EX-12 :- Demonstrate virtualization by installing Type-2 Hypervisor in your device, create and configure VM image with a Host Operating system (Either Windows/Linux), using VMware Workstation.

Aim

To demonstrate virtualization by installing a Type-2 Hypervisor (VMware Workstation) on a host computer and creating, configuring, and running a Virtual Machine (VM) with a guest operating system (Windows/Linux).

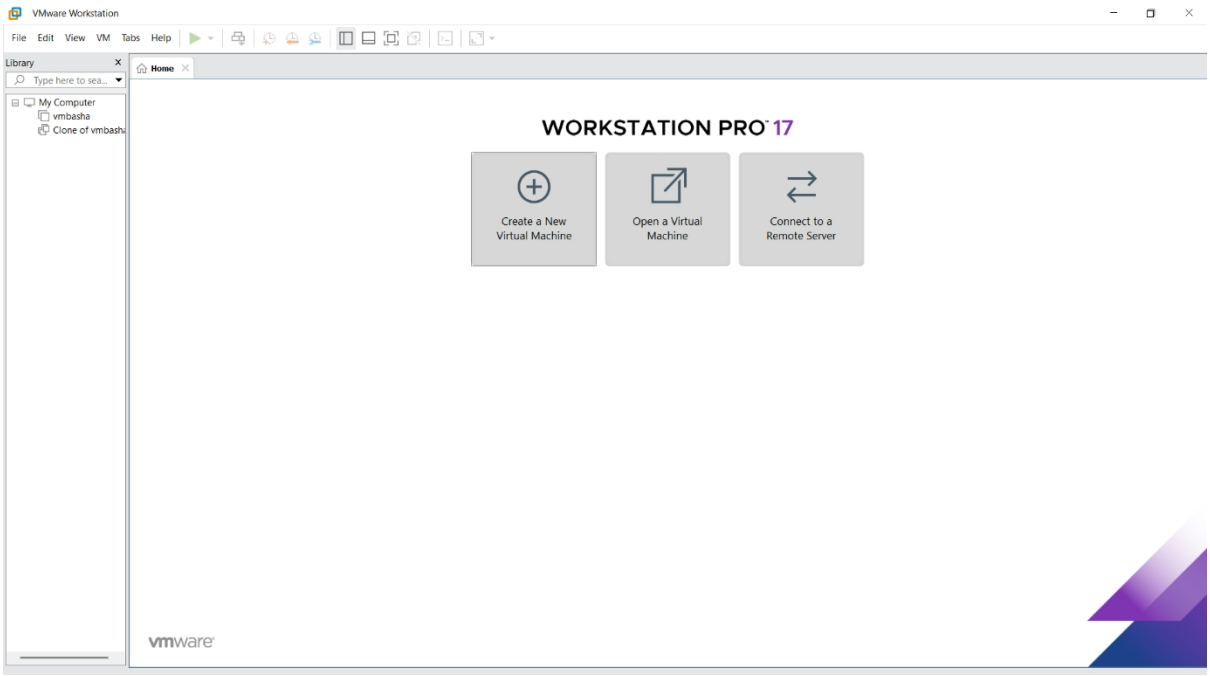
Requirement

- A computer with Windows or Linux as Host OS
- Minimum 8 GB RAM (4 GB minimum works, but 8 GB recommended)
- VMware Workstation Player/Pro
- ISO file of Guest OS (Windows/Linux, e.g., Ubuntu)
- Internet connection

Procedure

Step 1: Download VMware Workstation

1. Open a web browser.
2. Visit the official VMware website.
3. Download **VMware Workstation Player** (free for personal use) or **VMware Workstation Pro**.
4. Save the installer file.



Step 2: Install VMware Workstation (Type-2 Hypervisor)

1. Double-click the downloaded installer.
2. Click **Next** and accept the license agreement.
3. Choose default installation settings.
4. Click **Install**.
5. Restart the system if prompted.

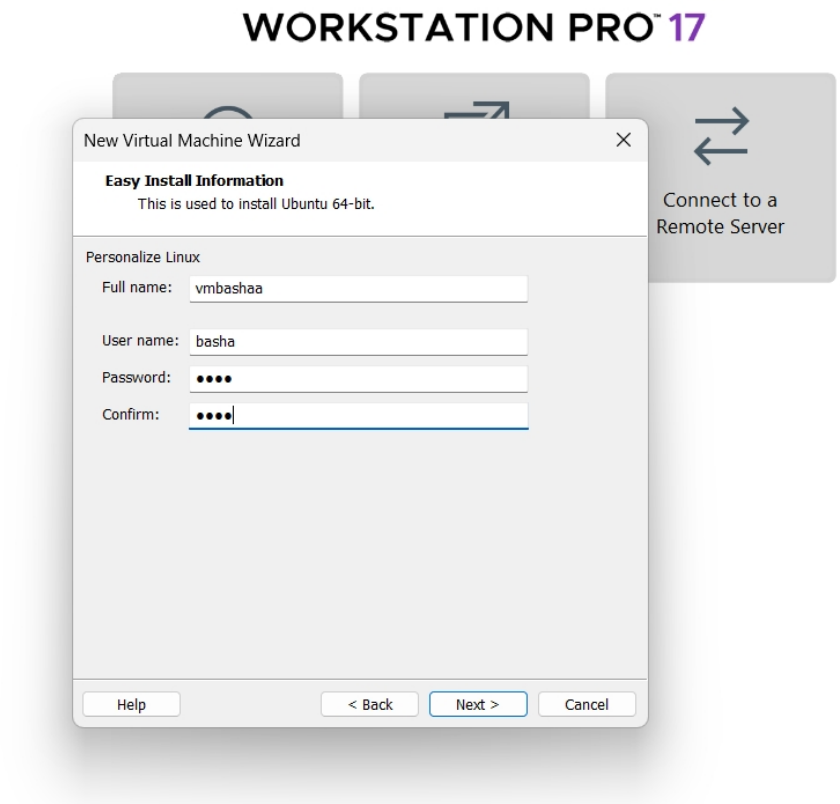
VMware Workstation runs on top of an existing OS, so it is called a **Type-2 Hypervisor**.

Step 3: Launch VMware Workstation

1. Open **VMware Workstation** from the Start Menu (Windows) or Applications (Linux).
2. The main dashboard will appear.

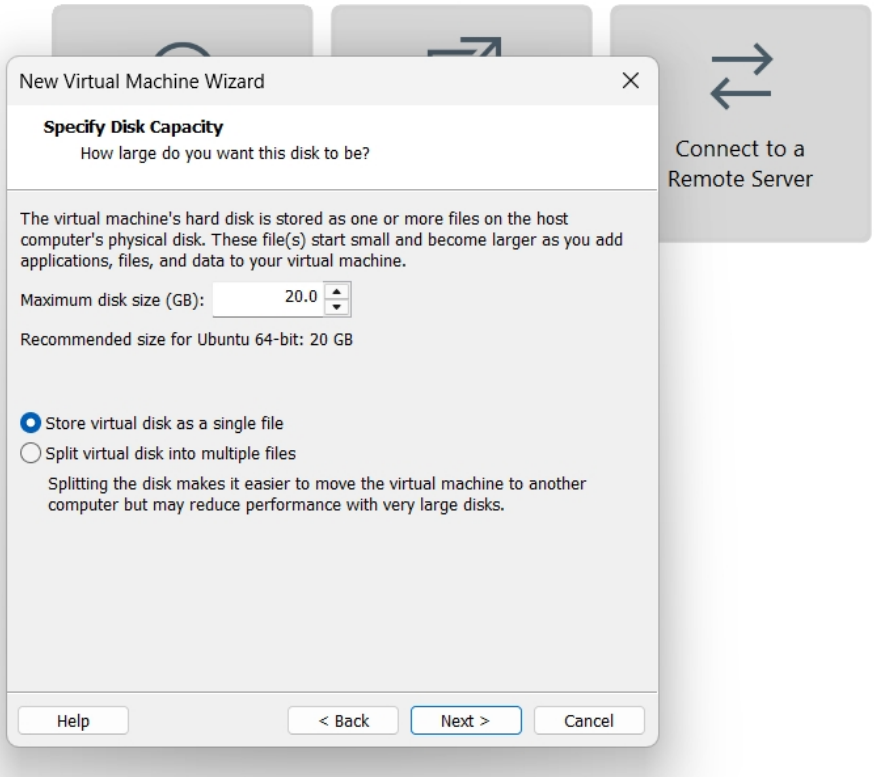
Step 4: Create a New Virtual Machine

1. Click **Create a New Virtual Machine**.
2. Select **Typical (Recommended)** and click **Next**.
3. Choose **Installer disc image file (ISO)**.
4. Browse and select the **Guest OS ISO file** (Windows/Linux).
5. Click **Next**.



Step 5: Select Guest Operating System

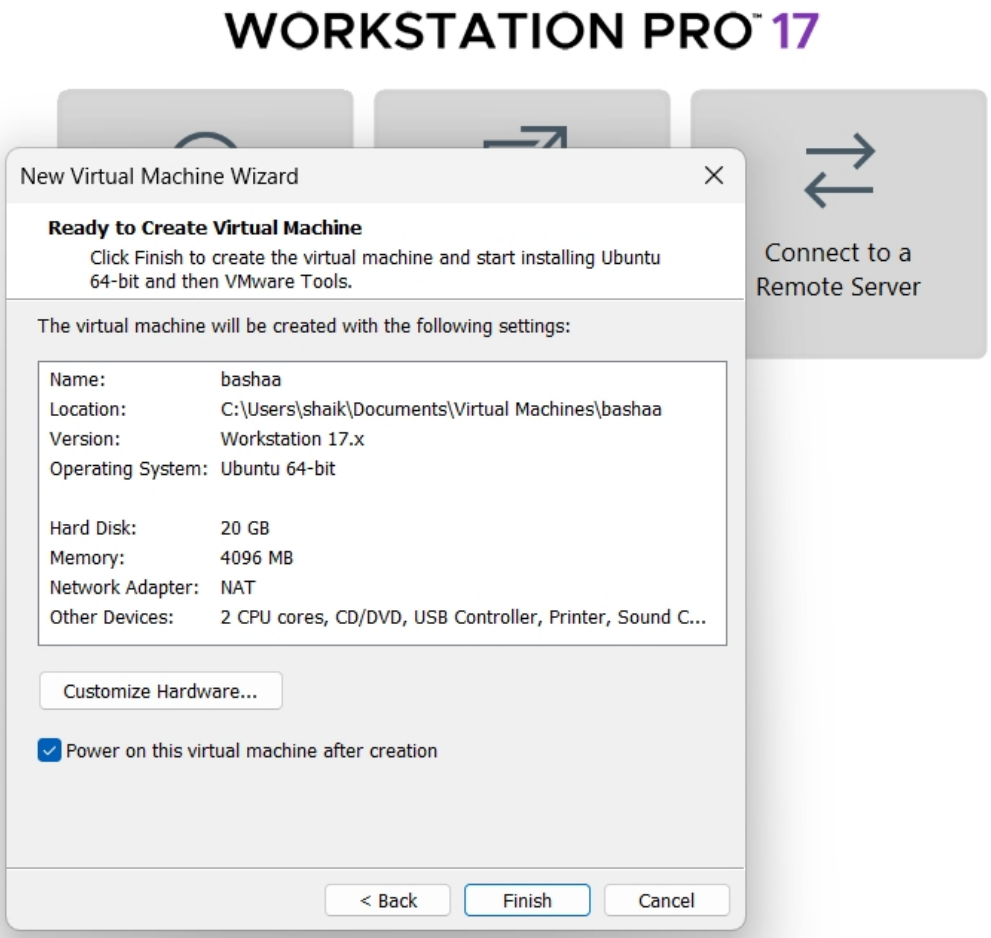
1. VMware automatically detects the OS.
2. If not detected, manually select:
    - **Linux** → Ubuntu (or chosen distro)
    - **Microsoft Windows** → Appropriate version
3. Click **Next**.



4.

Step 6: Configure Virtual Machine

1. Enter a **Virtual Machine Name**.
2. Choose the location to store VM files.
3. Allocate **Disk Space** (e.g., 20–40 GB).
4. Select **Store virtual disk as a single file**.
5. Click **Next**.

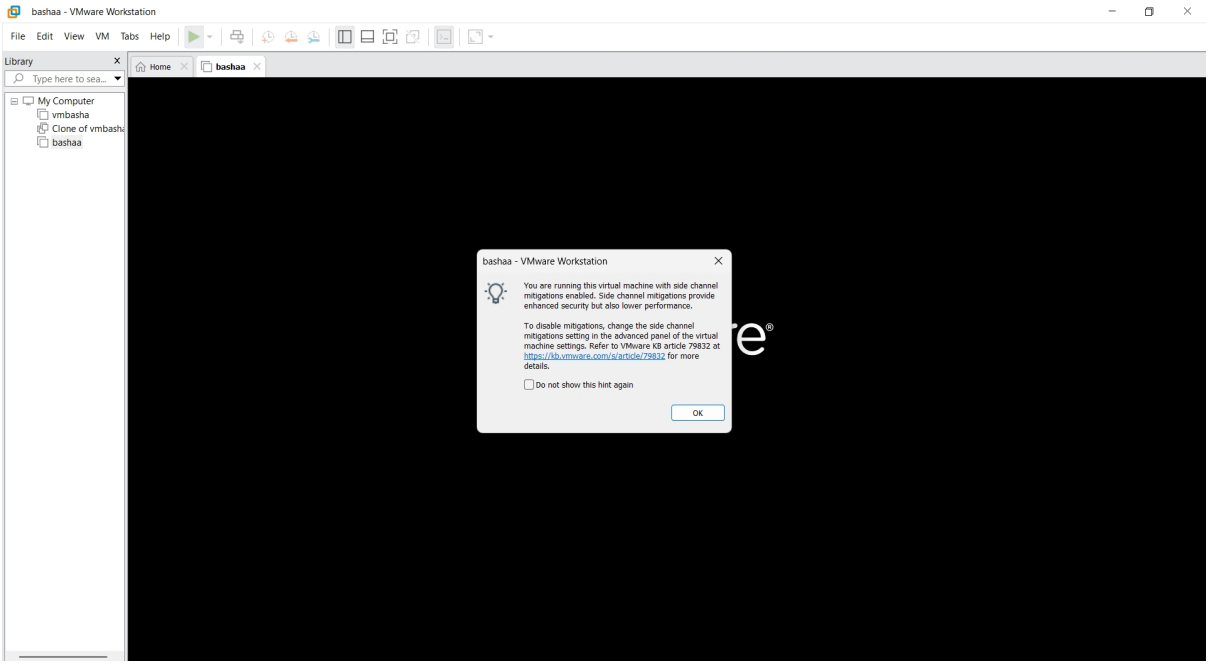


Step 7: Customize Hardware

1. Click **Customize Hardware**.
2. Set:
    - **Memory (RAM):** 2–4 GB
    - **Processors:** 1–2 cores
    - **Network:** NAT (recommended)
3. Click **Close**, then **Finish**.

Step 8: Install Guest Operating System

1. Click **Power on this virtual machine**.
2. OS installation starts automatically.
3. Follow on-screen instructions:
    - Select language
    - Create user account
    - Set password
4. Wait until installation completes.



Step 9: Verify Virtualization

1. Once OS loads, log in.
2. Check:
    - System settings inside VM
    - RAM, CPU, and storage allocation
3. The VM runs independently from the host OS.

Result

Thus, virtualization was successfully demonstrated by installing a Type-2 Hypervisor (VMware Workstation) and creating a Virtual Machine with a guest operating system running on the host system.

Output