**System Requirements**

Before starting, ensure your system meets these minimum requirements:

* **OS**: Ubuntu 20.04 LTS (Preferred) or later / Debian-based system
* **RAM**: At least **8GB** (Recommended: 16GB)
* **CPU**: Minimum **4 vCPUs**
* **Disk Space**: At least **30GB Free Space**
* **User Account**: Non-root user with sudo privileges
* **Internet Connection**: Required for downloading dependencies

1. **Update the System**

**Before installing anything, update your system packages:-**

* sudo apt update && sudo apt upgrade -y

1. **Install Dependencies**

**DevStack requires some essential dependencies. Install them using:-**

* sudo apt install -y git curl wget vim python3 python3-dev python3-pip net-tools

1. **Create a Non-Root User (stack)**

**For security reasons, DevStack does not run as the root user. Create a new user called stack:-**

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

**Give the stack user sudo privileges:-**

* echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo tee /etc/sudoers.d/stack

**Switch to the stack user:-**

* sudo su - stack

1. **Clone the DevStack Repository**

**Once inside the stack user, clone the DevStack Git repository:-**

* git clone <https://opendev.org/openstack/devstack.git>
* cd devstack

1. **Create the local.conf Configuration File**

**Inside the devstack directory, create a local.conf file:-**

* vi local.conf

**Copy and paste the following configuration:-**

[[local|localrc]]

ADMIN\_PASSWORD=secret

DATABASE\_PASSWORD=$ADMIN\_PASSWORD

RABBIT\_PASSWORD=$ADMIN\_PASSWORD

SERVICE\_PASSWORD=$ADMIN\_PASSWORD

(# Network Configuration)

HOST\_IP=192.168.1.100 ( # Change this to your machine’s IP )

(# Enable Basic Services)

ENABLED\_SERVICES+=q-svc,q-agt,q-dhcp,q-l3,q-meta

ENABLED\_SERVICES+=c-api,c-vol,c-sch,c-bak

ENABLED\_SERVICES+=n-api,n-crt,n-obj,n-cpu,n-cond,n-sch,n-novnc

ENABLED\_SERVICES+=g-api,g-reg

(Save & Exit)

1. **Run DevStack Installation Script**

**Run the installation script to install OpenStack:-**

* ./stack.sh

(🕒 **This process may take 20-60 minutes**, depending on your system and internet speed.)

1. **Access the OpenStack Dashboard**

**Once the installation completes, DevStack provides login details:-**

**Open a browser and visit:**

* http://your-ip/dashboard  
  (Replace your-ip with the HOST\_IP from local.conf)

**Default login credentials**:

* **Username**: admin
* **Password**: secret (or what you set in local.conf)

1. **Use OpenStack CLI**

**To interact with OpenStack via CLI, load the credentials:-**

* source openrc

**Test OpenStack services:**

* openstack service list

**Reinstalling**

**Reinstalling? If you need to reinstall DevStack, remove everything using:-**

* ./unstack.sh
* ./clean.sh

**Stopping DevStack**:-

* ./unstack.sh

**Starting DevStack again**:-

* ./rejoin-stack.sh