Vm ware

VMware is a company known for its virtualization technology, which allows multiple virtual machines (VMs) to run on a single physical computer. Here’s a high-level overview of how VMware's virtualization technology works:

1. **Virtualization Basics:**
   * **Virtual Machine (VM):** A VM is a software-based emulation of a physical computer. It has its own operating system (OS), applications, and virtual hardware.
   * **Hypervisor:** The core component that enables virtualization is the hypervisor. VMware offers two types:
     + **Type 1 Hypervisor (bare-metal):** Installed directly on the physical hardware (e.g., VMware ESXi).
     + **Type 2 Hypervisor (hosted):** Runs on top of an existing OS (e.g., VMware Workstation, VMware Fusion).
2. **How Hypervisors Work:**
   * **Resource Management:** The hypervisor manages the hardware resources (CPU, memory, storage, etc.) and allocates them to VMs. It ensures that each VM gets a fair share of resources while isolating them from each other.
   * **Abstraction:** It abstracts the physical hardware to create virtual hardware environments for each VM. This includes virtual CPUs, memory, disk drives, and network interfaces.
   * **Isolation:** Each VM operates in its own isolated environment, so issues in one VM generally don’t affect others.
3. **VMware Features:**
   * **VMware vSphere:** A suite that includes ESXi (the hypervisor) and vCenter Server (for managing multiple ESXi hosts and VMs).
   * **VMware Tools:** A set of utilities installed inside VMs to improve performance and enable advanced features like better graphics, time synchronization, and file sharing between host and guest OS.
   * **VMotion:** Allows live migration of VMs from one physical server to another with no downtime, helping balance loads and perform maintenance without disrupting services.
   * **Snapshots and Cloning:** Snapshots capture the state of a VM at a specific point in time, allowing for easy recovery. Cloning creates a copy of a VM for testing or scaling purposes.
4. **Storage and Networking:**
   * **Virtual Storage:** VMware uses virtual disks (VMDK files) that reside on physical storage systems. These virtual disks can be managed independently of physical storage.
   * **Virtual Networking:** VMware creates virtual network interfaces for VMs and virtual switches to manage network traffic. This setup can mimic physical networking setups, allowing for flexible network configurations and segmentation.
5. **Management and Automation:**
   * **vCenter Server:** Provides centralized management for ESXi hosts and VMs, including provisioning, monitoring, and automation.
   * **Automation Tools:** VMware offers tools like VMware vRealize for cloud management and automation, enhancing scalability and operational efficiency.

In summary, VMware's technology abstracts and partitions physical resources to create multiple virtual environments on a single hardware platform. This enables better resource utilization, isolation, and flexibility in managing and deploying applications.

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Now install vmware in your system

Now to create virtual machine

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After downloading open vmware and create a virtual machine

Select Typical

Then upload iso image and it will start doing setup of linux

Now you can install skype and send files to linux also to verify the things on linux

Notes:

Go to VM ->settings -> options->advanced -> disable site channel mitigations

To increase performance of virtual machine

Cons

1. Little bit slow in the system
2. Not recommened separate virtual machine we create in one system with high configuration in physical machine and use it at your end.