

6. Demonstrate virtualization by Installing Type-2 Hypervisor in your device, create and configure VM image with a Host Operating system (Either Windows/Linux) using virtual box.

Aim

To demonstrate **virtualization** by installing a **Type-2 Hypervisor (Oracle VirtualBox)** on the host system and to **create, configure, and run a Virtual Machine (VM)** with a host operating system (Windows/Linux).

Requirements

Hardware Requirements

- Computer/Laptop with virtualization support (Intel VT-x / AMD-V enabled)
- Minimum 4 GB RAM
- At least 20 GB free disk space

Software Requirements

- Host Operating System: Windows / Linux
- Oracle VirtualBox (Type-2 Hypervisor)
- ISO image of Guest Operating System (Windows/Linux)

Procedure

Step 1: Install Oracle VirtualBox

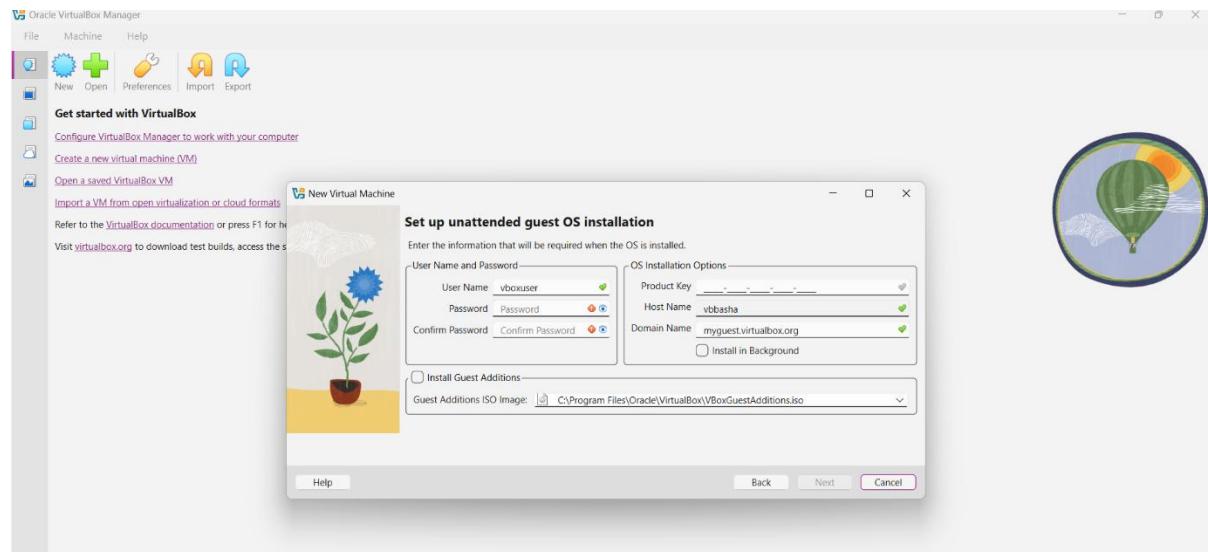
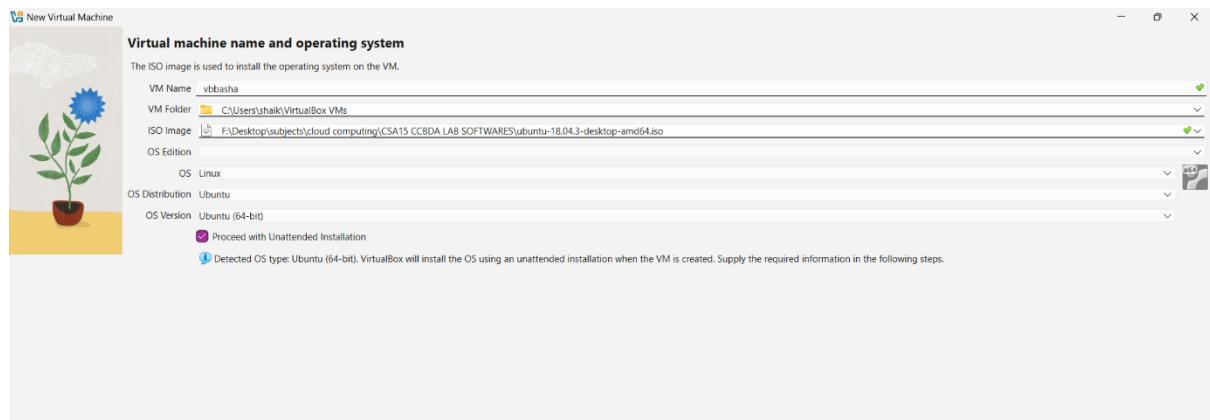
1. Download Oracle VirtualBox from the official website.
2. Run the installer and follow the installation wizard.
3. Accept default settings and complete the installation.
4. Restart the system if required.

Step 2: Download Guest OS ISO

1. Download the ISO file of the required Guest OS (Windows/Linux).
2. Save the ISO file to a known location on the system.

Step 3: Create a New Virtual Machine

1. Open Oracle VirtualBox.
2. Click on **New**.
3. Enter the VM name.
4. Select the OS type and version (e.g., Linux → Ubuntu / Windows → Windows 10).
5. Click **Next**.



Step 4: Configure VM Hardware

1. Allocate RAM (minimum 2 GB recommended).
2. Create a virtual hard disk.
3. Select **VDI (VirtualBox Disk Image)**.

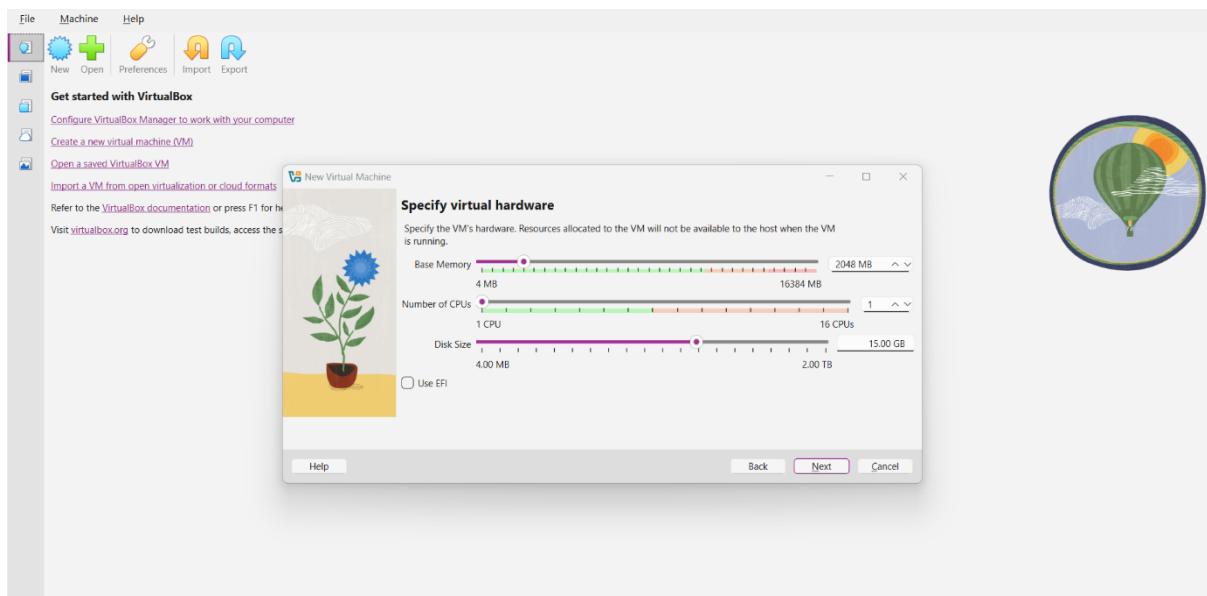
4. Choose **Dynamically Allocated**.
5. Allocate disk size (minimum 20 GB).
6. Click **Create**.

Step 5: Attach Guest OS ISO

1. Select the created VM.
2. Click **Settings → Storage**.
3. Under Controller IDE, click **Empty**.
4. Attach the downloaded ISO file.
5. Click **OK**.

Step 6: Install Guest Operating System

1. Click **Start** to boot the VM.
2. The system will boot from the ISO file.
3. Follow the OS installation steps (language, region, user account).
4. Complete the installation and reboot the VM.



Step 7: Verify Virtual Machine

1. After reboot, log in to the guest OS.
2. Check system information to confirm successful installation.
3. The VM now runs independently inside the host OS.

Result

Thus, **virtualization was successfully demonstrated** by installing a **Type-2 Hypervisor (Oracle VirtualBox)** and creating, configuring, and running a **Virtual Machine** with a guest operating system.

Output: -

