Install KVM on Ubuntu 20.04

Check Virtualization Support on Ubuntu 20.04

1) check if your CPU supports hardware virtualization via egrep command:

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

If the command returns a value of `0`, your processor is not capable of running KVM.

2) Now, check if your system can use KVM acceleration by typing:
sudo kvm-ok

The output should be: KVM accerleration can be used
If kvm-ok is giving an error then try solving by installing cpu-checker

sudo apt-install cpu checker

Step 1: Install KVM Packages

1) Update the repositories:
sudo apt update
2) install essential KVM packages with the following command:
sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils

Step 2: Authorize Users

1) Only members of the **libvirt** and **kvm** user groups can run virtual machines. Add a user to the libvirt group by typing:
sudo adduser 'username' libvirt
2) Now do the same for the kvm group:
sudo adduser '[username]' kvm

Step 3: Verify the Installation

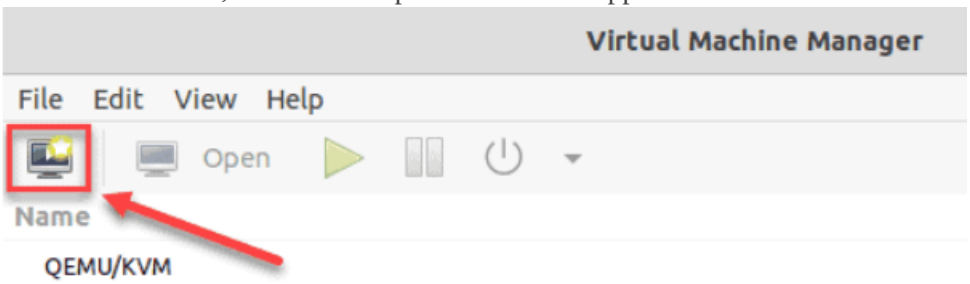
1) Confirm the installation was successful by using the `virsh` command:
virsh list –all
2) use the `systemctl` command to check the status of libvirtd:
sudo systemctl status libvirtd
3) Press Q to quit the screen
4) If the virtualization daemon is not active, activate it with the following command:
sudo systemctl enable --now libvirtd

Creating a Virtual Machine on Ubuntu 20.04

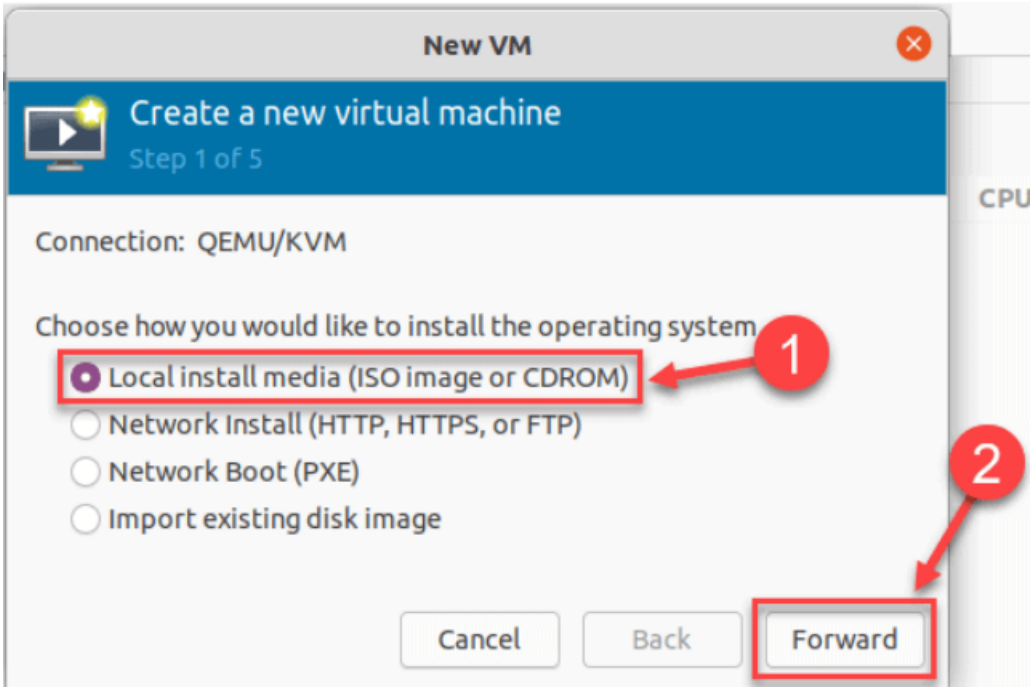
1) Before you choose one of the two methods listed below, install virt-manager, a tool for creating and managing VMs:
   Sudo apt install virt-manager

Method 1: Virt Manager GUI

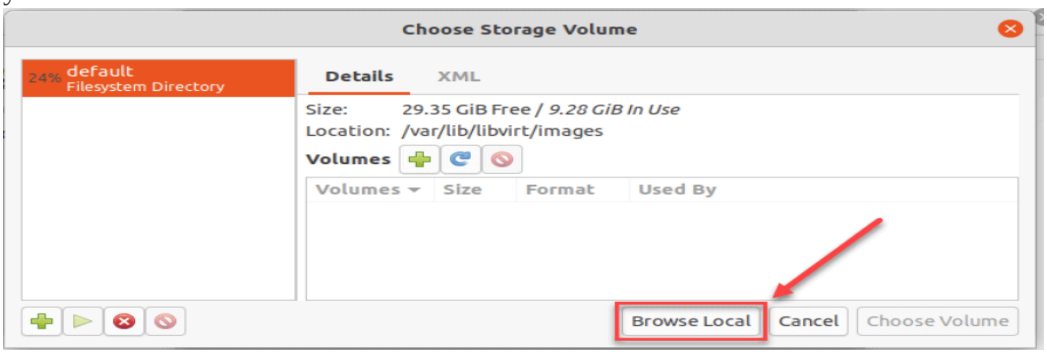
1) Start virt-manager with:
   Sudo virt-manager
2) In the first window, click the computer icon in the upper-left corner.



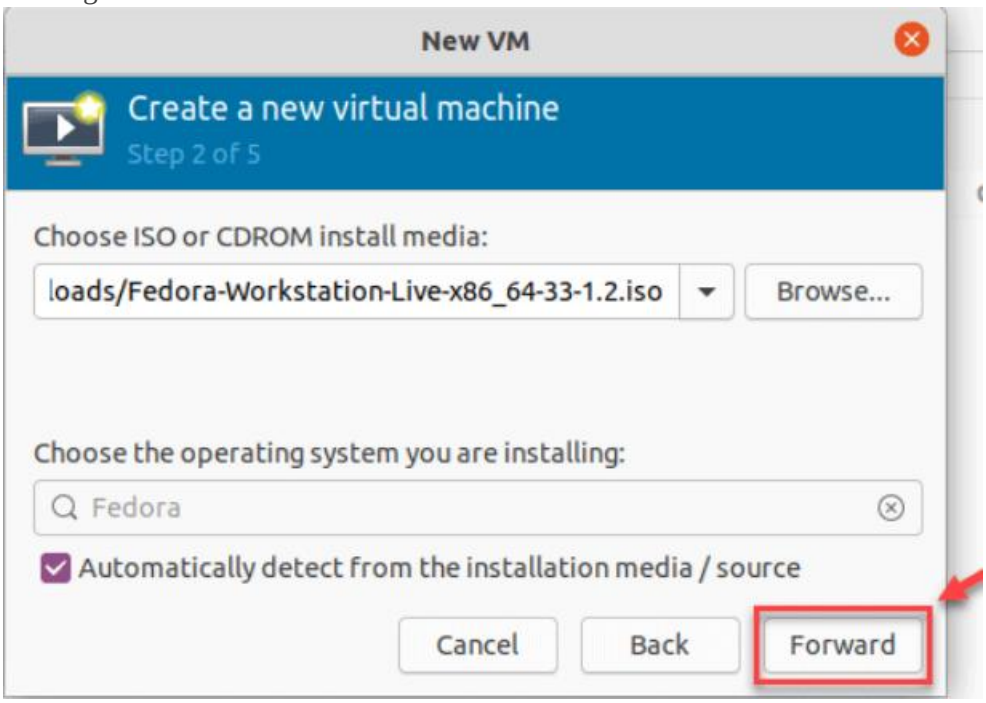
3) In the dialogue box that opens, select the option to install the VM using an ISO image. Then click **Forward**.



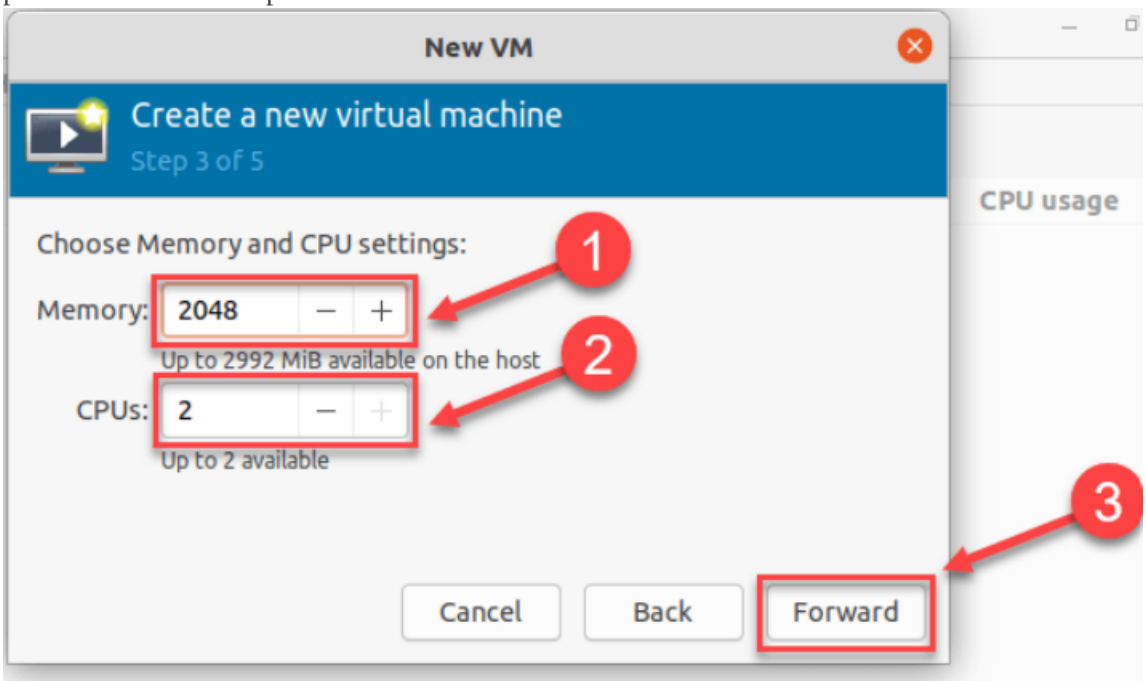
4) In the next dialogue, click **Browse Local** and navigate to the path where you stored the ISO you wish to install.



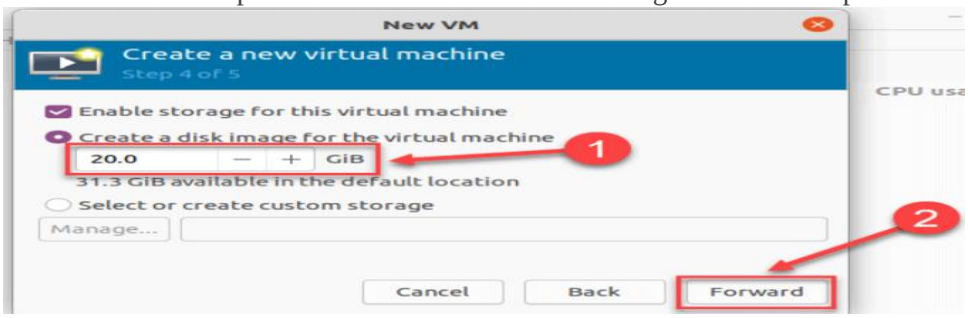
5) The ISO you chose in the previous window populates the field in Step 2. Proceed to Step 3 by clicking **Forward**.



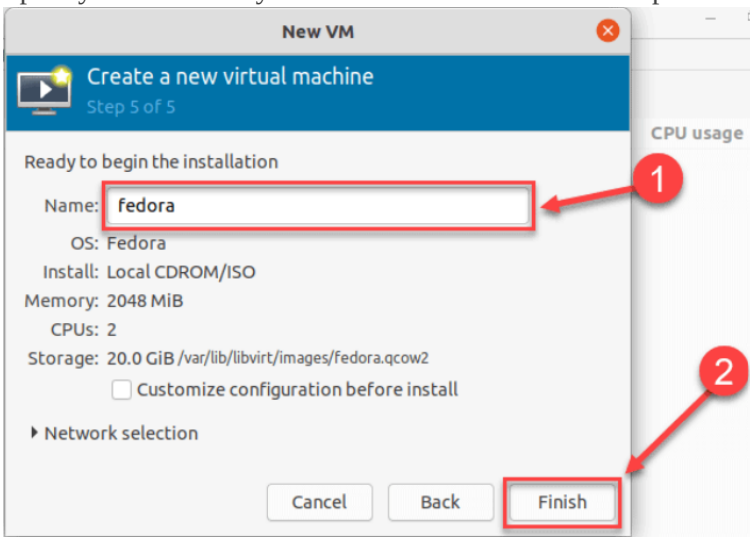
6) Enter the amount of RAM and the number of CPUs you wish to allocate to the VM and proceed to the next step.



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



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



9) The VM starts automatically, prompting you to start installing the OS that's on the ISO file.

Method 2: Using Command Line

1) virt-install --option1=value --option2=value ...

```
marko@test-machine:~$ sudo virt-install --name=Fedora33 \
> --description='Fedora 33' \
> --ram=1536 \
> --vcpus=1 \
> --disk path=/var/lib/libvirt/images/Fedora-Workstation-33/Fedora-33-WS.qcow2,size=15
\
> --cdrom /var/lib/libvirt/images/Fedora-Workstation-33/Fedora-Workstation-Live-x86_64-
33-1.2.iso \
> --graphics vnc
[sudo] password for marko:

Starting install...
Allocating 'Fedora-33-WS.qcow2'                          |  15 GB  00:00
```