Step 1: Install Ubuntu

Device	Summary		
	10 GB		
Processors	8		
Hard Disk (SCSI)	57 GB		
O CD/DVD (SATA)	Using file C:\Users\ADMIN\D		
Network Adapter	NAT		
USB Controller	Present		
√) Sound Card	Auto detect		
Printer	Present		
Display	Auto detect		

Step 2: Install Openstack using Devstack in Ubuntu

Reference: https://www.youtube.com/watch?v=KCZ9PDoBfmo

```
sudo useradd -m -d /opt/stack -s /bin/bash stack
sudo chmod +x /opt/stack
echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo tee /etc/sudoers.d/stack
sudo su - stack
sudo apt install git -y
git clone <a href="https://git.openstack.org/openstack-dev/devstack">https://git.openstack.org/openstack-dev/devstack</a>
```

cd devstack

```
nano local.conf
[[local|localrc]]
# Password for KeyStone, Database, RabbitMQ and Service
ADMIN_PASSWORD=1
DATABASE_PASSWORD=1
RABBIT_PASSWORD=1
SERVICE_PASSWORD=1
# Host IP - get your Server/VM IP address from <ip addr> command
```

HOST_IP=192.168.204.144 # Enable basic services ENABLED_SERVICES+=,key,n-api,n-crt,n-obj,n-cpu,n-cond,n-sch,n-cauth,placement-api,placement-client

Enable Senlin and Senlin-Dashboard enable_plugin senlin https://opendev.org/openstack/senlin stable/2023.2 enable_plugin senlin-dashboard https://opendev.org/openstack/senlin-dashboard stable/2023.2

Name the logfile LOGFILE=/opt/stack/logs/stack.sh.log

Step 3: Install (This will take at least 10 mins) ./stack.sh

source ~/devstack/openrc

Step 4: Launch at least 2 instance and create ssh key

Reference:

https://www.youtube.com/watch?v=a4su8OLXSvc&list=PLFj79il4Np7AeggY5Z8IQzwyUB5nrM2XW

chmod 600 debian12 ssh -i debian12.key debian@172.24.4.245





