**Install KVM and Virtual Manager on Ubuntu**

https://linuxhint.com/install-kvm-ubuntu-22-04/

https://www.tecmint.com/install-qemu-kvm-ubuntu-create-virtual-machines/

Step 1: Update and Upgrade Ubuntu System

Use the following command for updating the system:

sudo apt update

Next, use the following command for upgrading the system:

sudo apt upgrade

Step 2: Install Necessary Packages for KVM

Use the following command for updating the system:

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

Short overview of installed packages:

qemu-kvm – This is an open-source emulator that emulates the hardware resources of a computer.

libvirt-daemon-system – Provides configuration files needed to run the virtualization service.

virtinst – A collection of command-line utilities for creating and making changes to virtual machines.

libvirt-clients – APIs and client-side libraries for managing virtual machines from the command line.

bridge-utils – A set of command-line tools for managing bridge devices.

Step 3: Enable Essential Services to Virtualize and Check Their Status

After successfully installing essential dependencies, let’s enable the services that are needed to virtualize. Enable livirtd using the following command:

sudo systemctl enable libvirtd

Now start libvirtd by issuing the following command:

sudo systemctl start libvirtd

Let’s verify the status of libvirtd using the command mentioned below. If it is running fine, you will see ‘active’ in the output

sudo systemctl status libvirtd

Step 4: Add Your User to the KVM and Libvirt Group

Now add your user to KVM and libvirt group to get up KVM and avoid running into issues. The user can be added to the KVM group using this command:

sudo usermod -aG kvm $USER

Now add the user to the libvirt group by using this command:

sudo usermod -aG libvirt $USER

Step 5: Install Virtual Manager

Now install the Virtual Manager - A Qt-based GUI interface for creating and managing virtual machines using the libvirt daemon.

sudo apt install virt-manager

Reboot the system after installing virtual manager.