Module Code & Module Title

Level 5 – CT5052NP Network Operating Systems

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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1. Introduction

Virtualization is a technology which is used to share the capabilities of physical computers by splitting the resources among OSs. The concept of virtual Machines (VMs) started back in 1964 with IBM project called CP/CMS system.

The current state of virtualization includes hypervisors like VMware, VirtualBox, and Microsoft Hyper-V. these tools are important for running multiple operating systems. There are alternatives like containerization which uses tools such as Docker to run applications in isolated environments. Virtualization is still preferred when full operating system environment is required. Compared to containers, virtualization is more resource intensive but It provides complete isolation and greater flexibility for running different operating systems. (Peter, 2023)

Pros:

Complete isolation, flexibility, and the capacity to run many operating systems at once are all made possible by virtualization.

Cons:

Virtualization uses more memory and CPU than containerization since it simulates whole operating systems.

2. Objective

The objective of this lab is to successfully install and configure windows server 2022 on a virtual machine.

2.1 Required Tools and concepts

- VMware Workstation Player or Oracle VirtualBox for virtualization
- Windows server 2022 iso file.
- Minimum 8GB Ram and 50GB of storage.

3. Steps to replicate

i. Download and install virtualization software

Open virtualBox

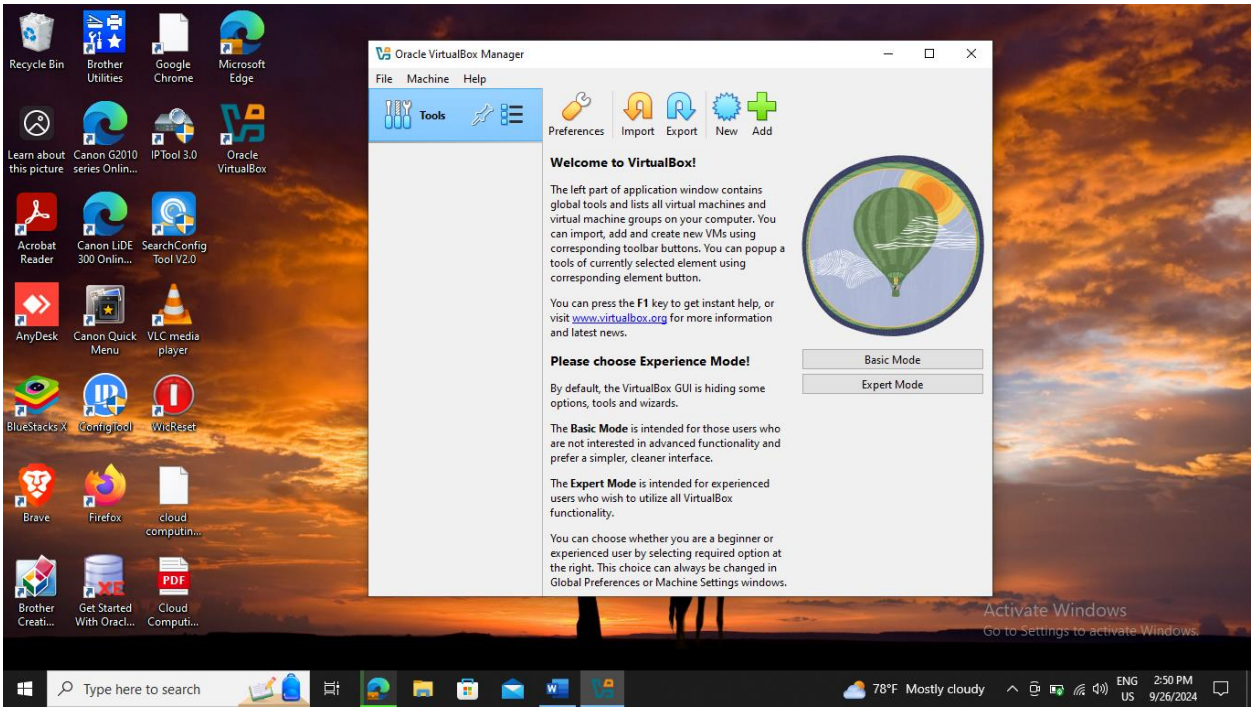

Figure 1:opening virtualBox

ii. Download Microsoft server 2022 iso file

iii. Create a new virtual machine

Open virtualBox and click on new button and provide the name of virtual machine

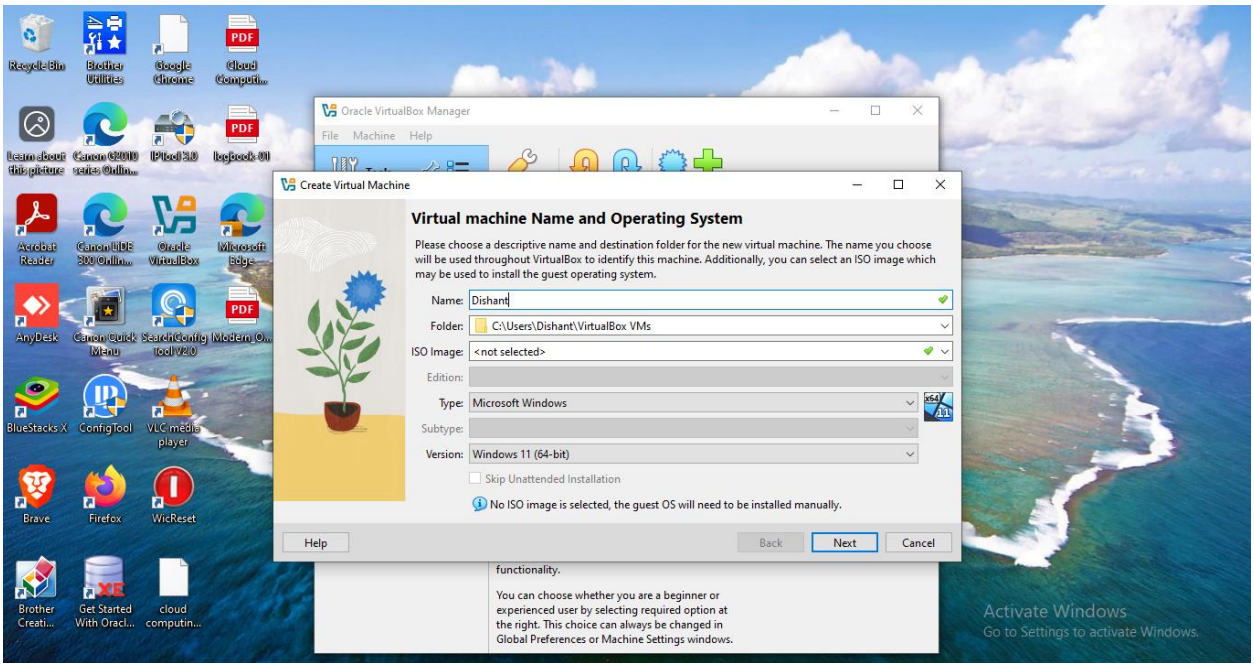

Figure 2: creating new virtual machine

iv. Select iso file

Click on iso image and provide the path of iso file of windows server 2022 previously downloaded.

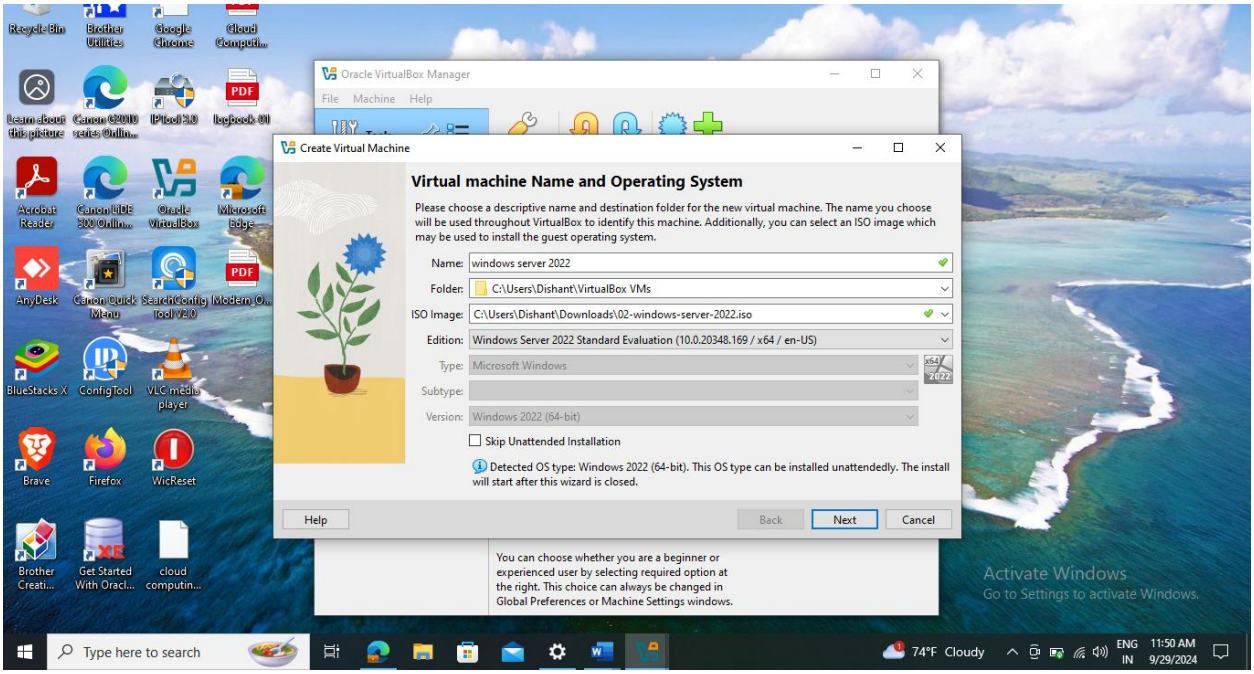

Figure 3: selecting iso file

v. configure credentials

provide required credentials

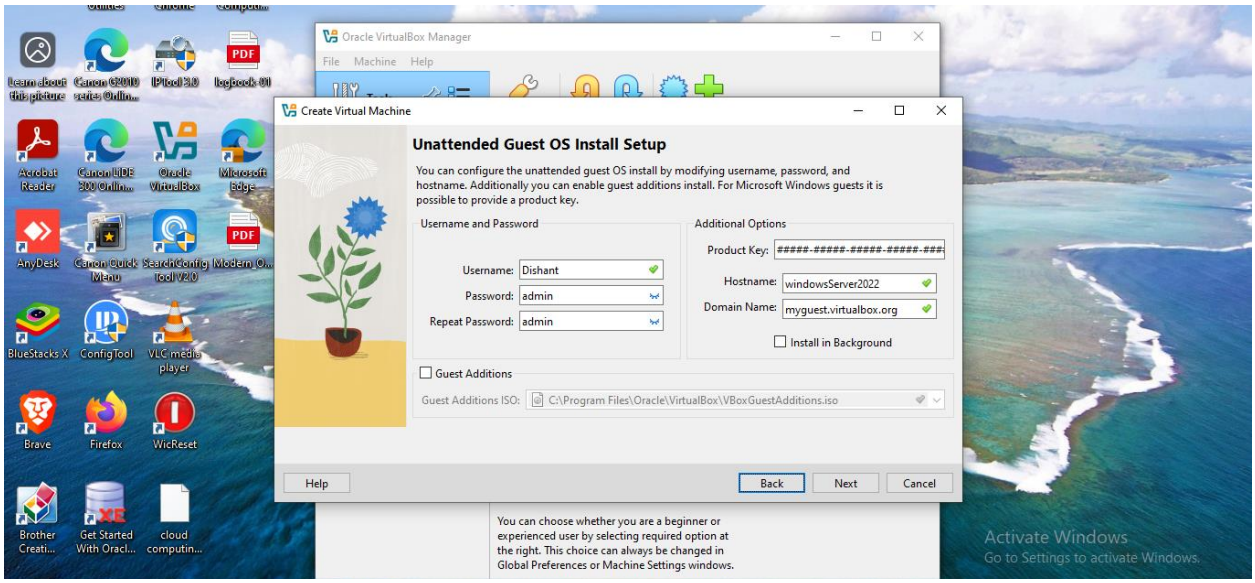

Figure 4:Providing credentials

vi. memory and CPU allocation

allocate required memory and cpu to run windows server 2022

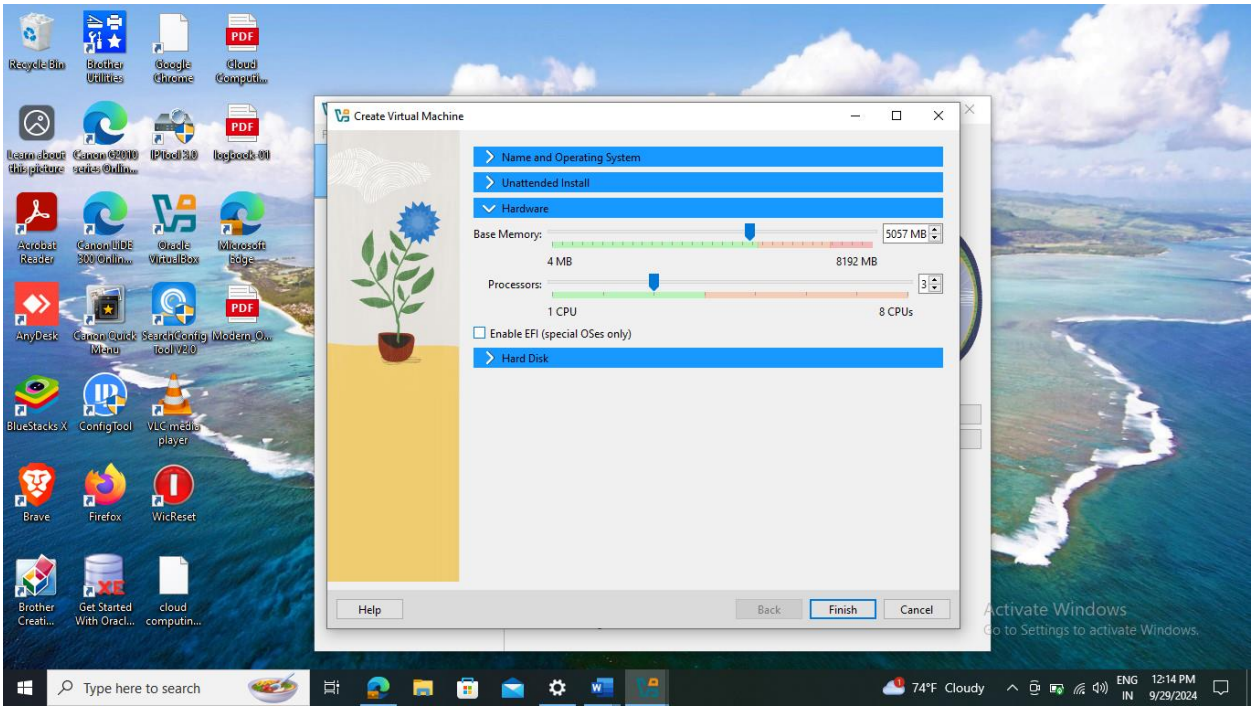

Figure 5:allocating memory and cpu

vii. storage allocation

allocate the required storage to run windows server 2022

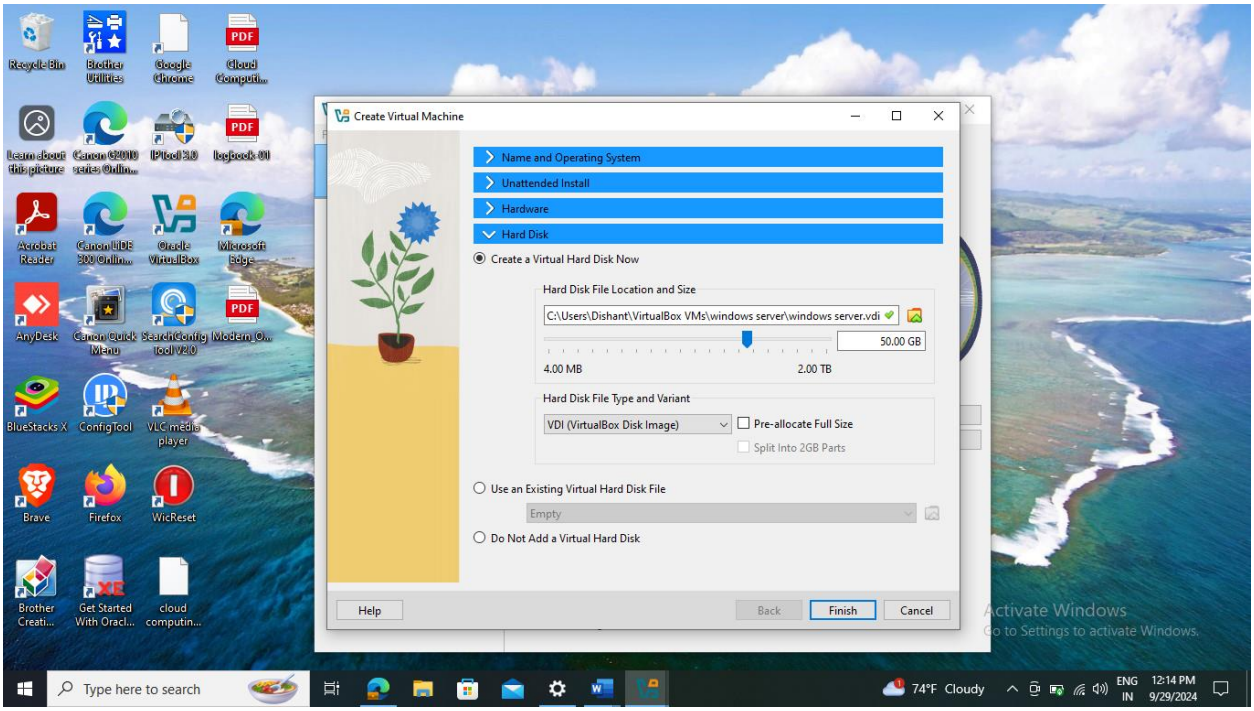

Figure 6:allocating storage

viii. finish the setup

finish the setup and run the virtual machine

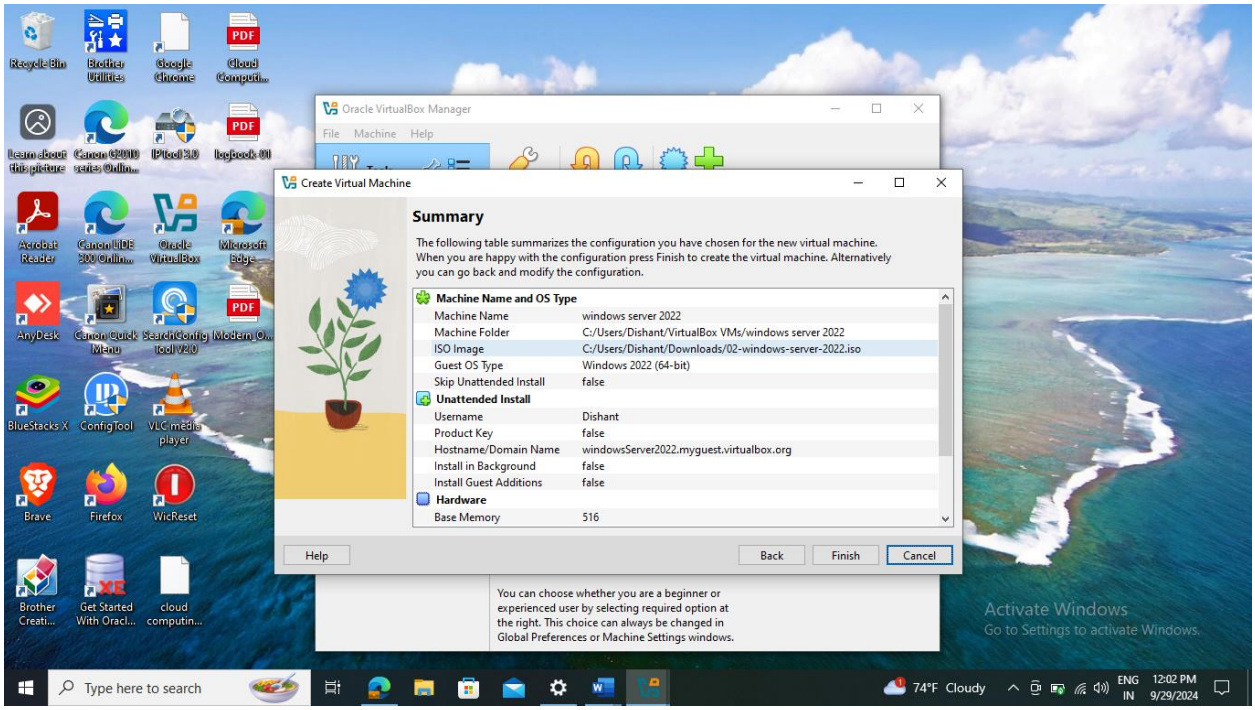

Figure 7: finishing setup

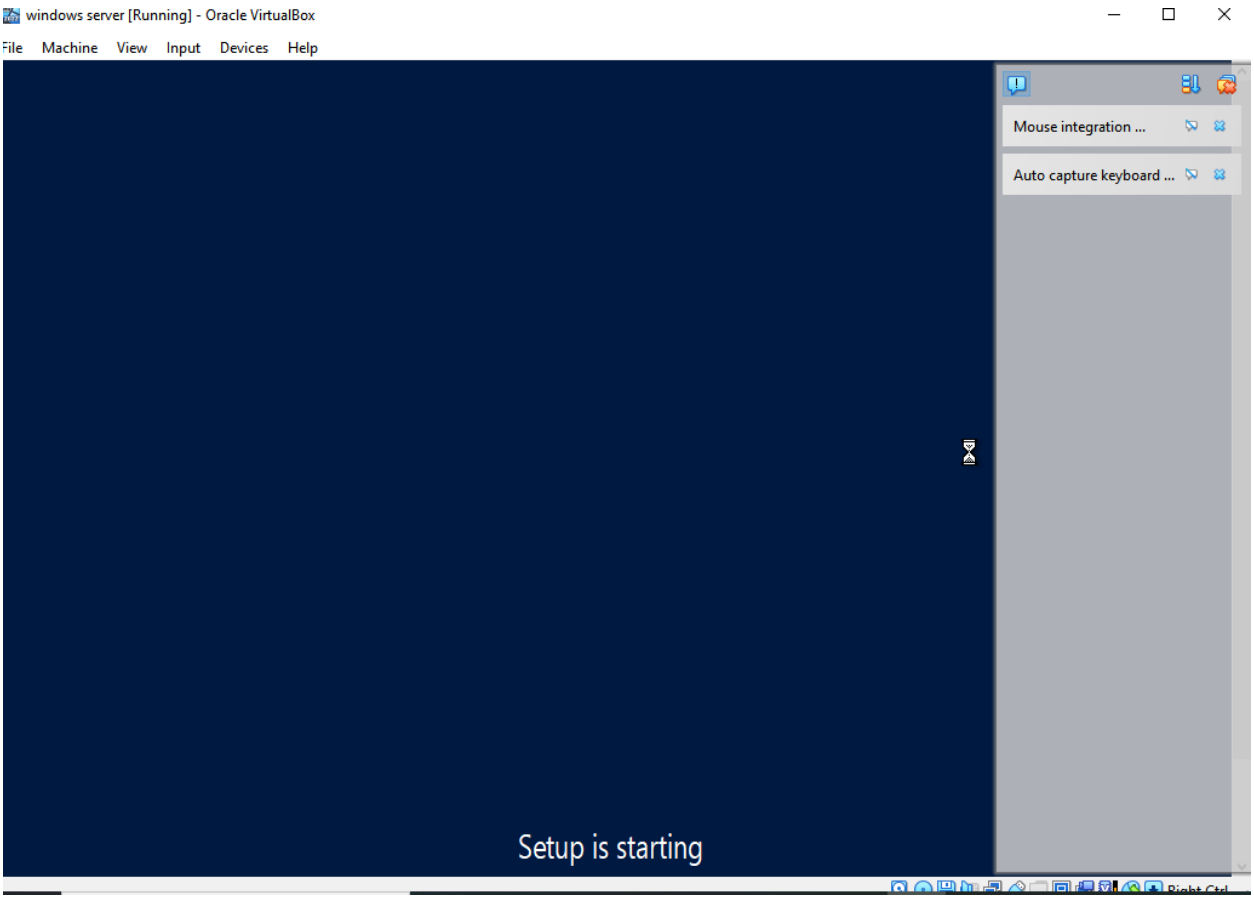

Figure 8:running virtual machine

4. conclusion

In this lab we successfully installed and configure windows server 2022 using virtualBox. We downloaded iso file and demonstrated step by step how to create a virtual machine using virutalBox.

Bibliography

Peter, J. (2023). The role of virtualization in modern IT infrastructure. *journal of cloud computing*.