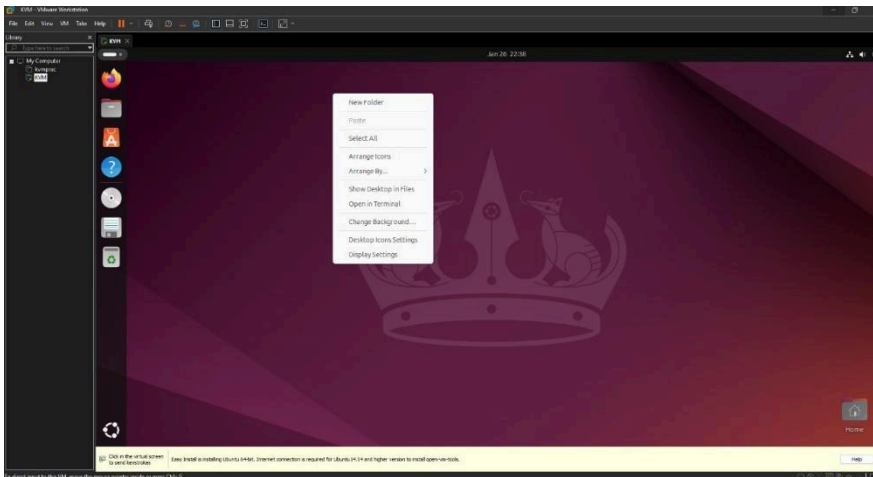


II) KVM Setup Steps: Open Terminal



1. Update the System

sudo apt update && sudo apt upgrade -y

2. Check if Virtualization is Enabled:

sudo grep -c "svm|vmx" /proc/cpuinfo

3. Verify KVM Virtualization

Check if KVM virtualization is enabled by running command:

kvm-ok

If the kvm-ok command is not found, install the CPU checker tool:

sudo apt install cpu-checker

then type kvm-ok

Output should include:

INFO: /dev/kvm exists

KVM acceleration can be used.

4. Install KVM and Required Packages

sudo apt install qemu-kvm virt-manager libvirt-daemon-system libvirt-clients bridge-utils -y

5. Enable the Virtualization Daemon

Start and enable the libvirt daemon:

sudo systemctl enable libvirtd

sudo systemctl start libvirtd

6. Check the Status of the Libvirt Daemon

Verify that the daemon is running:

sudo systemctl status libvirtd

7. Add Your User to KVM and Libvirt Groups

Replace your-username with your actual username and run the following commands:

sudo usermod -aG kvm your-username

sudo usermod -aG libvirt your-username

```
cloud@cloud-VMware-Virtual-Platform: ~/Desktop
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo apt update && sudo apt upgrade -y
[sudo] password for cloud:
Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:2 http://in.archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:4 http://in.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:5 http://in.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [783 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [976 kB]
Fetched 1,885 kB in 2s (795 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
3 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following package was automatically installed and is no longer required:
  python3-netifaces
Use 'sudo apt autoremove' to remove it.
Get more security updates through Ubuntu Pro with 'esm-apps' enabled:
  libbson1 libpostproc57 libavcodec60 libavutil58 libswscale7 libswresample4
  libavformat60 libavfilter9
Learn more about Ubuntu Pro at https://ubuntu.com/pro
The following upgrades have been deferred due to phasing:
  python3-distupgrade ubuntu-release-upgrader-core ubuntu-release-upgrader-gtk
3 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo grep -c "svm|vmx" /proc/cpuinfo
0
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ kvm-ok
INFO: Your CPU does not support KVM extensions
INFO: For more detailed results, you should run this as root
HINT:  sudo /usr/sbin/kvm-ok
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo apt install cpu-checker
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
cpu-checker is already the newest version (0.7-1.3build2).
```

```
cloud@cloud-VMware-Virtual-Platform:~/Desktop
The following package was automatically installed and is no longer required:
  python3-netifaces
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ kvm-ok
INFO: Your CPU does not support KVM extensions
INFO: For more detailed results, you should run this as root
HINT:  sudo /usr/sbin/kvm-ok
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo apt install qemu-kvm virt-manager libvirt-daemon-system libvirt-clients bridge-utils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'qemu-system-x86' instead of 'qemu-kvm'
qemu-system-x86 is already the newest version (1:8.2.2+ds-0ubuntu1.5).
virt-manager is already the newest version (1:4.1.0-3ubuntu0.1).
libvirt-daemon-system is already the newest version (10.0.0-2ubuntu0.5).
libvirt-clients is already the newest version (10.0.0-2ubuntu0.5).
bridge-utils is already the newest version (1.7.1-1ubuntu2).
The following package was automatically installed and is no longer required:
  python3-netifaces
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl enable libvirtd
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl start libvirtd
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl status libvirtd
● libvirtd.service - libvirt legacy nonolithic daemon
   Loaded: loaded (/usr/lib/systemd/system/libvirtd.service; enabled; preset: enabled)
   Active: active (running) since Sun 2025-01-26 19:42:17 IST; 17min ago
   TriggeredBy: ● libvirtd-admin.socket
                 ● libvirtd.socket
                 ● libvirtd-ro.socket
   Docs: man:libvirtd(8)
         https://libvirt.org/
  Main PID: 1467 (libvirtd)
    Tasks: 24 (limits: 32768)
  Memory: 25.4M (peak: 95.5M swap: 10.9M swap peak: 10.9M)
     CPU: 2.504s
   CGroup: /system.slice/libvirtd.service

Enter outside or press Ctrl+Alt
```

```
cloud@cloud-VMware-Virtual-Platform: ~/Desktop
The following package was automatically installed and is no longer required:
python3-netifaces
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ kvm-ok
INFO: Your CPU does not support KVM extensions
INFO: For more detailed results, you should run this as root
HINT: sudo /usr/sbin/kvm-ok
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo apt install qemu-kvm virt-manager libvirt-daemon-system libvirt-clients bridge-utils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'qemu-system-x86' instead of 'qemu-kvm'
qemu-system-x86 is already the newest version (1:8.2.2+ds-0ubuntu1.5).
virt-manager is already the newest version (1:4.1.0-3ubuntu0.1).
libvirt-daemon-system is already the newest version (10.0.0-2ubuntu0.5).
libvirt-clients is already the newest version (10.0.0-2ubuntu0.5).
bridge-utils is already the newest version (1:7.1-1ubuntu2).
The following package was automatically installed and is no longer required:
python3-netifaces
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl enable libvirtd
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl start libvirtd
cloud@cloud-VMware-Virtual-Platform:~/Desktop$ sudo systemctl status libvirtd
● libvirtd.service - libvirt legacy monolithic daemon
   Loaded: loaded (/usr/lib/systemd/system/libvirtd.service; enabled; preset: enabled)
   Active: active (running) since Sun 2025-01-26 19:42:17 IST; 17min ago
   TriggeredBy: ● libvirtd-admin.socket
                 ● libvirtd.socket
                 ● libvirtd-ro.socket
   Docs: man:libvirtd(8)
         https://libvirt.org/
  Main PID: 1467 (libvirtd)
    Tasks: 24 (limit: 32768)
   Memory: 25.4M (peak: 95.5M swap: 10.9M swap peak: 10.9M)
     CPU: 2.504s
   CGroup: /system.slice/libvirtd.service
```

8. Log Out and Re-login

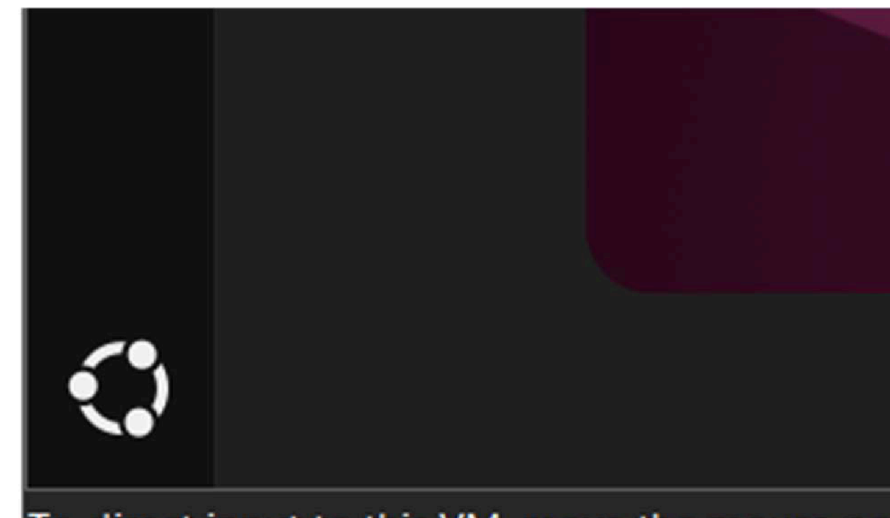
Log out from your system and log back in to apply group changes.

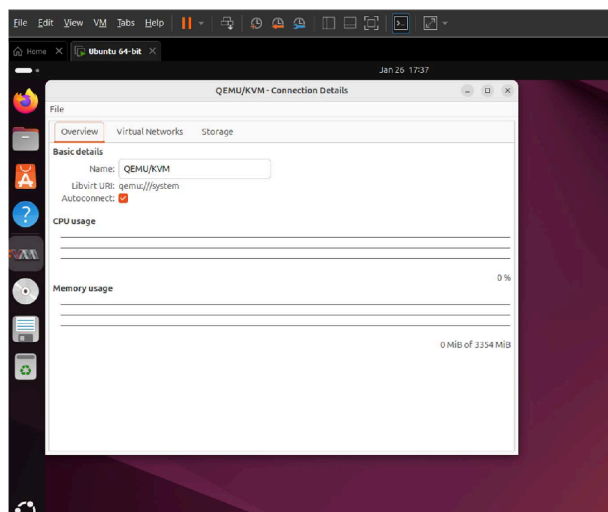
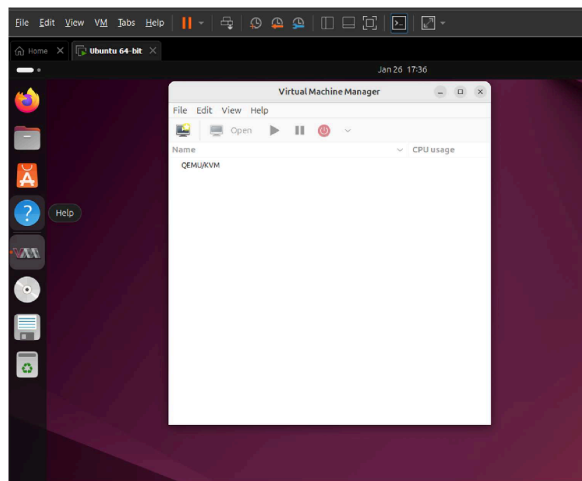
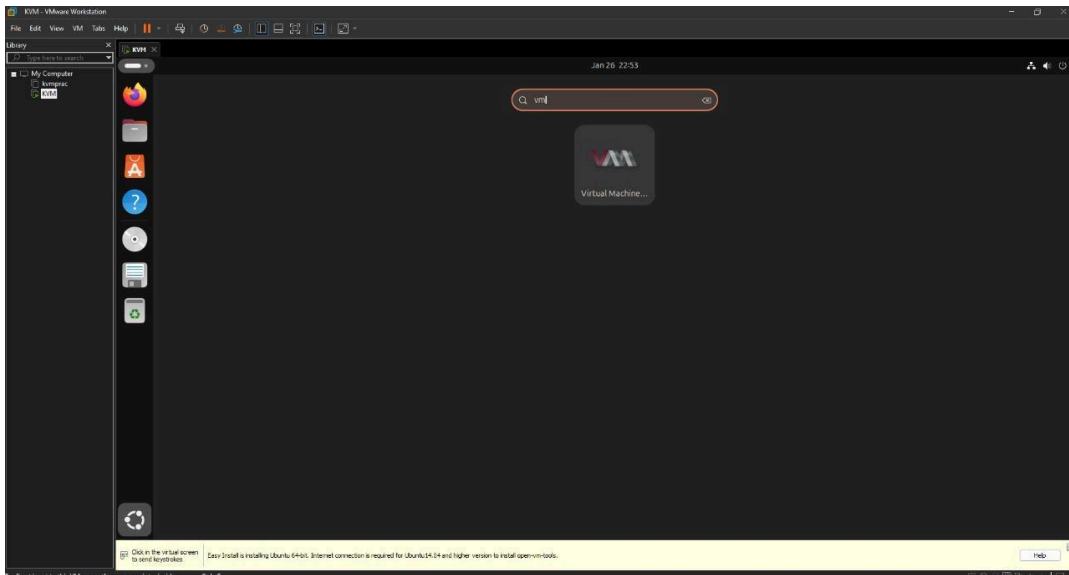
9. Run KVM Virtual Machine Manager

Search for "Virtual Machine Manager" in your system applications and launch it.

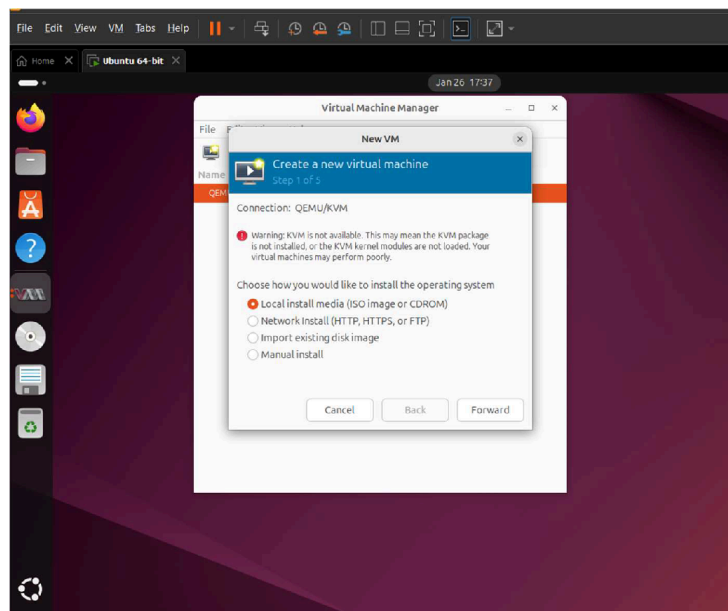
10. Prepare to Create Virtual Machines

In Virtual Machine Manager, click Create a New Virtual Machine to begin setting up virtual environments.

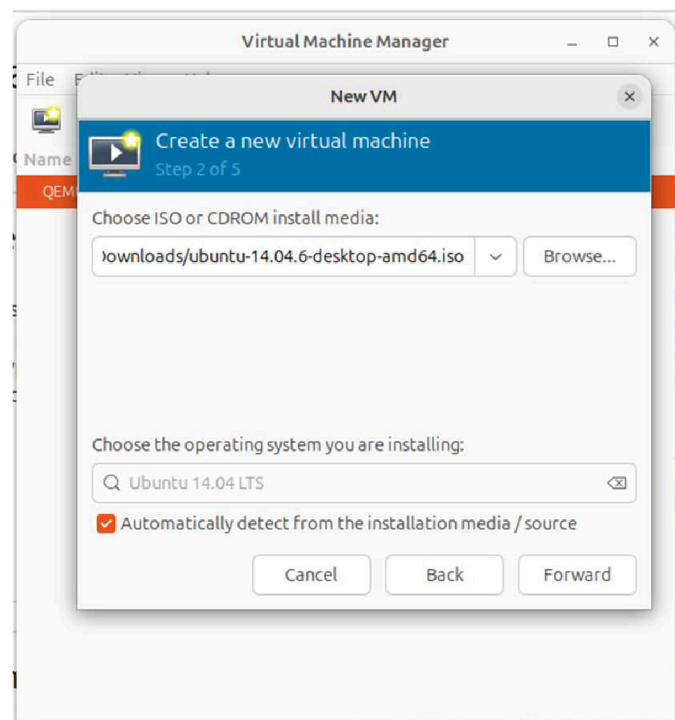




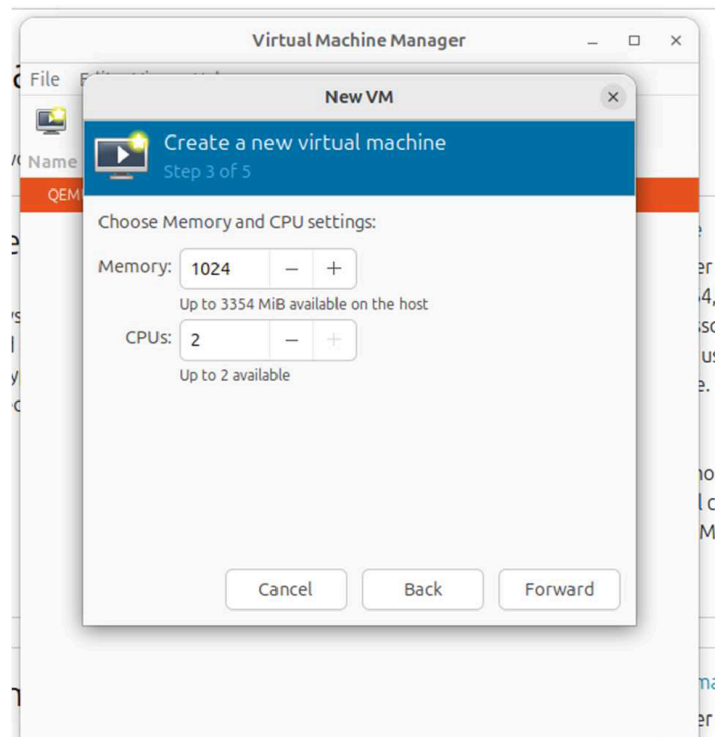
Now we can create new virtual machine from File>Create New Virtual Machine



Then ,Select the os to install (eg:/:windows, ubuntu etc)



Then



Then

