

# Virtual Machine



# Road Map

- What is a virtual machines?
- What is a virtual machine used for?
- Tools to install VM
- Benefits of a virtual machine
- Installation steps
- Live demo and presentation of a VM and applications

# What is a Virtual Machine?



A **virtualized instance** of a computer that can perform almost all of the same functions as a computer. That includes running applications and operating systems.

---

# What is a VM used for?



- Building and deploying apps to the cloud.
- Trying out a new operating system (OS).
- Backing up your existing OS.
- Accessing virus-infected data or running an old application by installing an older OS.
- Spinning up a new environment.  
Repurpose older devices

---



VMware Workstation Player



VirtualBox



Citrix

**Operating System:**  
Windows 7 Professional

**Memory:**  
16 GB  
**Hard Drive Capacity:**  
300 Gb

VM1

**Operating System:**  
MacOS High Sierra

**Memory:**  
8 GB  
**Hard Drive Capacity:**  
500 Gb

VM2

**Operating System:**  
Ubuntu Linux

**Memory:**  
4 GB  
**Hard Drive Capacity:**  
250 Gb

VM3



Multiple vm softwares available.  
Virtualbox, oracle vm, hyper-v,  
QEMU, Red Hat virtualization,  
Google cloud compute

# Benefits of a Virtual Machine



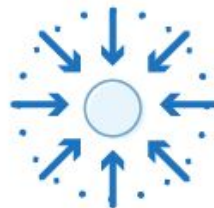
## **Operational flexibility**

Operate separate instances of multiple OS types



## **Reducing overhead**

Run multiple virtual machines on the same underlying hardware



## **Centralization**

Consolidate systems to simplify management



## **Scalability**

Easily scale your virtual environment as your business grows

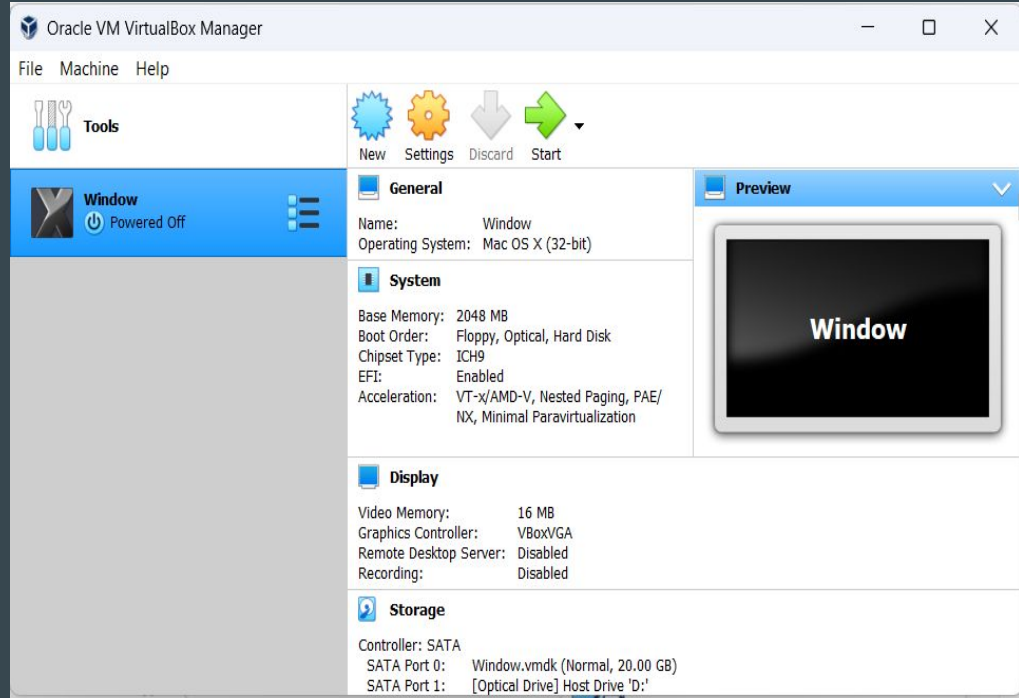


## **Disaster recovery**

Restore data and system states from VM instances

# Installation steps

- Install Virtual Box
- Download the preferred OS for the VM depending on my physical Machine OS.
- Install a VM through VB



# Creating A virtual Machine

## Step -1 Creating A virtual Machine(Choosing a name and OS)

← Create Virtual Machine

### Name and operating system

Please choose a descriptive name and destination folder for the new virtual machine and select the type of operating system you intend to install on it. The name you choose will be used throughout VirtualBox to identify this machine.

Name: ubuntu24.04

Machine Folder: C:\Users\senth\VirtualBox VMs

Type: Linux

Version: Linux

Solaris

BSD

IBM OS/2

Mac OS X

Other

Expert Mode Next Cancel



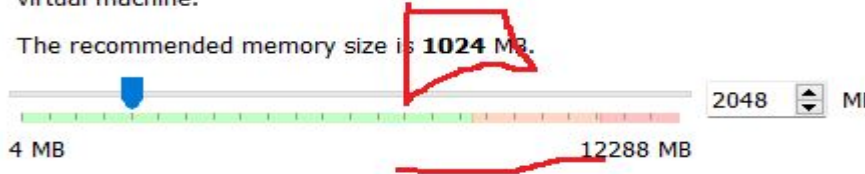
## Step-2 Allocating Memory space

← Create Virtual Machine

### Memory size

Select the amount of memory (RAM) in megabytes to be allocated to the virtual machine.

The recommended memory size is **1024 MB**.



4 MB 12288 MB 2048 MB

Next Cancel

## Step -3 Creating a virtual Hard disk

Create Virtual Hard Disk

File location

C:/Users/senth/VirtualBox VMs/ubuntu24.04/ubuntu24.vdi

File size

4.00 MB 2.00 TB 10.00 GB

Hard disk file type

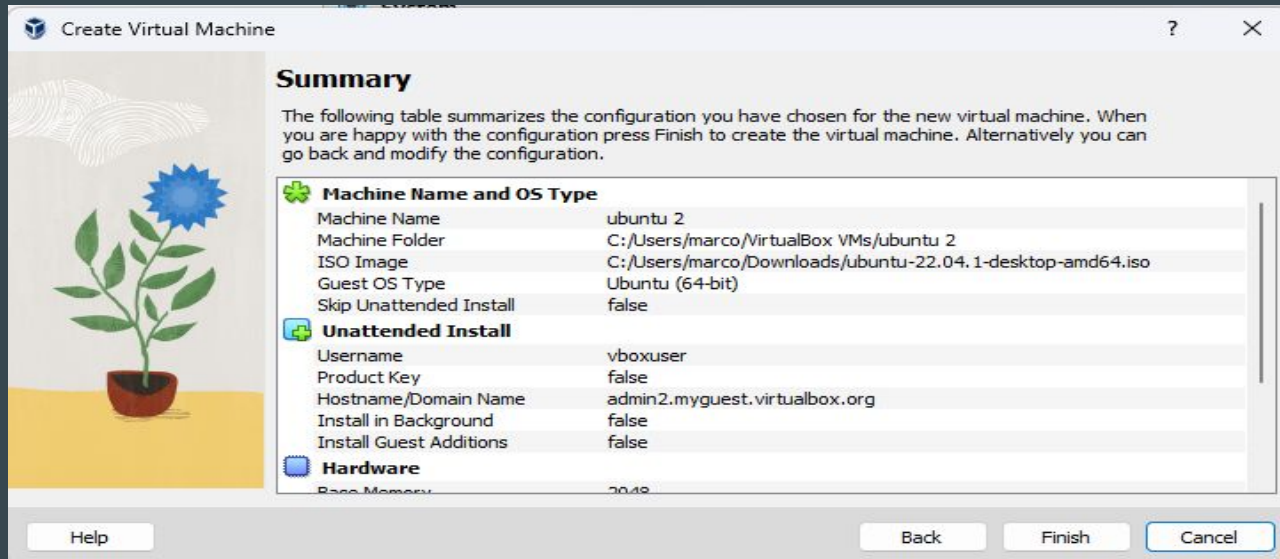
- ☒ VDI (VirtualBox Disk Image)
- ☒ VHD (Virtual Hard Disk)
- ☐ VMDK (Virtual Machine Disk)
- ☐ HDD (Parallels Hard Disk)
- ☐ QCOW (QEMU Copy-On-Write)
- ☐ QED (QEMU enhanced disk)

Storage on physical hard disk

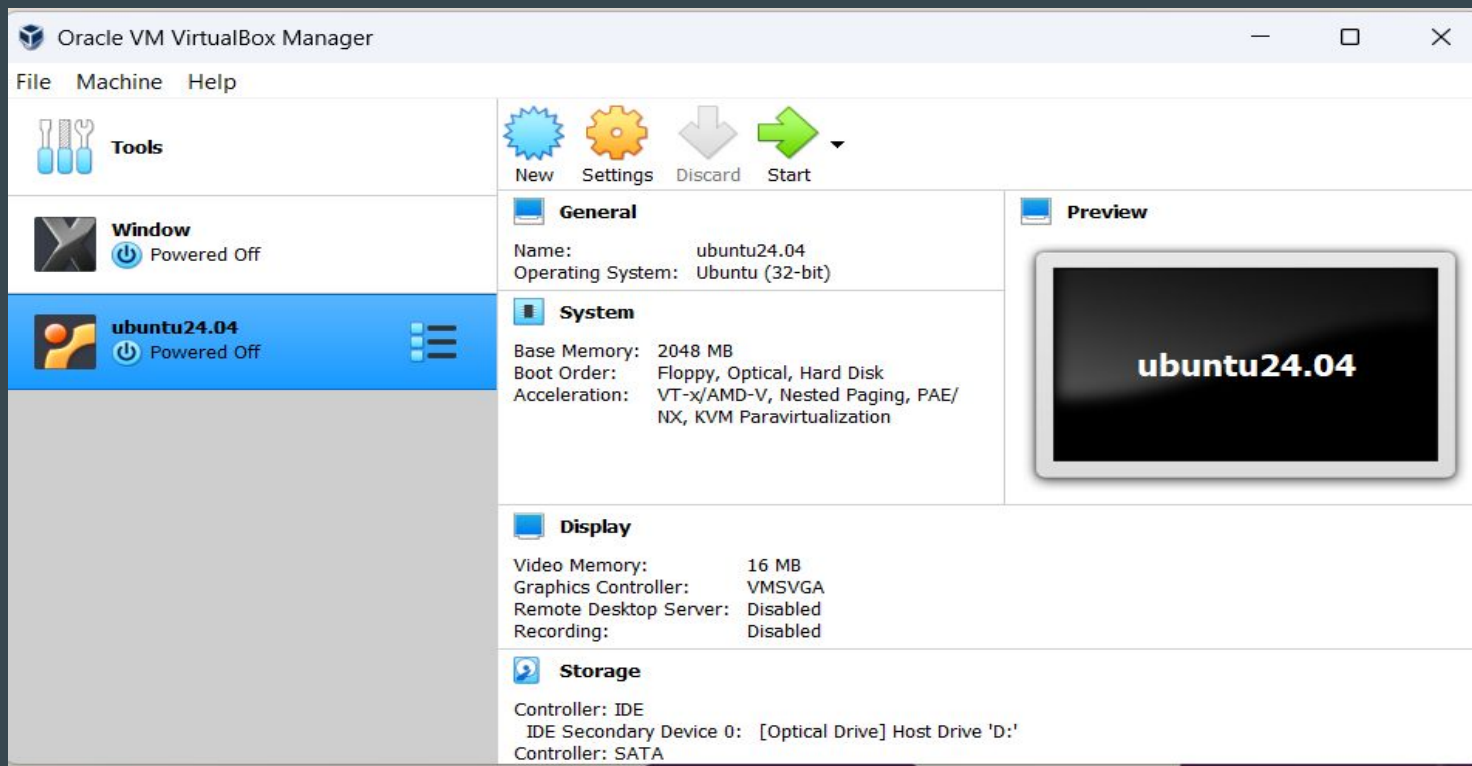
- ☒ Dynamically allocated
- ☐ Fixed size
- ☐ Split into files of less than 2GB

Guided Mode Create Cancel

# Final step -Summary and Finish



# VM-Created



# Live demo and presentation of a VM and applications



Q&A

# Source Page, Citations

“Welcome to Virtualbox.org!” *Oracle VM VirtualBox*, Oracle, <https://www.virtualbox.org/>.

© 2023 Canonical Ltd. Ubuntu and Canonical are registered trademarks of Canonical Ltd. “Download Desktop | Download.” *Ubuntu*, [ubuntu.com/download/desktop](https://ubuntu.com/download/desktop).

Winkler, E., Winkler, E., & \*, N. (2022, May 30). *What is a virtual machine? (why and when to use it)*. SoftwareHow. Retrieved February 6, 2023, from <https://www.softwarehow.com/what-is-virtual-machine/>

24X7, Read Us. “5 Best Free Virtual Machine Software of 2022 (Updated).” *Pinterest*, 2 July 2022, [in.pinterest.com/pin/technology-586382813978550384](https://in.pinterest.com/pin/technology-586382813978550384).