NETWORKING & SYSTEM ADMINISTRATION LAB

Experiment No.: 9

Name: SHAMJAD MAZOOD NAZER

Roll No: 36

Batch: MCA-B

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Aim

Introduction to Hypervisors and VMs: KVM installation and commands

Procedure

Step 1: Update the repositories

```
mca@U36:~/Desktop/RMCA-B/NETWORK/16-06-2022$ sudo apt update
[sudo] password for mca:
Get:1 http://dl.google.com/linux/chrome/deb stable InRelease [1,811 B]
Hit:2 http://ppa.launchpad.net/codeblocks-devs/release/ubuntu bionic InRelease
Hit:3 http://archive.ubuntu.com/ubuntu bionic InRelease
Err:4 http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu bionic InRelease
  403  Forbidden [IP: 185.125.190.52 80]
Hit:5 http://ppa.launchpad.net/pasgui/ppa/ubuntu bionic InRelease
Get:6 http://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,101 B]
Hit:7 http://ppa.launchpad.net/webupd8team/java/ubuntu bionic InRelease
```

Step 2: Install essential KVM packages

Install virt-manager, a tool for creating and managing VMs

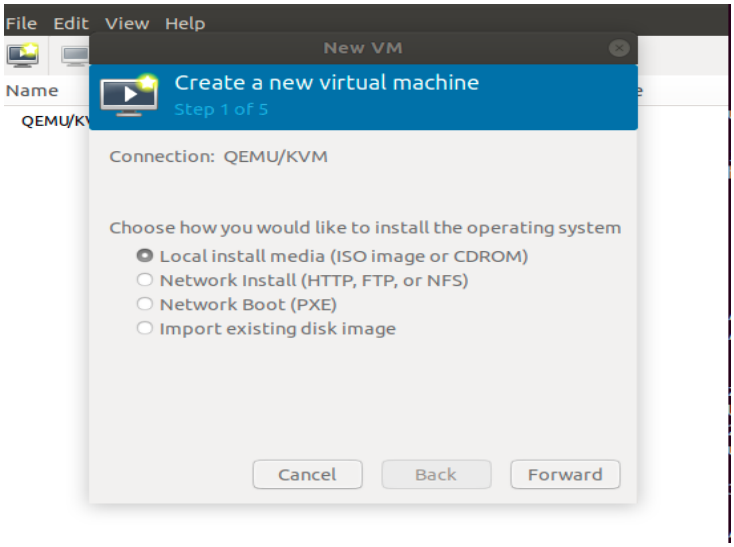
```
mca@U40:~$ sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils virt-manager
Reading package lists... Done
Building dependency tree
Reading state information... Done
qemu-kvm is already the newest version (1:2.11+dfsg-1ubuntu7.4).
The following additional packages will be installed:
  augeas-lenses dmeventd ebtables gir1.2-appindicator3-0.1 gir1.2-gtk-vnc-2.0
  gir1.2-libosinfo-1.0 gir1.2-libvirt-glib-1.0 gir1.2-spiceclientglib-2.0
  gir1.2-spiceclientgtk-3.0 libaugeas0 libdevmapper-event1.02.1
  libgovirt-common libgovirt2 libgtk-vnc-2.0-0 libgvnc-1.0-0 liblvm2app2.2
  liblvm2cmd2.02 libnetcf1 libosinfo-1.0-0 libphodav-2.0-0
  libphodav-2.0-common libspice-client-glib-2.0-8 libspice-client-gtk-3.0-5
  libusbredirhost1 libvirt-daemon libvirt-daemon-driver-storage-rbd
  libvirt-glib-1.0-0 libvirt0 libxml2-utils lvm2 osinfo-db python-asn1crypto
  python-certifi python-cffi-backend python-chardet python-cryptography
  python-dbus python-enum34 python-gi python-gi-cairo python-idna
  python-ipaddr python-ipaddress python-libvirt python-libxml2 python-openssl
  python-pkg-resources python-requests python-six python-urllib3
  spice-client-glib-usb-acl-helper virt-viewer virtinst
Suggested packages:
  augeas-doc augeas-tools libosinfo-l10n gstreamer1.0-plugins-bad
  gstreamer1.0-libav libvirt-daemon-driver-storage-gluster
  libvirt-daemon-driver-storage-sheepdog libvirt-daemon-driver-storage-zfs
```

Step 3: Start virt-manager with

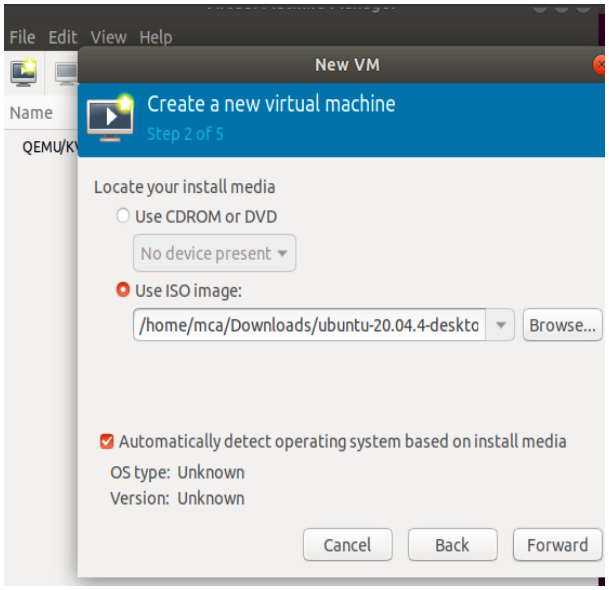
```
mca@U36:~/Desktop/RMCA-B/NETWORK/16-06-2022$ sudo virt-manager
mca@U36:~/Desktop/RMCA-B/NETWORK/16-06-2022$
```

Step 4: In the first window, click the computer icon in the upper-left corner,

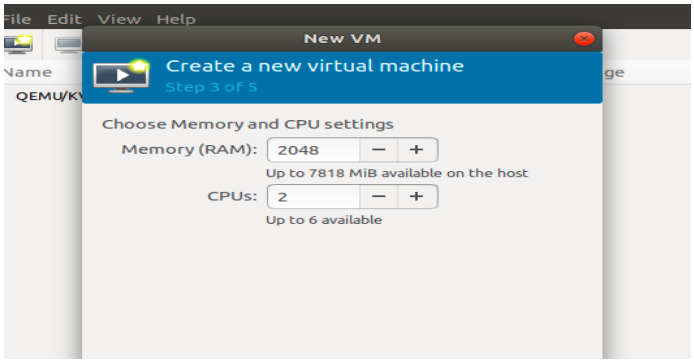
In the dialogue box that opens, select the option to install the VM using an ISO image. Then click **Forward**.



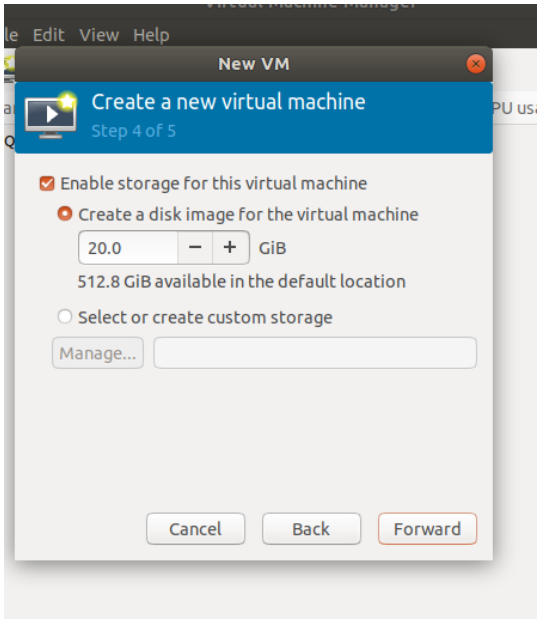
Step 5: Choose ISO,click Forward



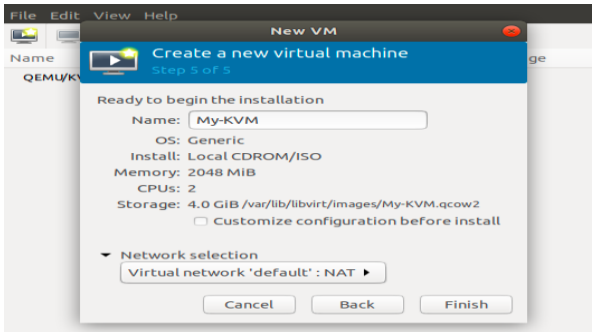
Step 6: Enter the amount of RAM and the number of CPUs you wish to allocate to the VM and proceed to the next step.



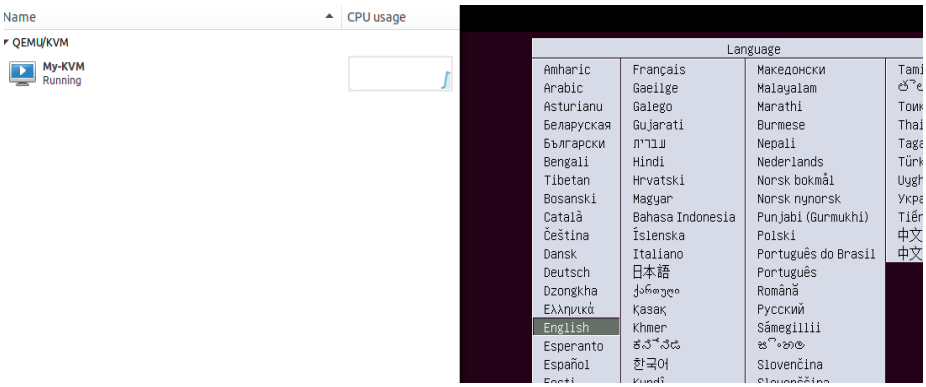
Step 7: Allocate hard disk space to the VM. Click **Forward** to go to the last step.



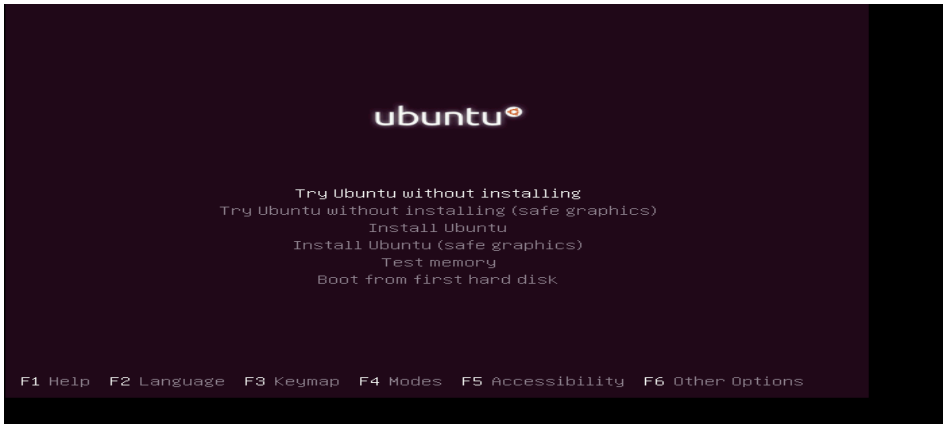
Step 8: Specify the name for your VM and click **Finish** to complete the setup.

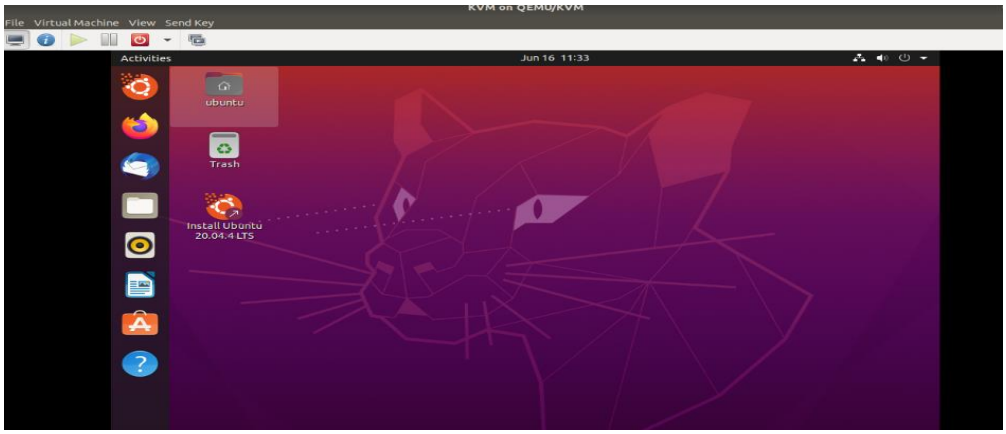


Step 9: Select language



Step 10: The VM starts automatically, prompting you to start installing the OS that's on the ISO file.

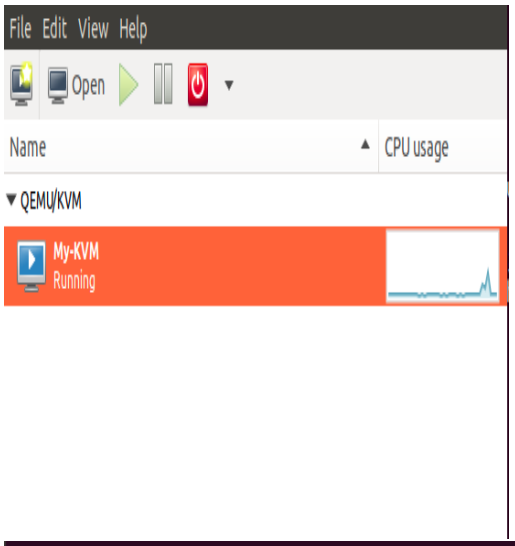




Step 11: Check the state of KVM

```
mca@U40:~$ sudo virsh list --all
 Id    Name                           State
----------------------------------------------------
 1     KVM                            running

mca@U40:~$
```




```
mca@U40:~$ sudo virsh list --all
 Id    Name                           State
----------------------------------------------------
 -     KVM                            shut off
```