



Waterford Institute of Technology



openstack®

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## MINIMUM REQUIREMENTS

- A fresh Ubuntu 18.04 installation
- User with sudo privileges
- 4 GB RAM
- 2 vCPUs
- Hard disk capacity of 10 GB
- Internet connection

# UPDATE AND UPGRADE THE SYSTEM

- `apt update -y && apt upgrade -y`

```
root@ubuntu:/# apt update -y && apt upgrade -y
Hit:1 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:4 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:5 http://archive.canonical.com/ubuntu bionic InRelease [10.2 kB]
Get:6 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:7 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:8 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:9 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:10 http://us-central1.gce.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [627 kB]
```

## CREATE STACK USER AND ASSIGN SUDO PRIVILEGE

- `sudo adduser -s /bin/bash -d /opt/stack -m stack`
- `echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo tee /etc/sudoers.d/stack`

```
root@ubuntu:/# sudo useradd -s /bin/bash -d /opt/stack -m stack
root@ubuntu:/#
root@ubuntu:/# echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo tee /etc/sudoers.d/stack
stack ALL=(ALL) NOPASSWD: ALL
root@ubuntu:/#
```

# INSTALL GIT AND DOWNLOAD DEVSTACK

- `su - stack`
- `sudo apt install git -y`

```
root@ubuntu:~# su - stack
stack@ubuntu:~$
stack@ubuntu:~$ sudo apt install git -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version (1:2.17.1-1ubuntu0.4).
The following packages were automatically installed and are no longer required:
  grub-pc-bin libnuma1
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

## USING GIT, CLONE DEVSTACK'S GIT REPOSITORY

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

```
stack@ubuntu:~$ git clone https://git.openstack.org/openstack-dev/devstack
Cloning into 'devstack'...
warning: redirecting to https://opendev.org/openstack/devstack/
remote: Enumerating objects: 43615, done.
remote: Counting objects: 100% (43615/43615), done.
remote: Compressing objects: 100% (12575/12575), done.
remote: Total 43615 (delta 31152), reused 42370 (delta 30360)
Receiving objects: 100% (43615/43615), 8.27 MiB | 24.61 MiB/s, done.
Resolving deltas: 100% (31152/31152), done.
stack@ubuntu:~$
stack@ubuntu:~$ ls
devstack
stack@ubuntu:~$
```

- **DevStack** is a series of extensible scripts used to quickly bring up a complete OpenStack environment based on the latest versions of everything from git master.

## CREATE DEVSTACK CONFIGURATION FILE

- `cd devstack`
- `vim local.conf`
- Paste the following content

```
[[local|localrc]]  
  
# Password for KeyStone, Database, RabbitMQ and Service  
ADMIN_PASSWORD=StrongAdminSecret  
  
DATABASE_PASSWORD=$ADMIN_PASSWORD  
  
RABBIT_PASSWORD=$ADMIN_PASSWORD  
  
SERVICE_PASSWORD=$ADMIN_PASSWORD  
  
  
# Host IP - get your Server/VM IP address from ip addr command  
HOST_IP=10.208.0.10
```

# INSTALL OPENSTACK WITH DEVSTACK

- `./stack.sh`
- The following features will be installed:
  - Horizon – OpenStack Dashboard
  - Nova – Compute Service
  - Glance – Image Service
  - Neutron – Network Service
  - Keystone – Identity Service
  - Cinder – Block Storage Service
  - Placement – Placement API



# AT THE END OF THE INSTALLATION

```
This is your host IP address: 10.128.0.8
This is your host IPv6 address: ::1
Horizon is now available at http://10.128.0.8/dashboard
Keystone is serving at http://10.128.0.8/identity/
The default users are: admin and demo
The password: StrongAdminSecret

WARNING:
Using lib/neutron-legacy is deprecated, and it will be removed in the future

Services are running under systemd unit files.
For more information see:
https://docs.openstack.org/devstack/latest/systemd.html

DevStack Version: train
Change: 16d11d27f375b8c027bbc3a1db1885e90ce6c604 Merge "Option "lock_path" from group "DEFAULT"
OS Version: Ubuntu 18.04 bionic

2019-06-04 12:19:19.207 | stack.sh completed in 884 seconds.
```