
# FACULTY OF ENGINEERING & TECHNOLOGY

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# Topics Covered

**Virtual Machine (VM)**
**Advantages of Virtual Machine (VM)**
**Virtual Machine (VM) Softwares**

# Virtual Machine (VM)

- A virtual machine (VM) is a software program or operating system that not only exhibits the behavior of a separate computer, but is also capable of performing tasks such as running applications and programs like a separate computer.
- They are also widely implemented as a sandboxed environment that are separated from the rest of the network
- Virtual machines are implemented by software emulation methods or hardware virtualization techniques
- virtual machines can be divided into two categories:

- **System Virtual Machines**
  - A system platform that supports the sharing of the host computer's physical resources between multiple virtual machines, each running with its own copy of the operating system.
- **Process Virtual Machine**
  - Also known as application VM, a process virtual machine is designed to provide a platform-independent programming environment that supports a single process

# Advantages of Virtual Machine (VM)

Some of the advantages of a virtual machine include:

- Allows multiple operating system environments on a single physical computer without any intervention
- Virtual machines are widely available and are easy to manage and maintain
- Offers application provisioning and disaster recovery options
- A VM can be created or replicated very quickly by cloning it with an OS already installed, rather than installing a new OS on a physical server
- VMs are offer high availability since they can be moved from one server to another for maintenance purposes, even whilst running

# Virtual Machine (VM) Softwares

- VMware Workstation
- VMware Fusion
- Oracle VM VirtualBox Parallels Desktop
- Hyper-V Manager
- QEMU