Module 2 Virtualization and Cloud Basic

1.   Most popular hypervisors is:

- KVM
- Red Hat Enterprise Virtualisation
- Xen
- Microsoft Hyper-V
- VMware vSphere
- Docker Containers
- Oracle VirtualBox

2.   Differences between most popular hypervisor

- ### KVM

    Turns Linux kernel into hypervisor
    Merged into Linux kernel
    It is free
    Powerful CPU virtualisation
    Powerful CLI Scripting tool

    Difficult to manage for novices and those used to GUI
    Heavy IO overhead
    Issues Power and memory usage
    Lack of device assignments

Red Hat Enterprise Virtualisation

Enterprise Level Support based on KVM
Complex system

Difficult to deploy

Xen

Modernised than KVM, works without hardware support
High security isolations
Paravirtualization and hardware assisted virtualisation
A different user friendly interface

It has a minimal power management features

Microsoft Hyper-V

Microsoft Based Server
Enterprise Level Support
Native Integration with Microsoft infrastructure

There is no small distributive (for flash-ROM boot)
Lack of advanced management console

VMware vSphere

Enterprise Support level
A lot of addition software
Most popular hypervisor. Supported by Hardware vendors
A lot of virtual appliances
Professional studying

Cost a lot

Docker

Containerised virtualisation (Same kernel for all containers)
Open Source
Optional business support subscription
Containerised virtualisation
Small container size and cpu/ram overhead
application-centric packaging
workload deployment
Good startUp speed

Oracle VirtualBox/VMware Workstation/Parallels Desktop

Type 2 supervisors
Good to use on Desktops
Easy to use user-friendly GUI