/lib/nova/instances

#mount –t devpts devpts /dev/pts

And vim **/etc/fstab** and append below line.

devpts /dev/pts devpts gid=5,mode=620 0 0