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CT5052NP Network Operating System

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Student Name: Pujan Jung Thapa

London Met ID: 23057035

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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

Windows server is a line of operating systems developed by Microsoft and it's main function is to be used in networked environments, for example in corporate networks or cloud computing environments. Windows Server is made to offer a security-enhanced and reliable platform for business-critical applications, and it also offers a host of features and technologies that can help organizations manage their IT infrastructure efficiently and effectively. It come in different different version, including Windows Server Standard, Windows Server Datacenter, and Windows Server Essentials. Every one of it has been designed in such way that satisfies the requirements of organizations with a size varying from small businesses to large enterprises. Windows Server is equipped with the various features that provide to virtualization, active directory, and a wide range of security and networking capabilities. It is designed to be scalable, reliable, and secure for user it can also be managed from both graphical user interface and via command-line tools and scripts. Windows Server is a firm favorite among businesses because the operating system provides a secure and stable platform to them on which they run applications and store data. It is very simple to integrated with other Microsoft products and is compatible with a wide range of hardware and software platforms. Overall, Windows Server represents a robust yet flexible operating system that could efficiently assist an organization in managing and securing its IT infrastructure and resources. (Aldhamen, 2022)

1.1 History of Windows Server

Windows Server is a brand of proprietary operating systems developed by Microsoft. They include a separate version of Windows targeting the networked environment, providing virtualization, Active Directory, and other security capabilities. Multiple versions have been in use historically, including Windows Server 2003, an important release that signaled the separation of desktop and server code releases. System provide a secure platform for business-critical applications and comes in several editions for various organizations' needs. Windows NT, predecessor to the modern Windows Server had gained popularity as personal and intranet servers grew more affordable with greater memory capacity. As competition to Unix, Mac OS, and Netware in the server market continued, Windows NT increased their performance over time, especially the larger application servers. Evolution in Windows Server has targeted scalability, reliability, and integration with other Microsoft products, which is why it remains one of the popular choices for corporations managing IT infrastructure. (Boswell, 2003)

1.2 Need of windows server

Windows Server is an operating system widely used in networked environments; it comes with features such as virtualization, Active Directory, and security capabilities. It provides a solid platform for running applications and managing IT infrastructure, with several editions to suit various organizational needs. Mastering Windows Server involves understanding key components like IP configuration, DNS, DHCP, and Active Directory, along with implementing security measures and managing group policies. When deploying Windows Server, an organization has to make a decision whether to use it natively or virtualized for maximum resource utilization. Virtualization can provide financial advantages in power consumption, platform support, and data center maintainability. However, it may also bring performance penalties, which can be assessed using benchmarking tools like PCMark and AIDA64. It evaluates different virtualization environments to determine the best deployment strategies in a variety of scenarios, including storage clouds and database hosts. (Aldhamen, 2022)

1.3 Virtual box

Oracle VM Virtualbox is the free and cross-platform multipurpose virtualization software that allows simultaneous use of various operating systems on a single machine. Amongst other possible uses, developers use the application, probably more than any other group of persons, to run their codes faster since it allows them to test into different operating systems on a laptop. IT departments and their solution providers, however, find value in the virtualization tool for lowering operational costs and minimizing the time it takes to enable secure applications on-premisesand on-the-cloud. Oracle VM VirtualBox is specifically designed for, but not limited to, IT professionals and developers, as it enables lightning-fast and seamless operation on various Windows, macOS, Linux, and Oracle Solaris systems. The software is suitable for testing, development, demonstration, and deployment of cross-solution capabilities on a single device. (Virtualbox, 2011)

2. Objectives

In this log 2 t is all about the Window Server and how to use Virtual Box using same hardware components of a device to run Microsoft Window Server.

3. Required tools and concepts

3 .1 Windows server 2022 ISO

For running Windows server 2022 in virtual box, we need to download official Windows Server 2022 ISO file in our device so that we can install the new OS.

3.2 Oracle Virtual Box

We need Oracle Virtual Box which is an open source virtualization tool which we can download from website and we can select the version and in which operating system we are about to use like mac, windows etc we have to download according to our operating system.

4. Step of Replicate

After downloading ISO file and Virtual box of the windows server 2022 on our host machine we have to open first Oracle Virtual Box.

a. Create a New virtual machine in Virtual Box:

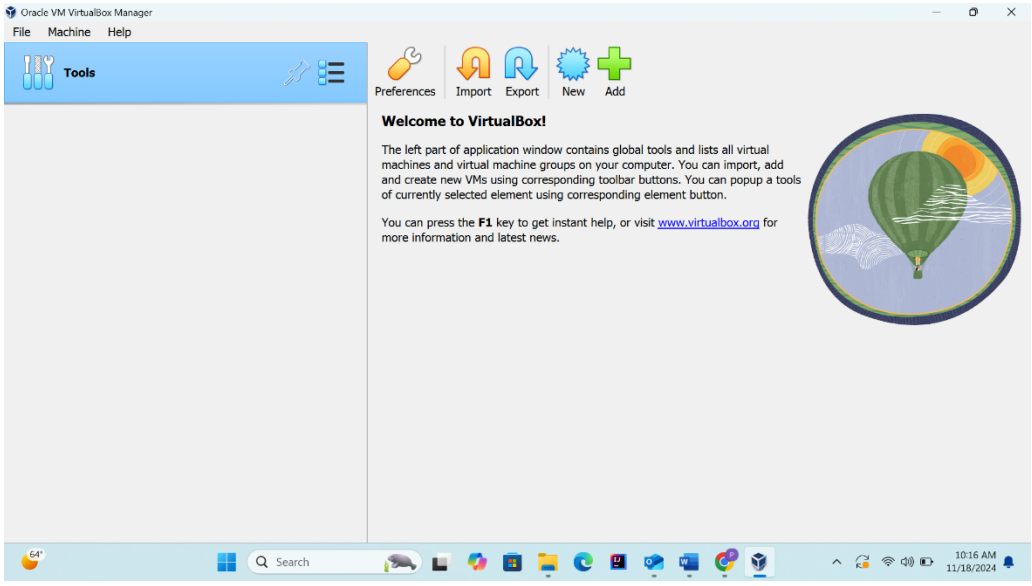

Figure 1: Creating new Virtual Machine

Now we have to create a new virtual machine by clicking new. Also provide a suitable name of your VM and copy ISO image or copy file path.

b. Configure Virtual Machine Hardware:

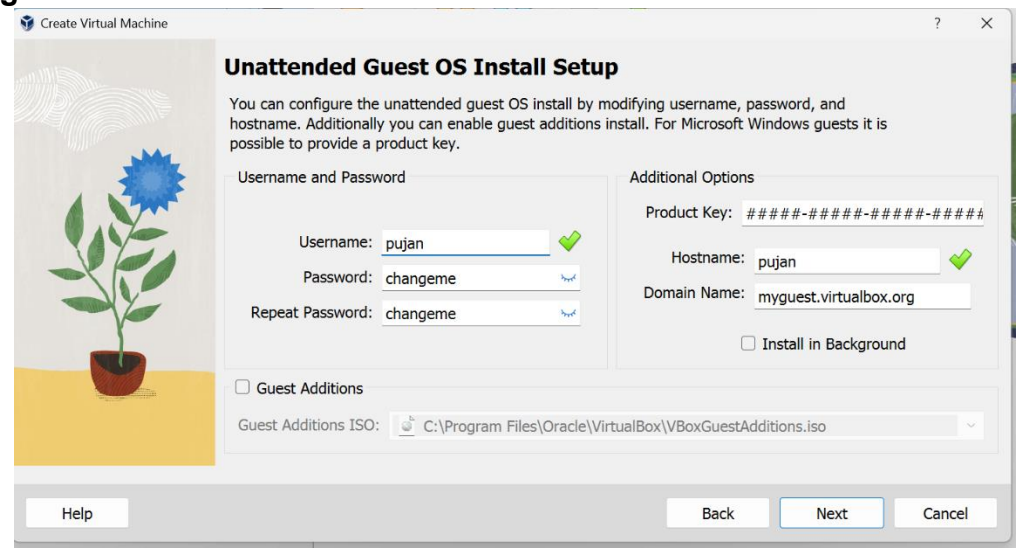

Figure 2: Setting Hostname

Give a Hostname

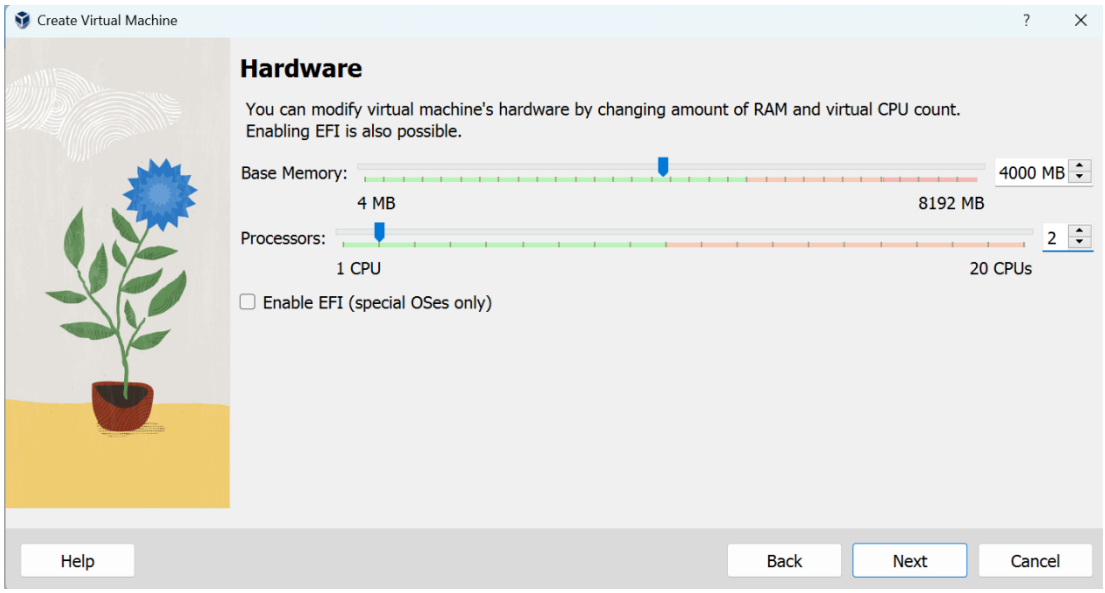

Figure 3: Allocating Base memory and processor for Virtual Machine

After that allocate base memory where I allocated 4000 MB which is more than 4GB and 4 CPUs.

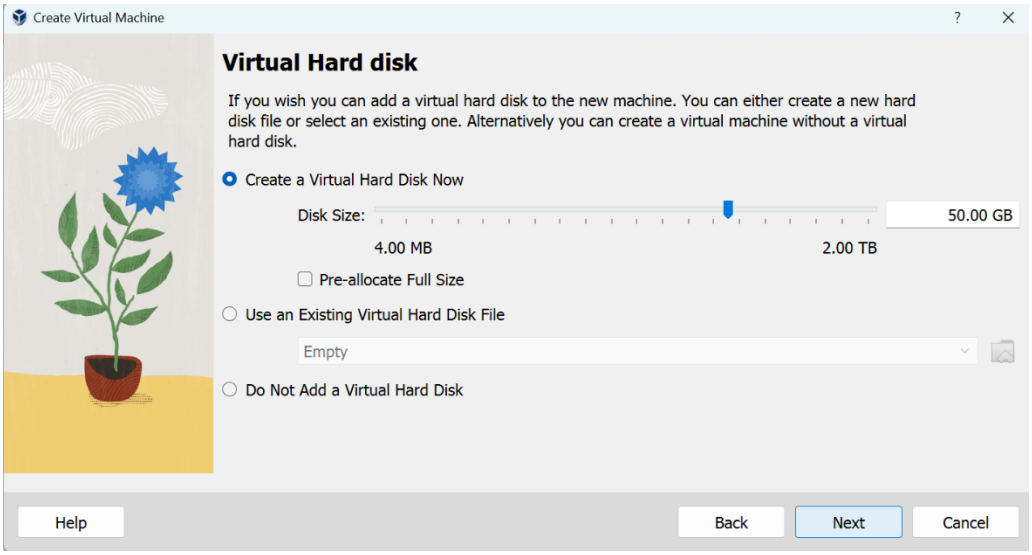

Figure 4: Hard disk file location and size

I have set my disk size to 50.00 GB

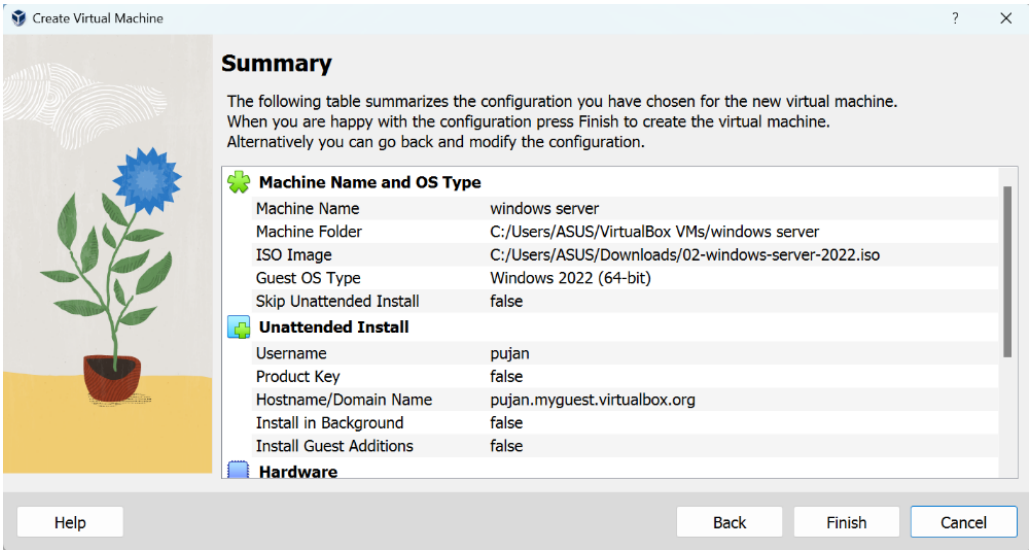

Figure 5: click on finish

c. Starting a Virtual Machine:

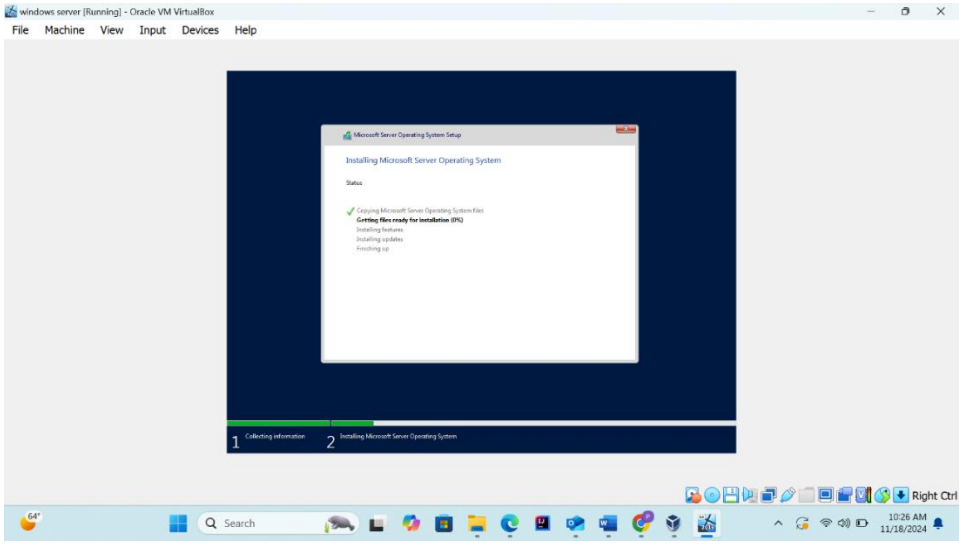

Figure 6: Installing process of Microsoft Server Operating System

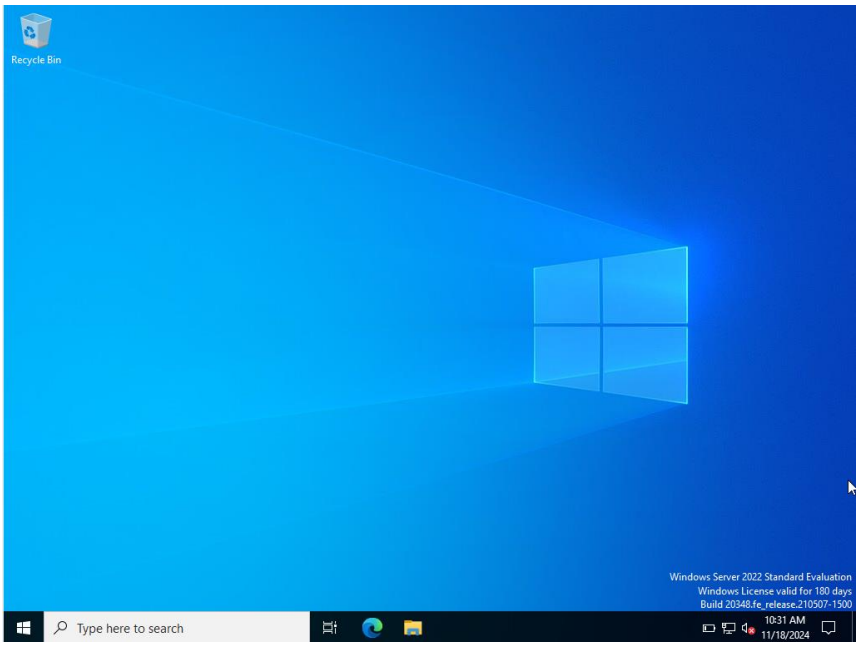

Figure 7: Home screen

d. Verifying the Host name:

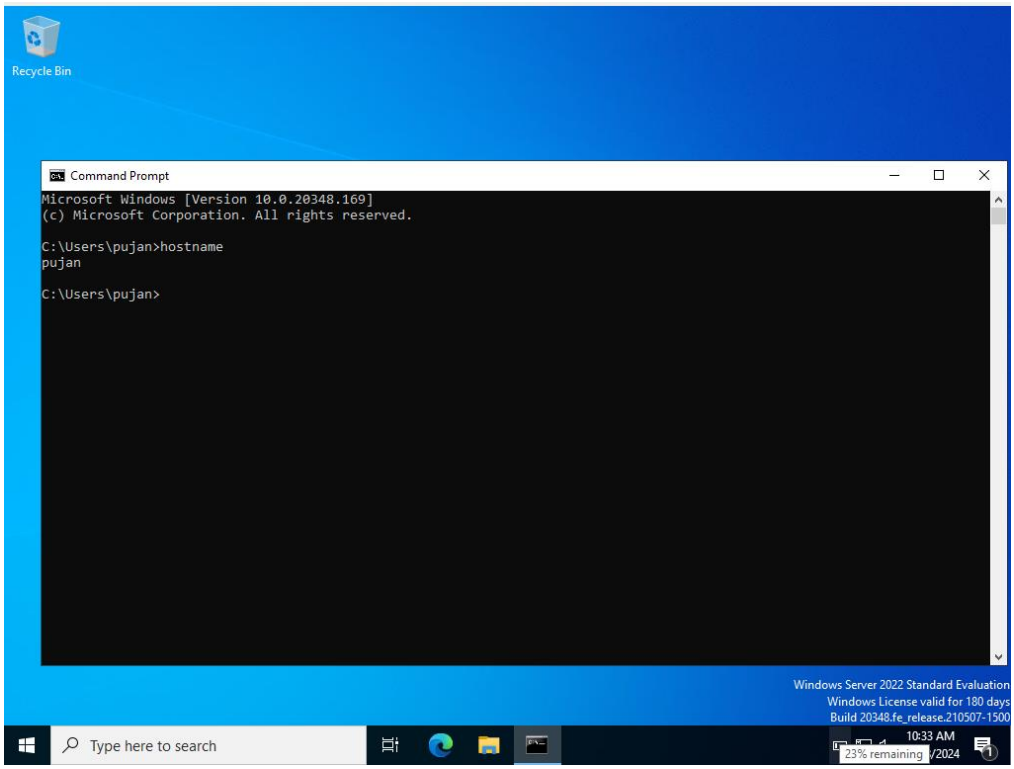

Figure 8: Verifying Host name

4. Conclusion

In conclusion, The report is all about Microsoft's Window Server, which can be operated in a virtualized environment through the hypervisor Oracle Virtual Box. The steps to run the virtual machine are documented by taking snapshots of each step in such a way that anyone reviewing this project will easily be able to run Oracle Virtual Box without confusion about the installation of Windows server 2022. In fact, it mainly claims that a new operating system can be run to make it more economical for students and developers. I, personally, learned how virtual box operates, which will help me overcome hurdles in the coming days, through this report.

5. References

Aldhamen, M., 2022. *“Windows Server Management".* s.l.:IJARCCE.

Boswell, W., 2003. *Inside Windows Server 2003.* Boston: Addison-Wesley Professional..

Virtualbox, 2011. In: *Oracle vm virtualbox. .* s.l.:Change, 107, pp. pp.1-287..