What is a virtual machine?

A virtual machine is the emulated equivalent of a computer system that runs on top of another system.

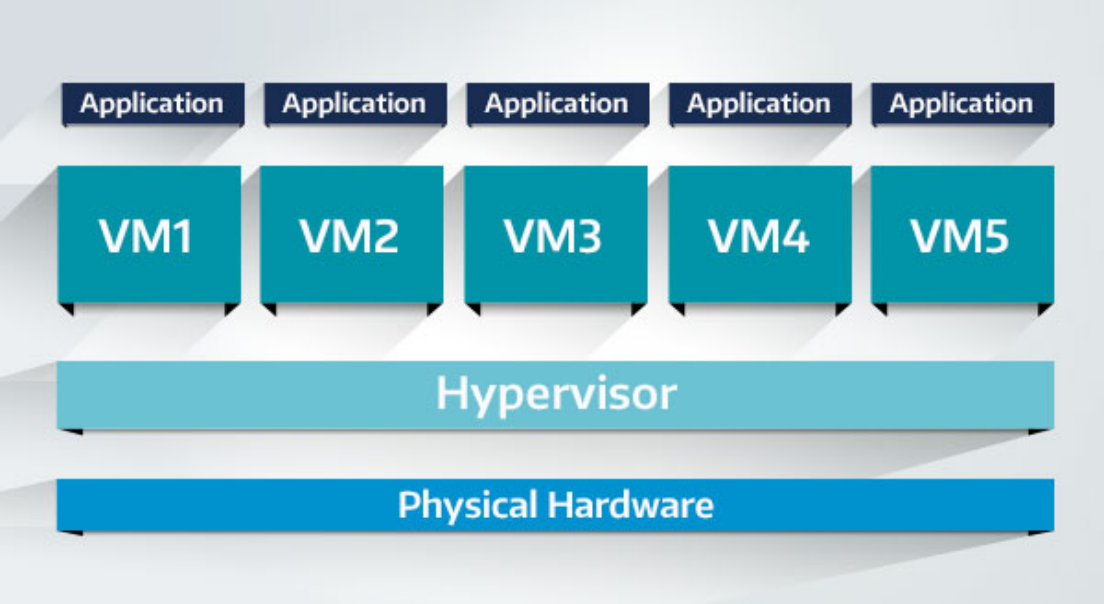
What is Virtualization ?

Virtualization is technology that lets you create useful IT services using resources that are traditionally bound to hardware.

It allows you to use a physical machine's full capacity by distributing its capabilities among many users or environments

Virtualization is the process of running a virtual instance of a computer system in a layer abstracted from the actual hardware.

Most commonly, it refers to running multiple operating systems on a computer system simultaneously.



Why we need Virtualization ?

To desktop users, the most common use is to be able to run applications meant for a different operating

system without having to switch computers or reboot into a different system.

What is KVM ?

Kernel-based Virtual Machine (KVM) is an open source virtualization technology built into Linux.

Kernel-based Virtual Machine is a virtualization module in the Linux kernel that allows the kernel to function as a hypervisor.

It was merged into the Linux kernel mainline in kernel version 2.6.20, which was released on February 5, 2007.

KVM requires a processor with hardware virtualization extensions, such as Intel VT or AMD-V.

KVM, short for kernel-based virtual machine, is a part of the Linux kernel that can run virtual machines directly, although you can still use a system running KVM virtual machines as a normal computer itself.

What is a hypervisor?

A hypervisor is a program for creating and running virtual machines.

Hypervisors have traditionally been split into two classes:

1- type one, or "bare metal"

2- type two or hosted

What is Type-1

hypervisors that run guest virtual machines directly on a system's hardware, essentially behaving as an operating system.

What is Type-2

Type two, or "hosted" hypervisors behave more like traditional applications that can be started and stopped like a normal program.

How we can install KVM on any redhat machine ?

Note: VT must be enabled and your machine must be configured on 64 bit based infra.

Step-1 Install kvm packages using this command

qemu-kvm-tools virt-manager libvirt

yum install qemu* virt* libvirt* -y

systemctl restart libvirtd

systemctl enable libvirtd

Step-2 copy or download ISO image to install virtual machine....

Step- 3 configure bridge network on your redhat machine to provide network reach ability between The physical machine and VM.

Step- 4 now open the KVM console and create the virtual machine as per hardware demand.

Step- 5 now we can install OS as per ISO image ...machine will ready after five to 10 minutes

****