Intall KVM hypervisor on CentOS 7

**Step:1 Install KVM and its associate packages**

install KVM and its associated packages.

* [root@porkman ~]# yum install qemu-kvm qemu-img virt-manager libvirt libvirt-python libvirt-client virt-install virt-viewer bridge-utils

check whether KVM module is loaded or not

* [root@porkman ~]# lsmod | grep kvm

kvm\_intel 162153 0

kvm 525409 1 kvm\_intel

In Case you have Minimal CentOS 7 and RHEL 7 installation , then virt-manger will not start for that you need to install x-window package.

* [root@porkman ~]# yum install "@X Window System" xorg-x11-xauth xorg-x11-fonts-\* xorg-x11-utils -y

Reboot the Server and then try to start virt manage

[root@porkman ~]#virt-manager

If virt-manager doesn open. Install “Gnome Desktop”

[root@porkman ~]#yum install “Gnome Desktop”

Note: if startx doesn’t work .. check video drivers there is a known issue with RADEON drivers.

Solution: uninstall Grapics drivers ( set to generic)

**\*add EPEL repo.**

**## RHEL/CentOS 7 64-Bit ##**

$# wget http://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm

$# rpm -ivh epel-release-latest-7.noarch.rpm

Check repolist: yum repolist

**Step:3 Configure Bridge Interface**

Before Start creating VMs , let’s first create the bridge interface. Bridge interface is required if you want to access virtual machines from outside of your hypervisor network.

[root@porkman ~]# cd /etc/sysconfig/network-scripts/

[root@ porkman network-scripts]# cp ifcfg-eno49 ifcfg-br0

[root@porkman network-scripts]#

Edit the Interface file and set followings:

[root@porkman network-scripts]# vi ifcfg-eno49

TYPE=Ethernet

BOOTPROTO=static

DEVICE=eno49

ONBOOT=yes

BRIDGE=br0

**Edit the Bridge file (ifcfg-br0) and set the followings:**

[root@porkman network-scripts]# vi ifcfg-br0

TYPE=Bridge

BOOTPROTO=static

DEVICE=br0

ONBOOT=yes

IPADDR=192.168.10.21

NETMASK=255.255.255.0

GATEWAY=192.168.10.1

DNS1=192.168.10.11

**Replace the IP address and DNS server details as per your setup.**

**Restart the network Service to enable the bridge interface.**

[root@porkman ~]# systemctl restart network

Check the Bridge interface using below command :

[root@porkman ~]# ip addr show br0

**Start the “virt-manager”**

[root@porkman ~]# virt-manager

**Creating a virtual Machine from Command Line:**

Virtual Machines can be created from the console as well using ‘virt-install’ command. In the following example i going to virtual machine of Ubuntu 16.04 LTS.

[root@porkman ~]# virt-install --name=Ubuntu-16-04 --file=/var/lib/libvirt/images/ubuntu16-04.dsk --file-size=20 --nonsparse --graphics spice --vcpus=2 --ram=2048 --cdrom=ubuntu-16.04-server-amd64.iso --network bridge=br0 --os-type=linux --os-variant=generic

**Note:** “if error : “qemu-kvm: could not open disk image ' ': Permission denied “

**Solution**: Change the /etc/libvirt/qemu.conf to make things work.

#Uncomment **user/group to work as root.**

Then restart libvirtd

**virsh utility**

The virsh utility can be used to interact with virtual machines. For example, say you want to list all configured guests, using virsh you can simply run:

[root@porkman ~]# virsh list –all

Output will show the id, name and state of all the configured guests, whether they are running or not.

To change some guest machine parameters.

[root@porkman ~]# virsh edit linuxconfig-vm

**Shut Down A Guest**

# virsh list

# virsh shutdown dominName

# virsh shutdown freebsd

# virsh shutdown 3

**Rebooting A Guest**

# virsh list

# virsh reboot domaiName

# virsh reboot 3

# virsh reboot win2008biz

**Forcefully Stop A Guest**

Force a guest to stop with the virsh command if it is not responding or crashed

# virsh list

# virsh destroy domainName

# virsh destroy openbsd.nixcraft.in