31442
Shivanjali Karande
Cloud Computing

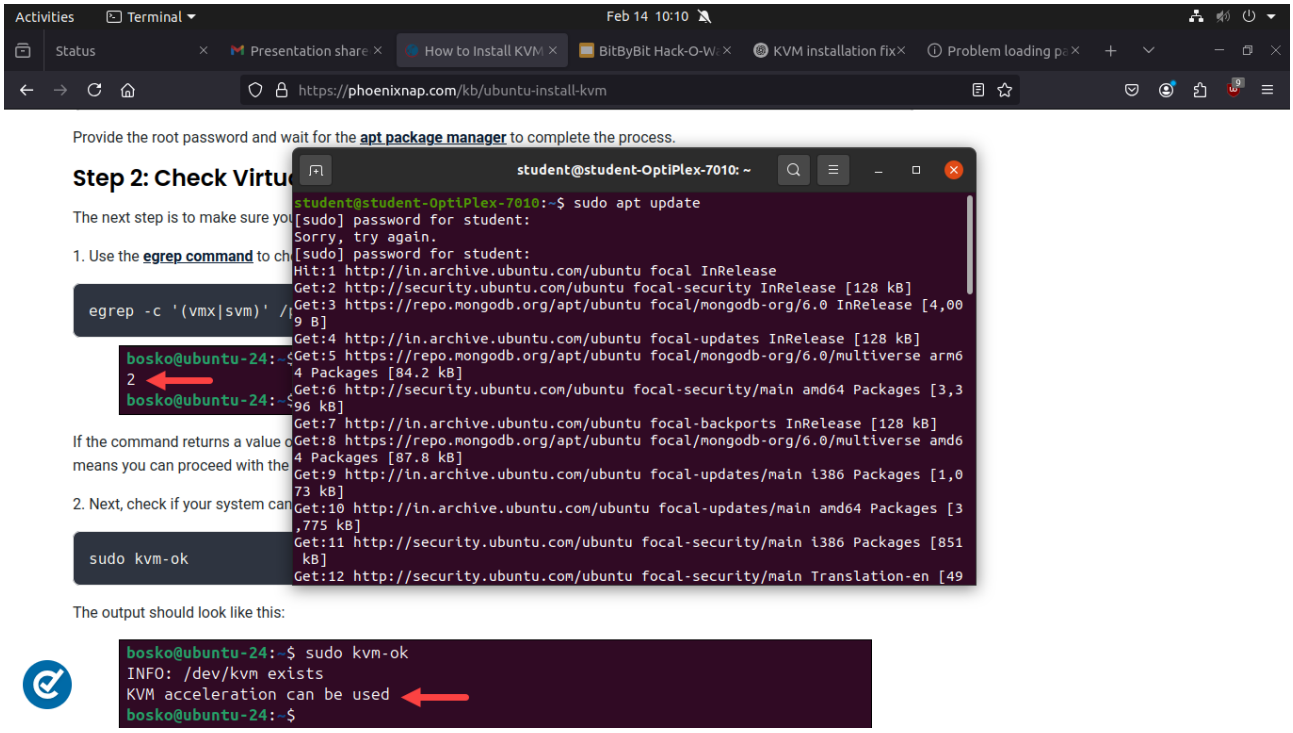
ASSIGNMENT NO. 2

Install KVM on Ubuntu

Step 1: Update Ubuntu

Run the command below:

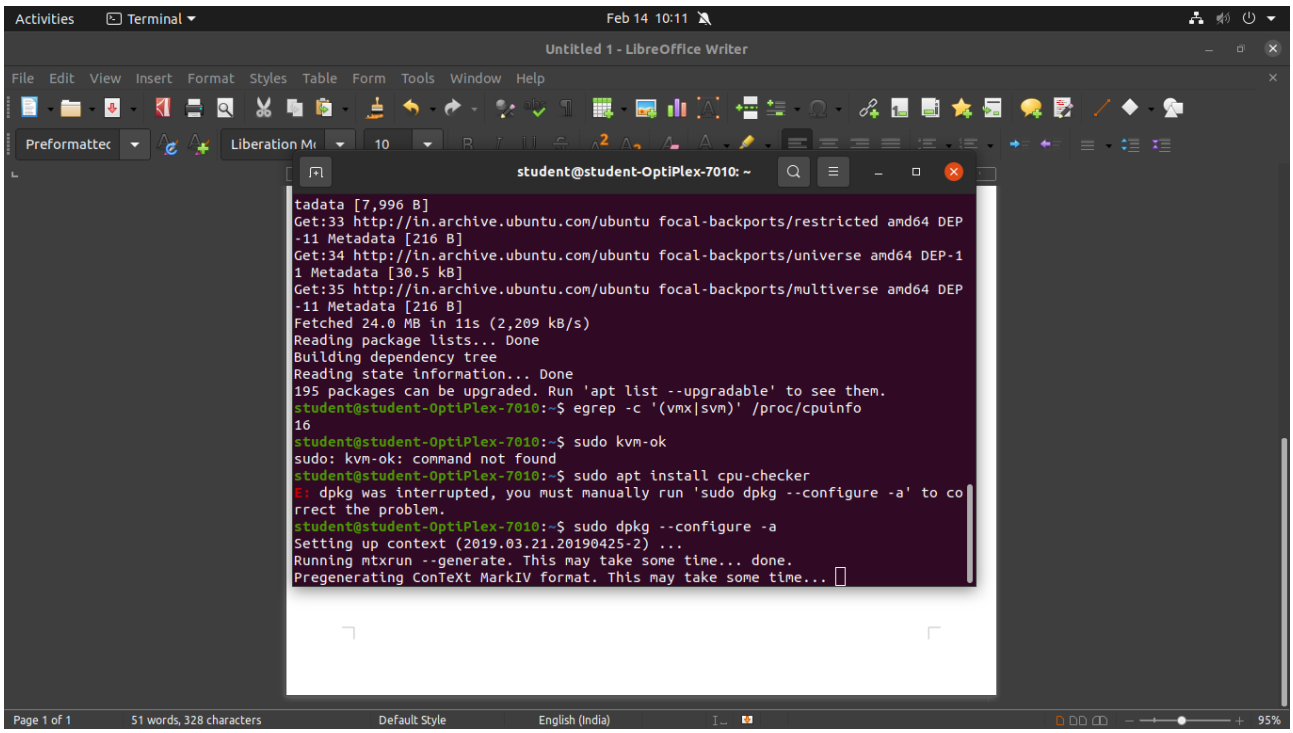
```
sudo apt update
```



Step 2: Check Virtualization Support on Ubuntu:

1. Use the egrep command to check if your CPU supports hardware virtualization. Run the following command:

```
egrep -c '(vmx|svm)' /proc/cpuinfo
```

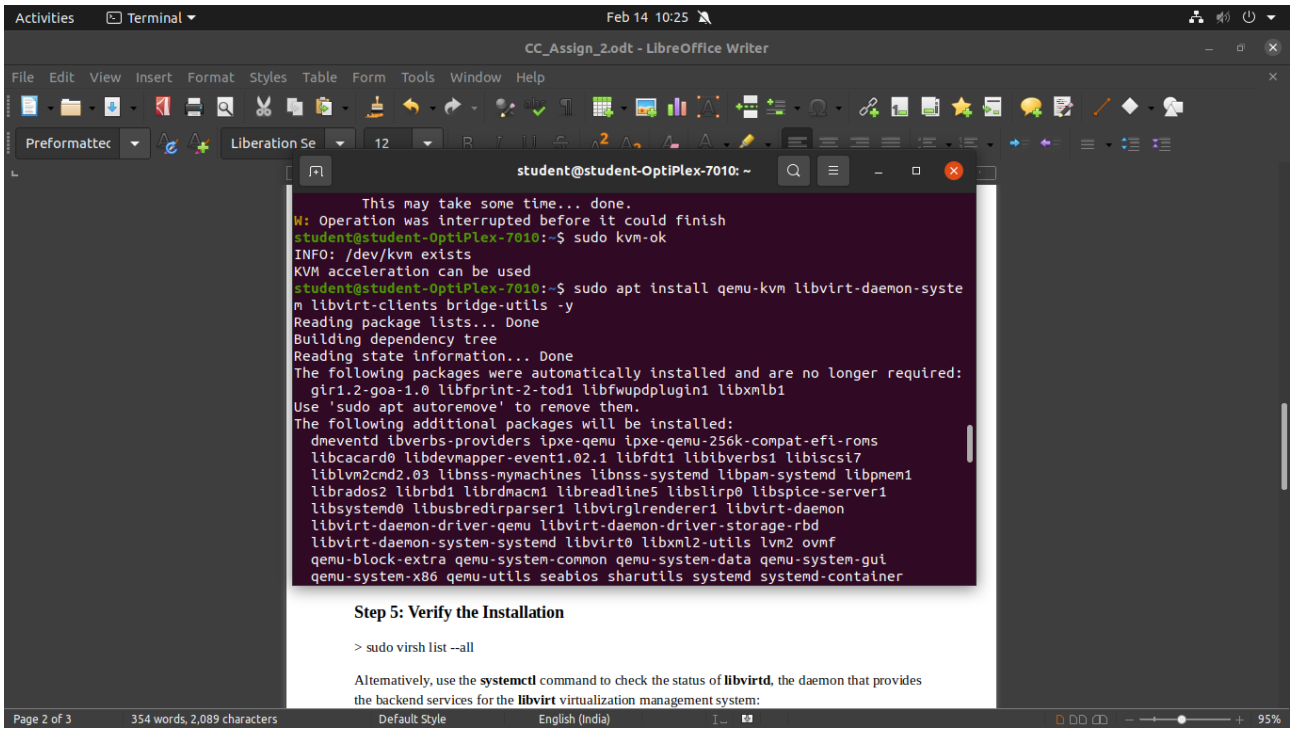


. Next, check if your system can use KVM acceleration:

`sudo kvm-ok`

Step 3: Install KVM Packages

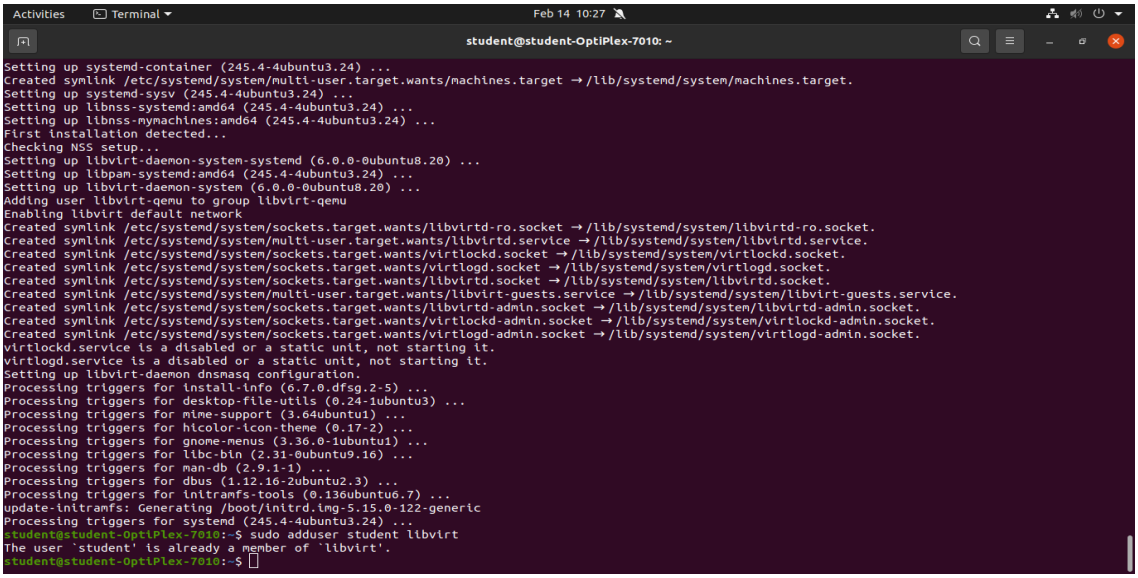
sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils -y



Step 4: Authorize Users

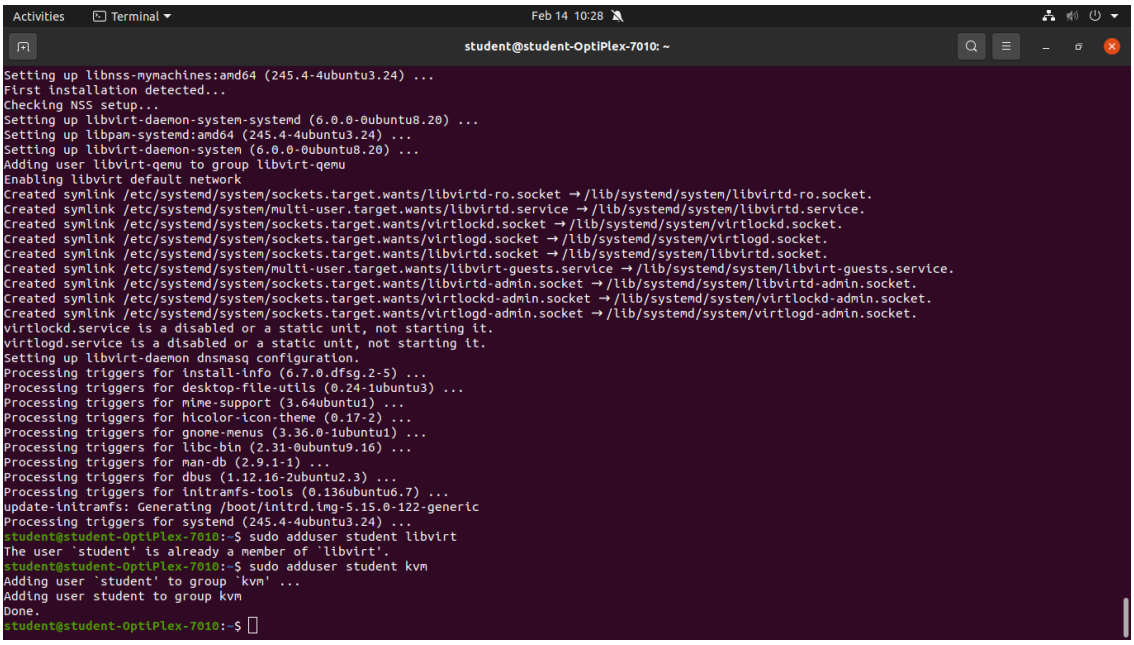
1. Add the user you want to run the virtual machines to the `libvirt` group:

> sudo adduser [username] libvirt



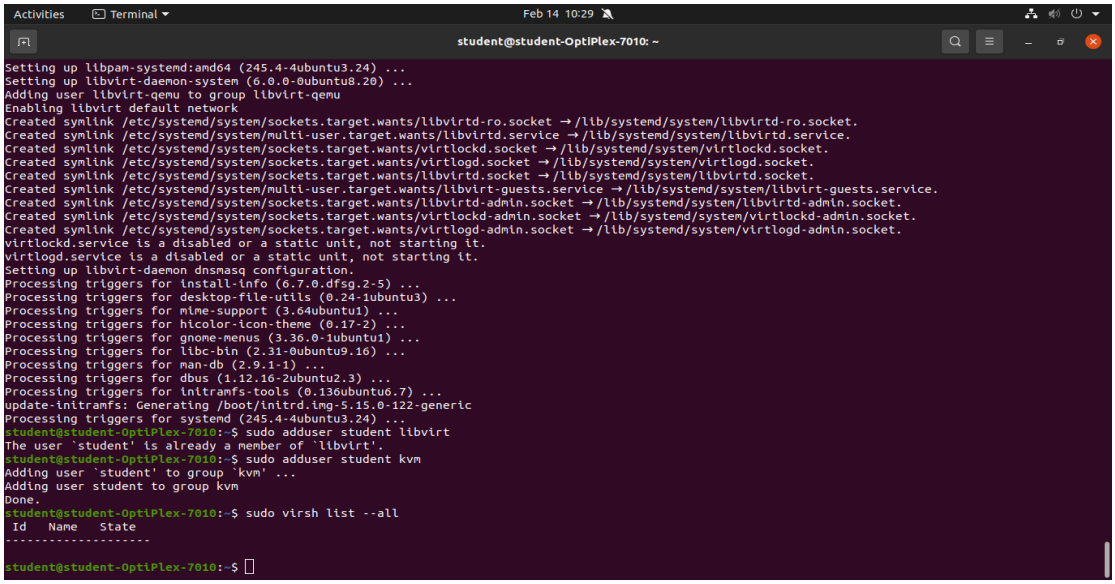
2. Next, do the same for the kvm group:

> sudo adduser [username] kvm



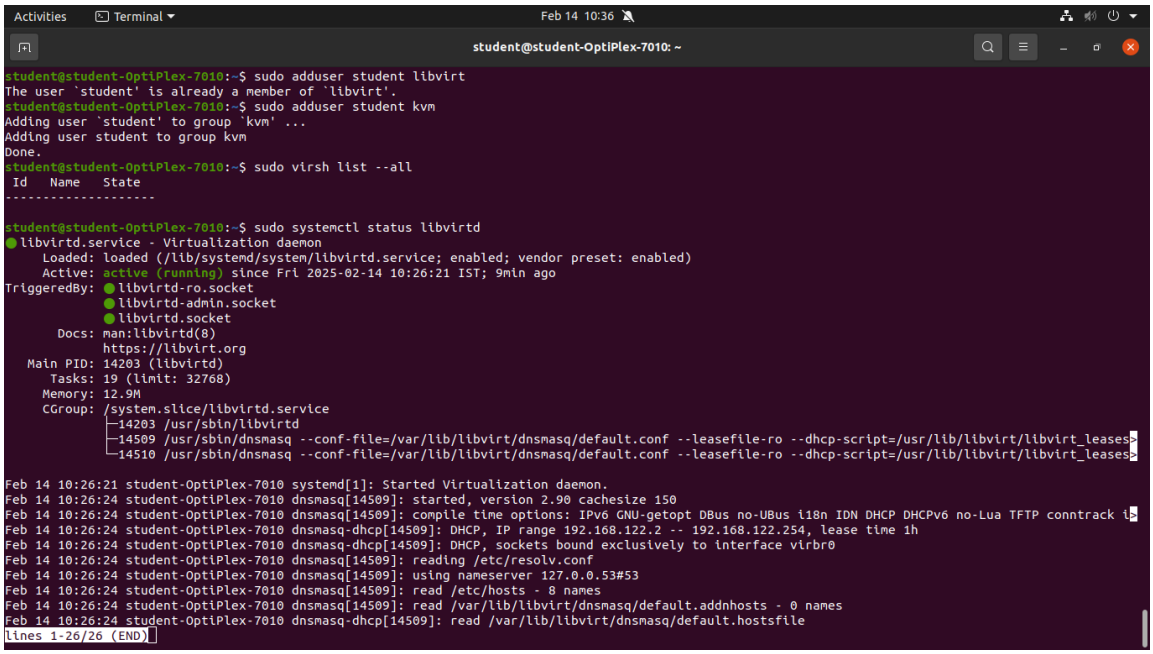
Step 5: Verify the Installation

> sudo virsh list –all



Alternatively, use the **systemctl** command to check the status of **libvirtd**, the daemon that provides the backend services for the **libvirt** virtualization management system:

> sudo systemctl status libvirtd



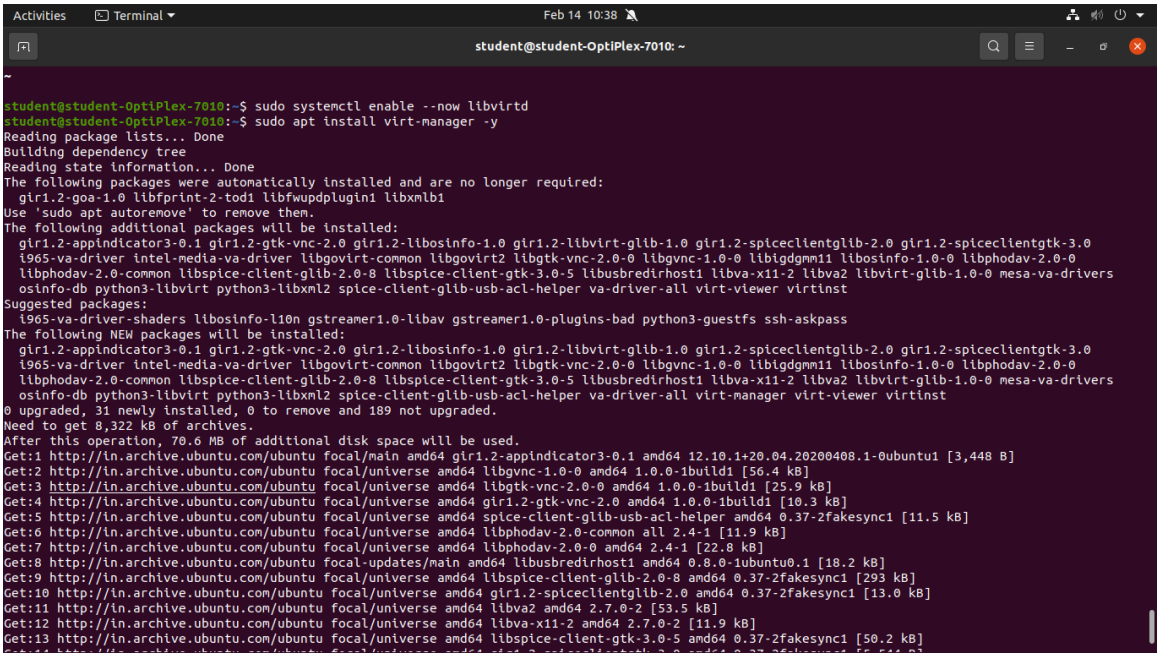
If the virtualization daemon is not active, activate it with the following command:

sudo systemctl enable --now libvirtd

Create Virtual Machine on Ubuntu

install **virt-manager**, a tool for creating and managing VMs:

>sudo apt install virt-manager -y

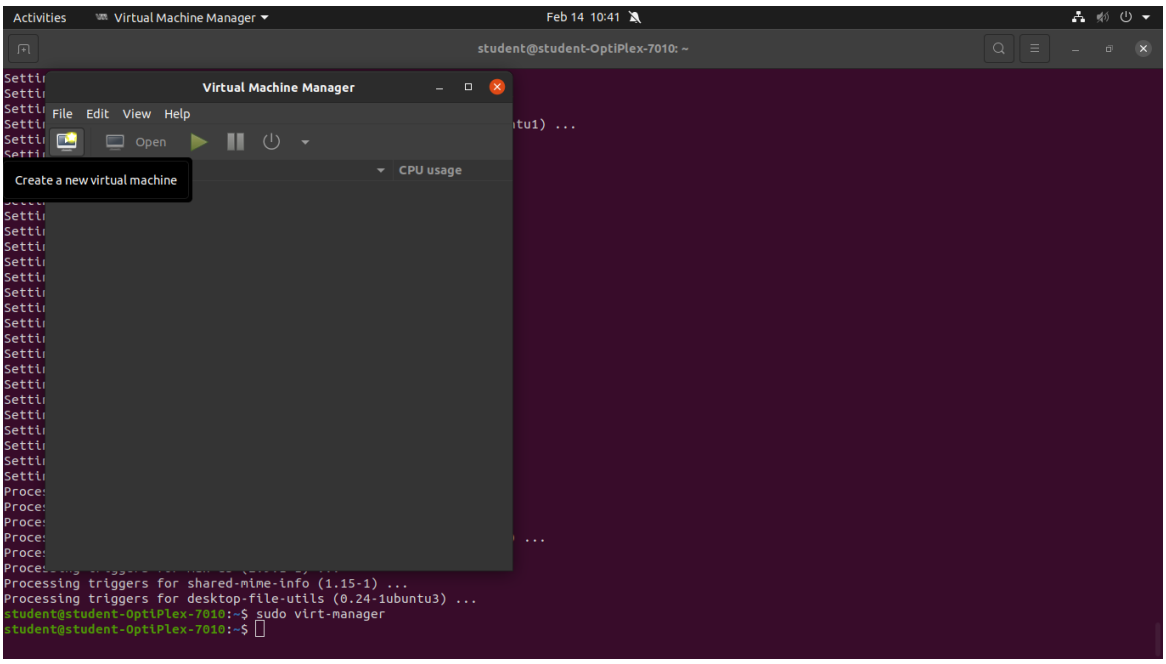


Method 1: Virt Manager GUI

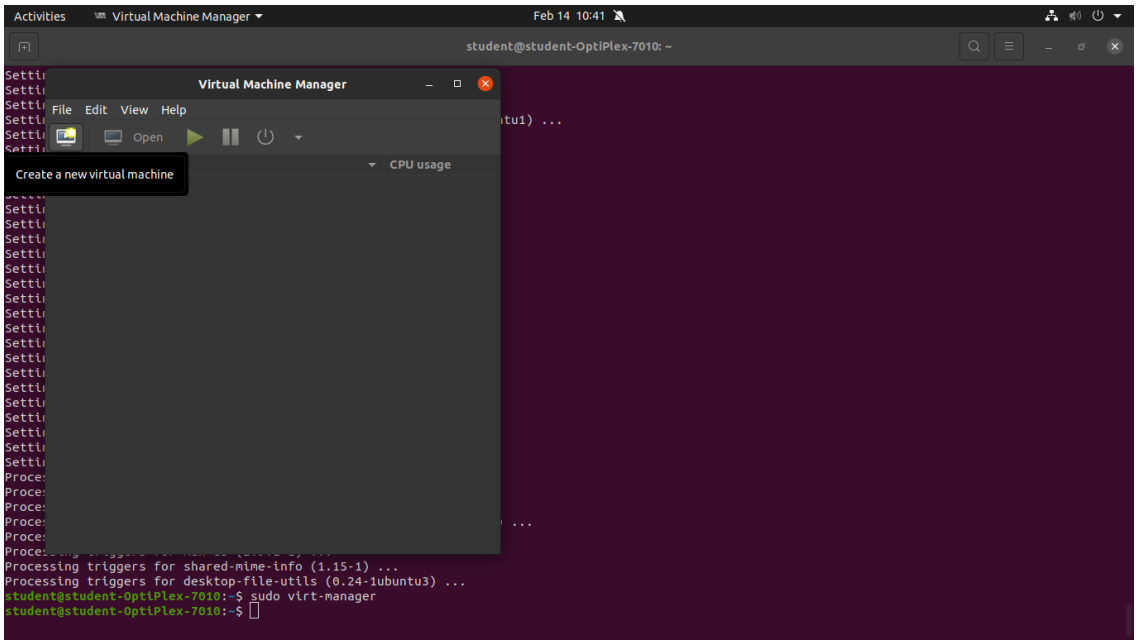
Virt-manager is a graphical user interface tool for managing virtual machines, allowing users to create, configure, and control VMs using **`libvirt`**. Follow the steps below:

1. Start **virt-manager** by running the command below:

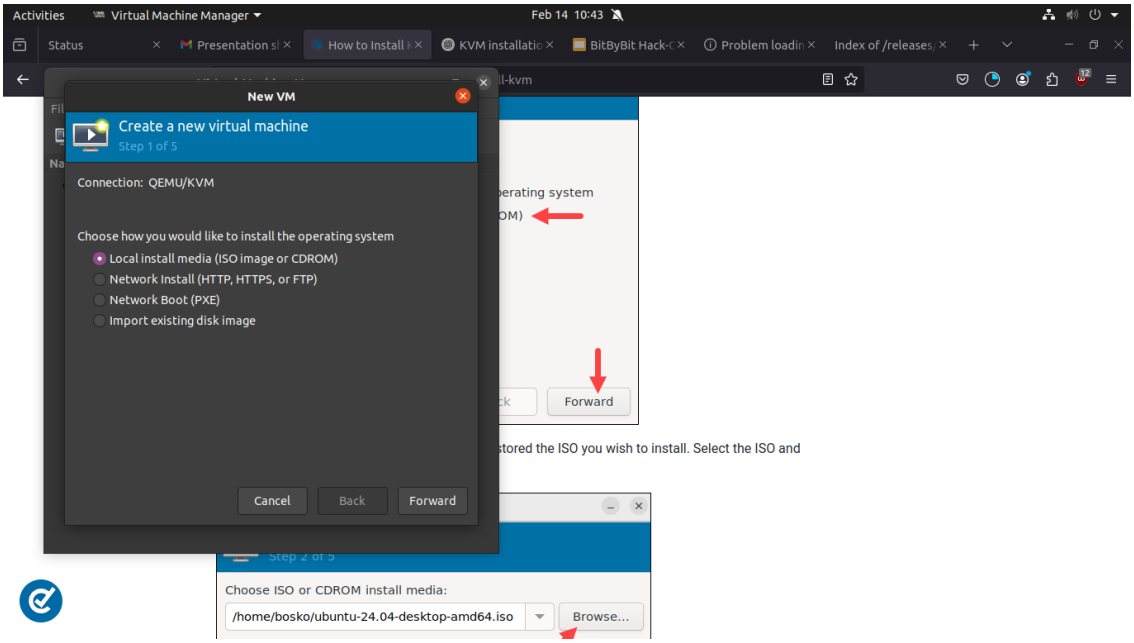
```
sudo virt-manager
```



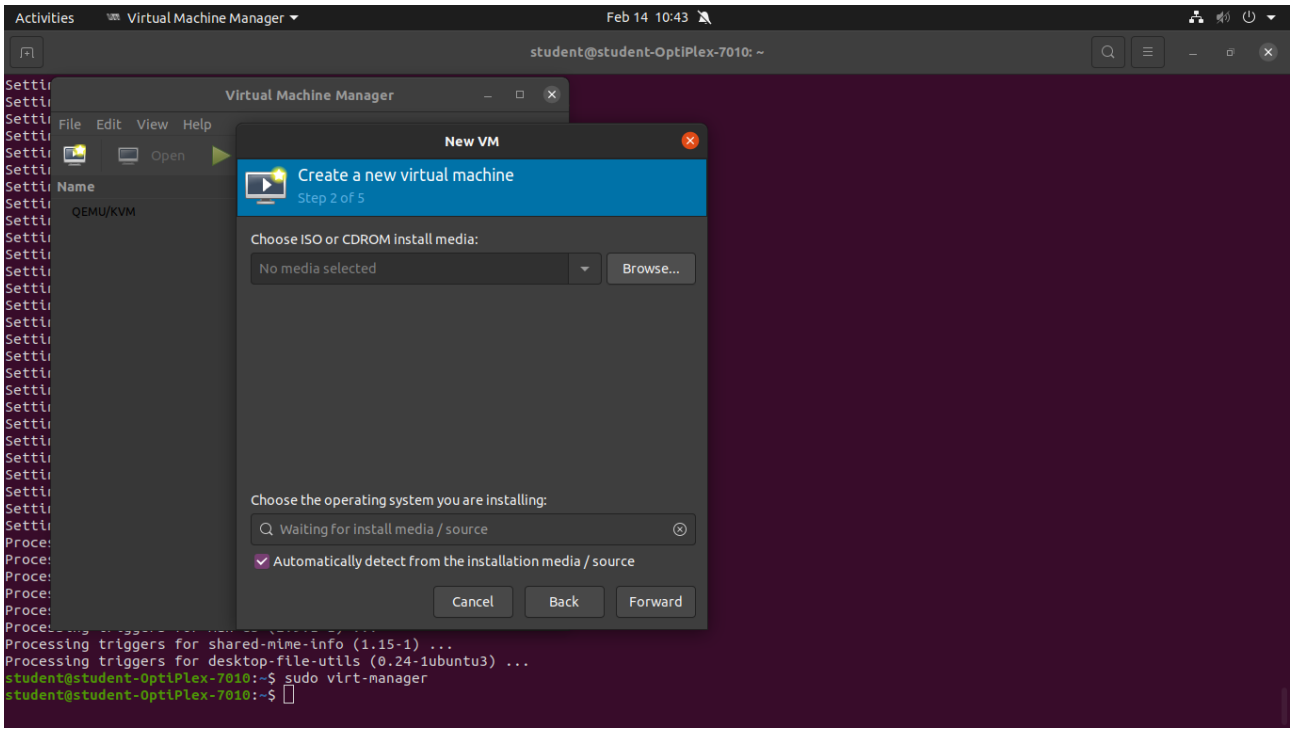
2. In the Virtual Machine Manager window, click the computer icon in the upper-left corner to create a new VM



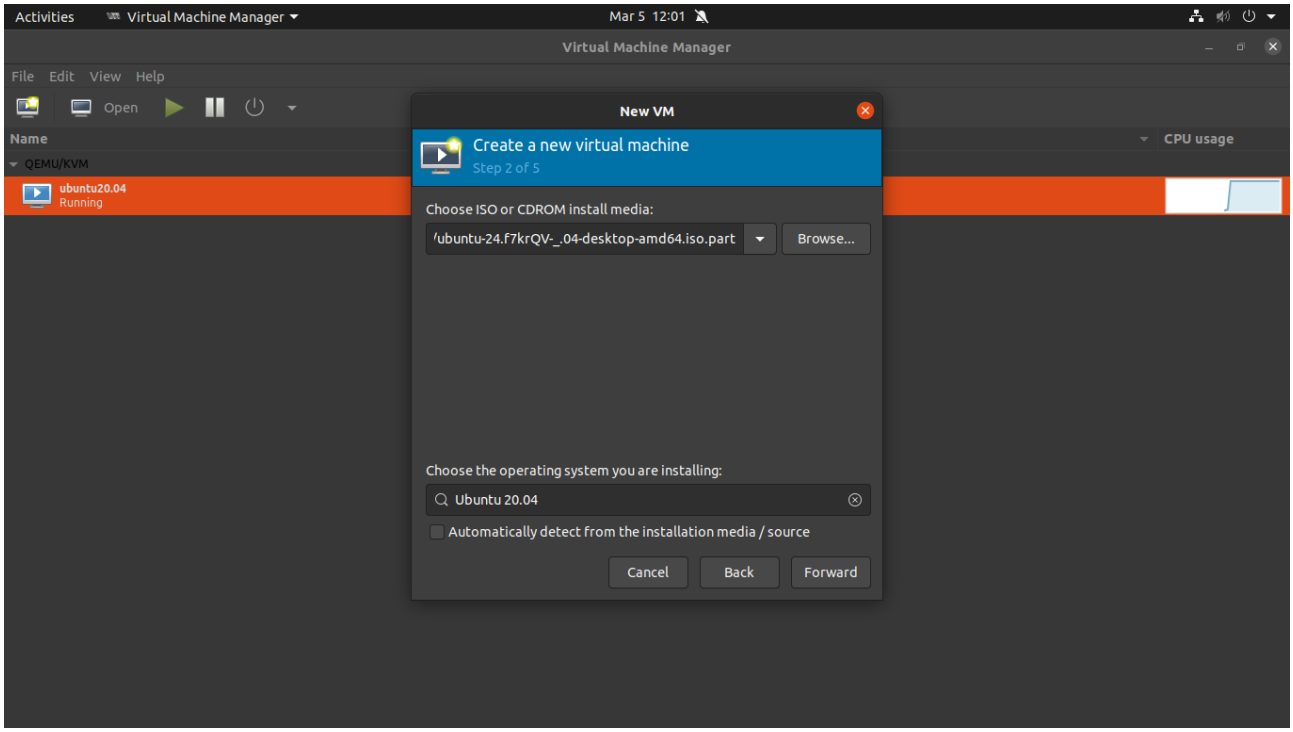
3. Select the option to install the VM using an ISO image and click **Forward**.



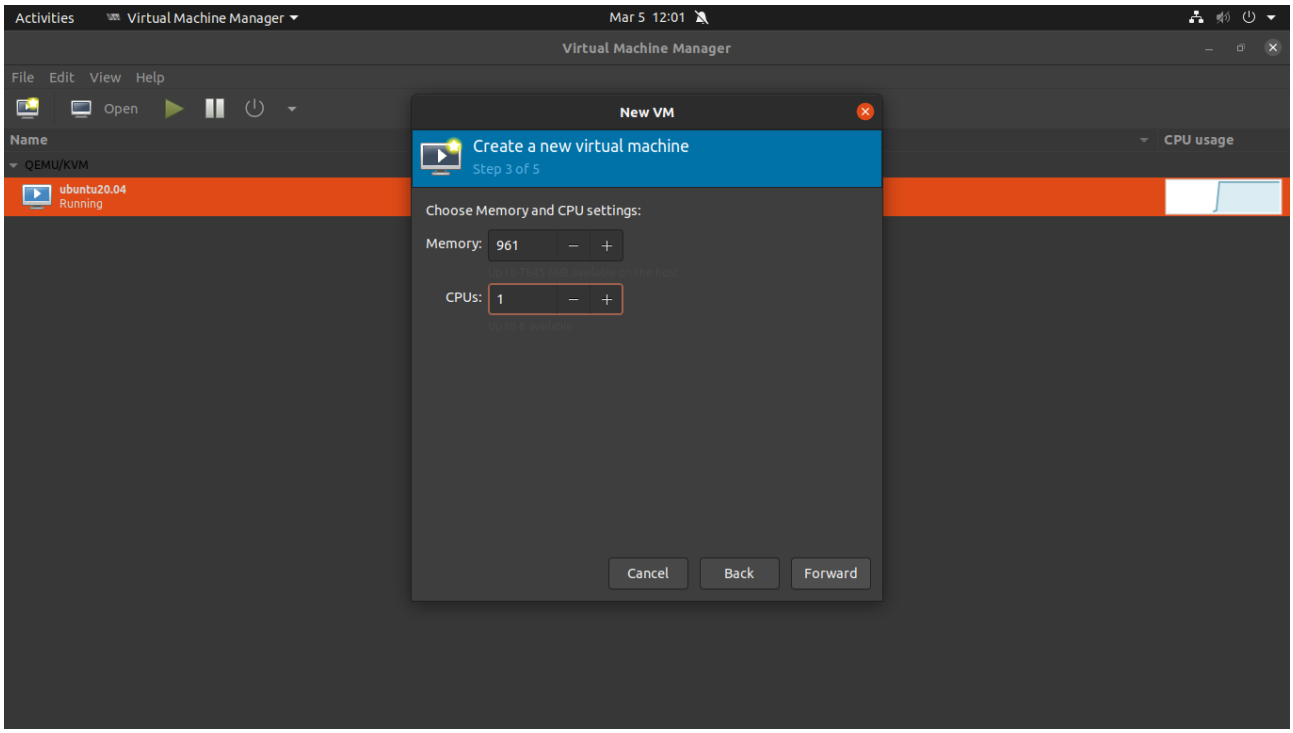
4. In the next dialogue, click **Browse...** and navigate to the path where you stored the ISO you wish to install. Select the ISO and click **Forward** to continue.



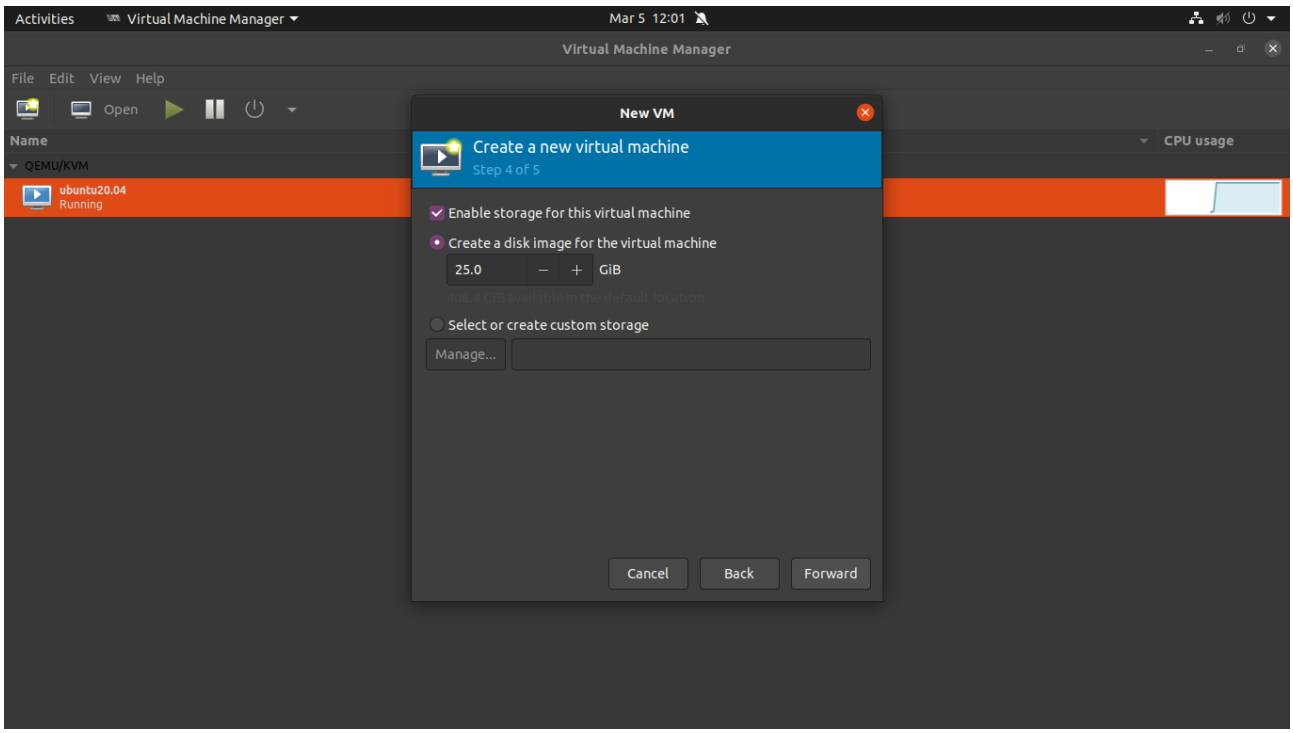
5. Enter the amount of RAM and the number of CPUs you wish to allocate to the VM and click **Forward** to proceed to the next step.

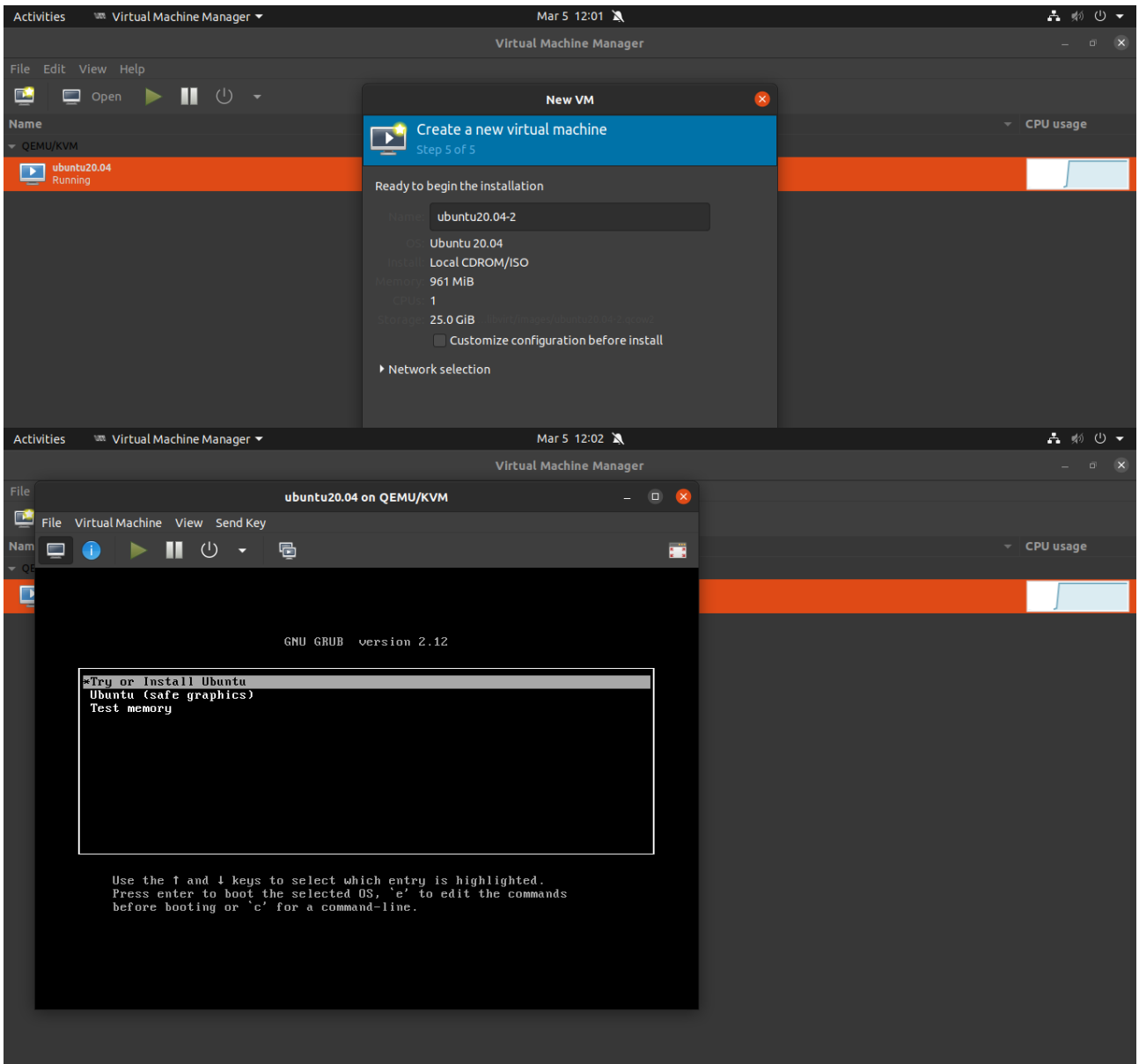


6. Allocate sufficient hard disk space to the VM. Click **Forward** to go to the last step.



7. Specify the name for your VM and click **Finish** to complete the setup.


Activities
Virtual Machine Manager
Mar 5 12:01
Virtual Machine Manager
File Edit View Help
Open
Name
CPU usage
QEMU/KVM
ubuntu20.04
Running
New VM
Create a new virtual machine
Step 4 of 5
Enable storage for this virtual machine
Create a disk image for the virtual machine
25.0
GiB
Select or create custom storage
Manage...
Cancel
Back
Forward


Activities
Virtual Machine Manager
Mar 5 12:01
Virtual Machine Manager
File Edit View Help
Open
Name
CPU usage
QEMU/KVM
ubuntu20.04
Running
New VM
Create a new virtual machine
Step 5 of 5
Ready to begin the installation
ubuntu20.04-2
Ubuntu 20.04
Local CDROM/ISO
961 MiB
1
25.0 GiB
Customize configuration before install
Network selection
Activities
Virtual Machine Manager
Mar 5 12:02
Virtual Machine Manager
ubuntu20.04 on QEMU/KVM
File Virtual Machine View Send Key
GNU GRUB version 2.12
*Try or Install Ubuntu
Ubuntu (safe graphics)
Test memory
Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, `e' to edit the commands
before booting or `c' for a command-line.