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Student Name: Birat Adhikari

London Met ID: 23048781

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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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Introduction-:

Virtualization is a technique to merge or splitting computing resources to give one or more execution environments using technique like division of hardware and software, machine simulation, mirroring and other (Rodríguez-Haro, et al.). It is the developing technology in the IT world. Majority of the IT company are using this technology to solidify their work load. Virtualization in computer system means creating a virtual instance of anything means it is the logical division of the resources of the system.

i) Virtualization

A hypervisor is one of many virtualization techniques which allow multiple operating systems, termed guests, to run concurrently on a host computer (Li, 2010). An operating system on virtual machine is called a guest OS. Virtualization enables users to run multiple virtual machines on a single machine maximizing the use of hardware. Use of virtualization technique is actually cost effective because it reduces the extra system. At last virtualization is enhances the resources effectively, flexibility, security and cost-effective.

ii) Containerization

In alternate to virtualization we can containerization platform like Docker. It is simply operating system for different containers. Docker provides you a platform that enables software to run in its own. Docker does not need a separate OS instance for each container so it is light weight. Docker let developer to ship code faster in standardize way by improving resource utilization.

Windows server is a type of operating system designed for managing network infrastructure, hosting different applications and storage systems (Dauti, 2022). It was first launched in 2003. This server handles the serving as a backbone for IT industry by handling administrative group related activities on a network. There are different versions of windows server which are mentioned below-:

- Windows Server 200
- Windows Server 2003
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

Objective-: Installing Windows server 2022 on a virtualization software (VMWare) using the iso file.

Required Tools and Concepts-:

i. System requirements-:

First off all your system must fulfil the sufficient storage and processing power to run VMware or virtual Box smoothly at least 8 GB of ram and 50 GB if storage is recommended with multi core processor.

ii. Virtualization Software-:

Then you need to install virtualization tool that allows to create virtual machine on the system.

iii. Windows Server 2022 ISO File-:

A copy of windows server 2002 ISO file which is available in the Microsoft official website.

Steps of Replicate-:

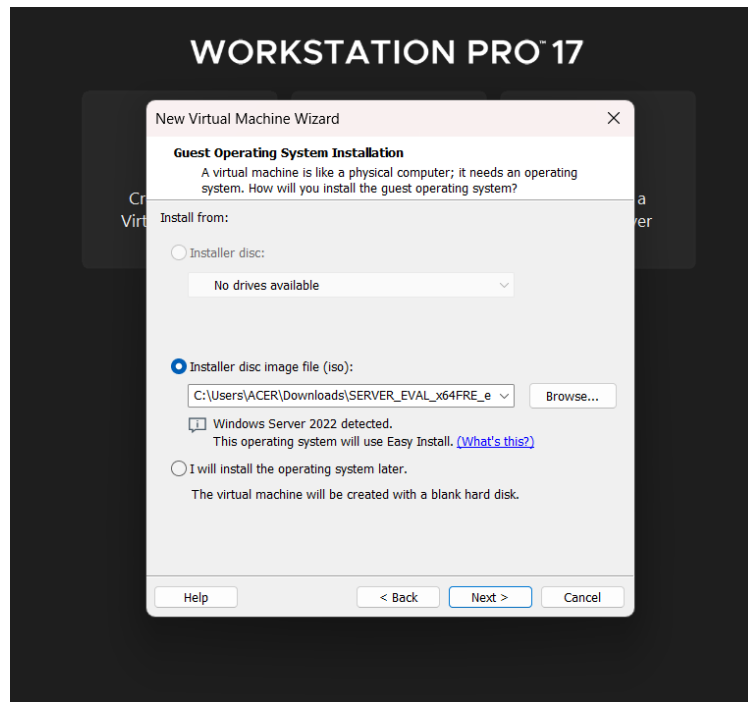


Figure 1: Importing Iso file

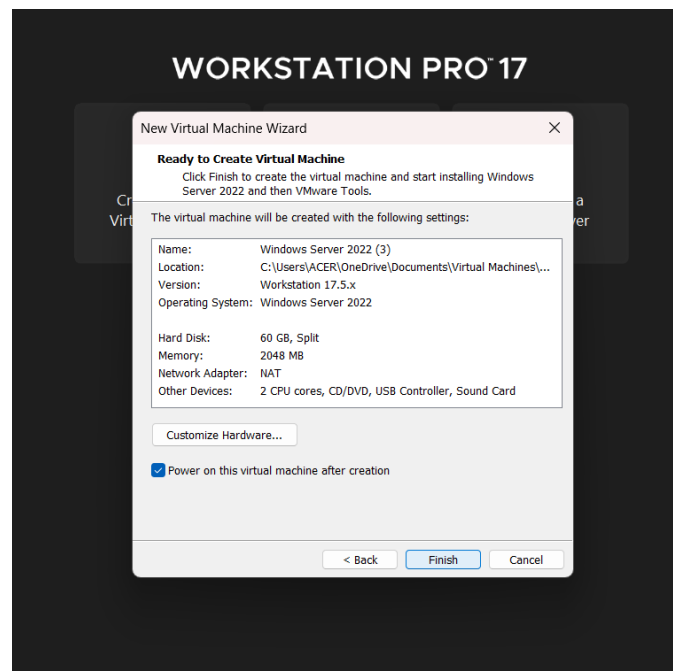


Figure 2: setting up necessary settings for windows server

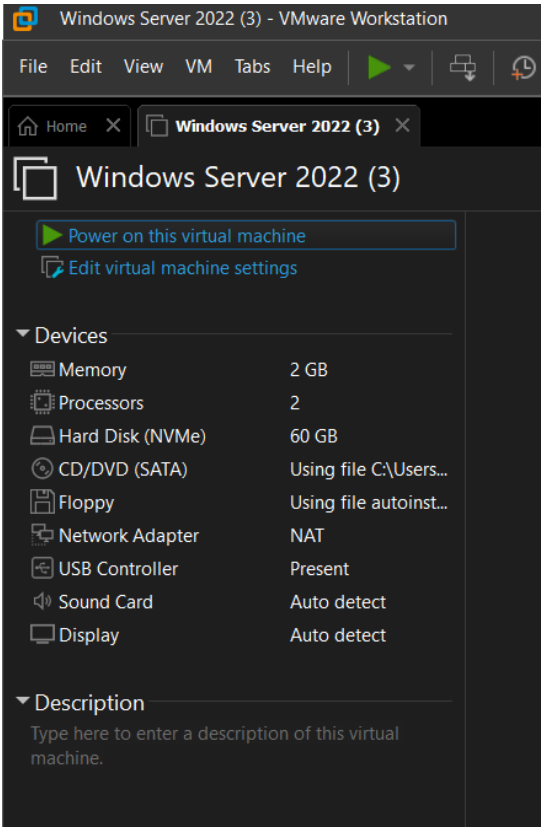


Figure 3: starting up windows server

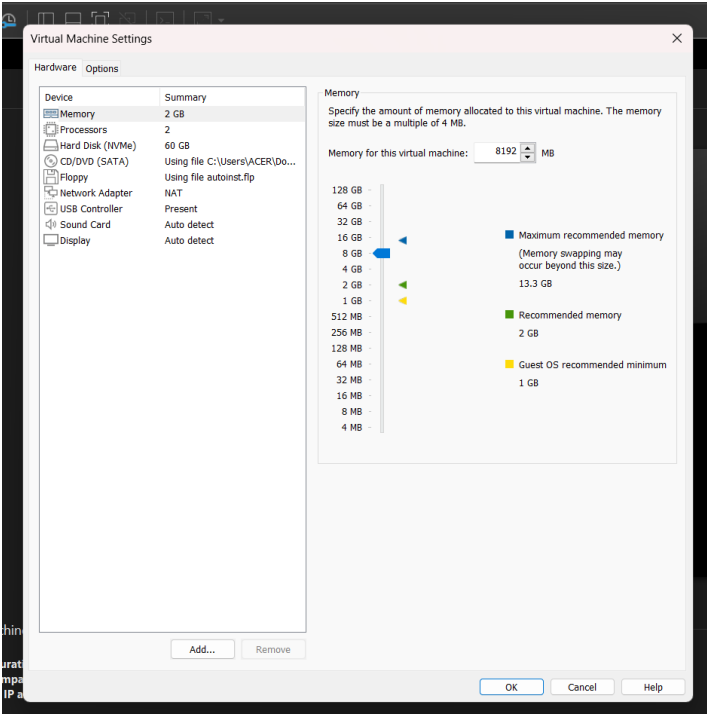


Figure 4: increasing processing power

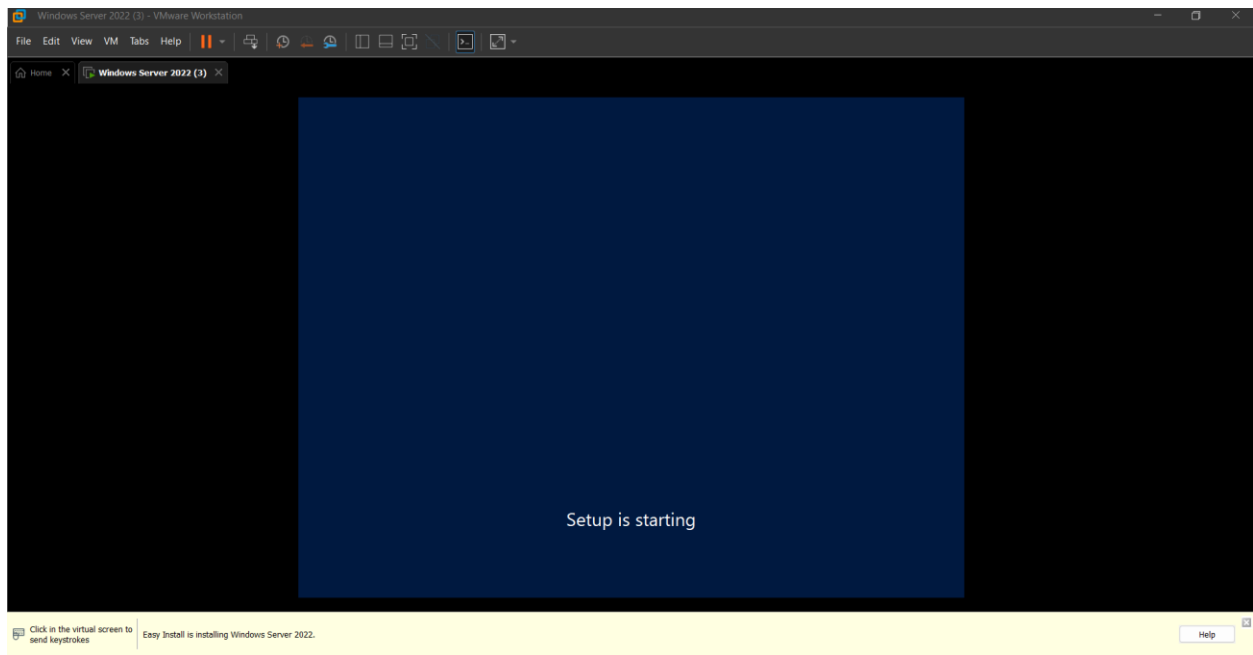


Figure 5:server starting window

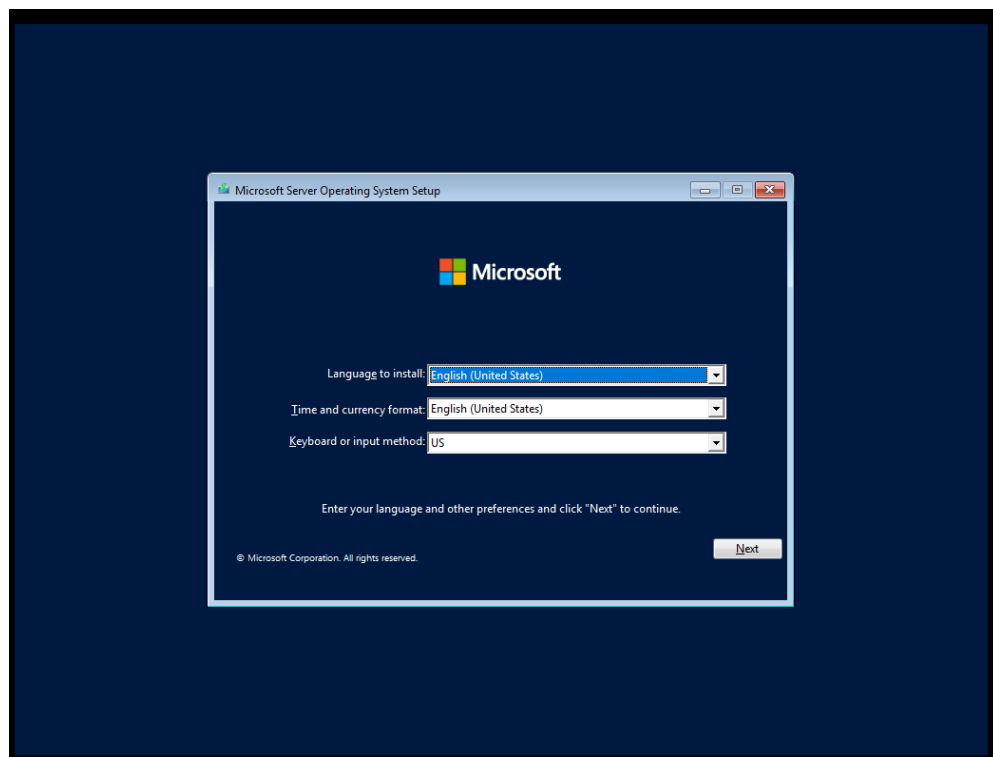


Figure 6: setup window for windows server

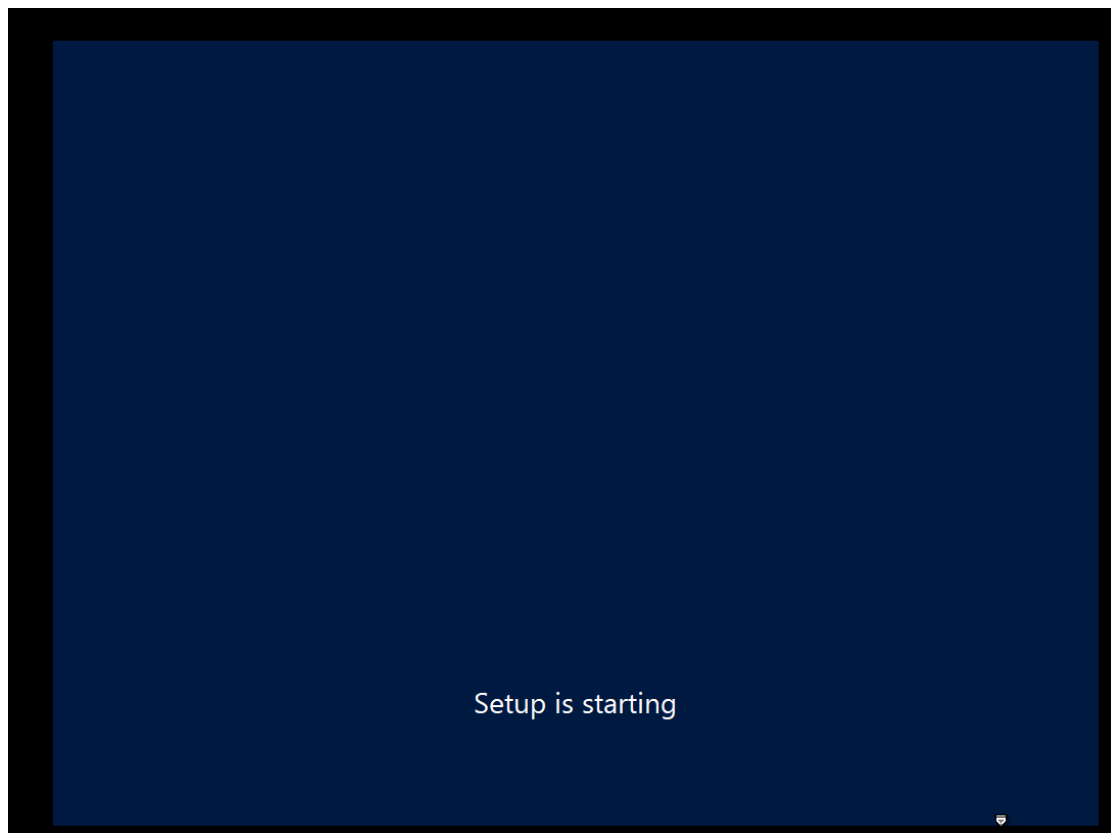


Figure 7: setup loader

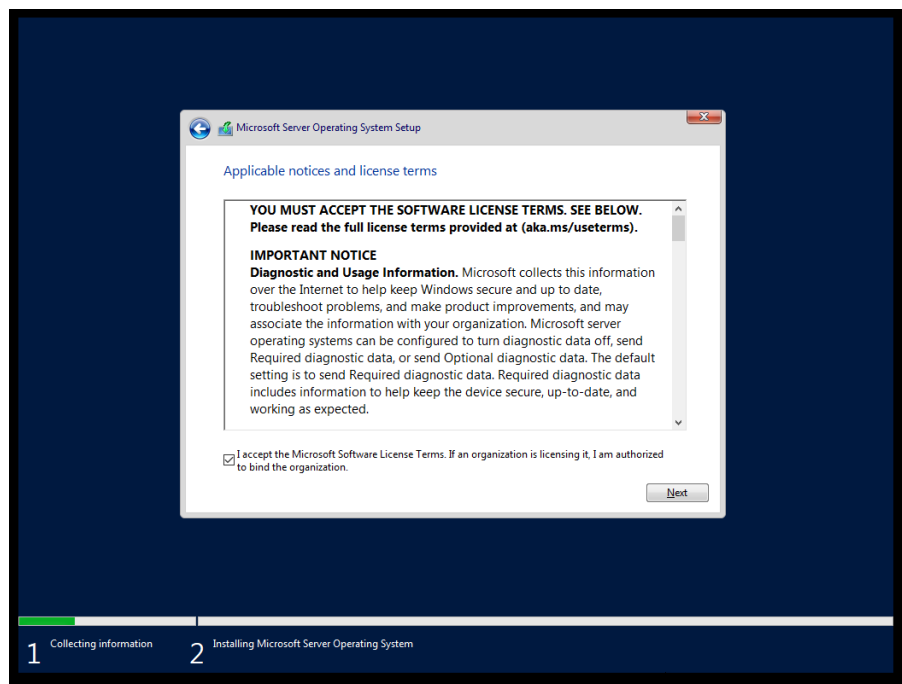


Figure 8: accepting license

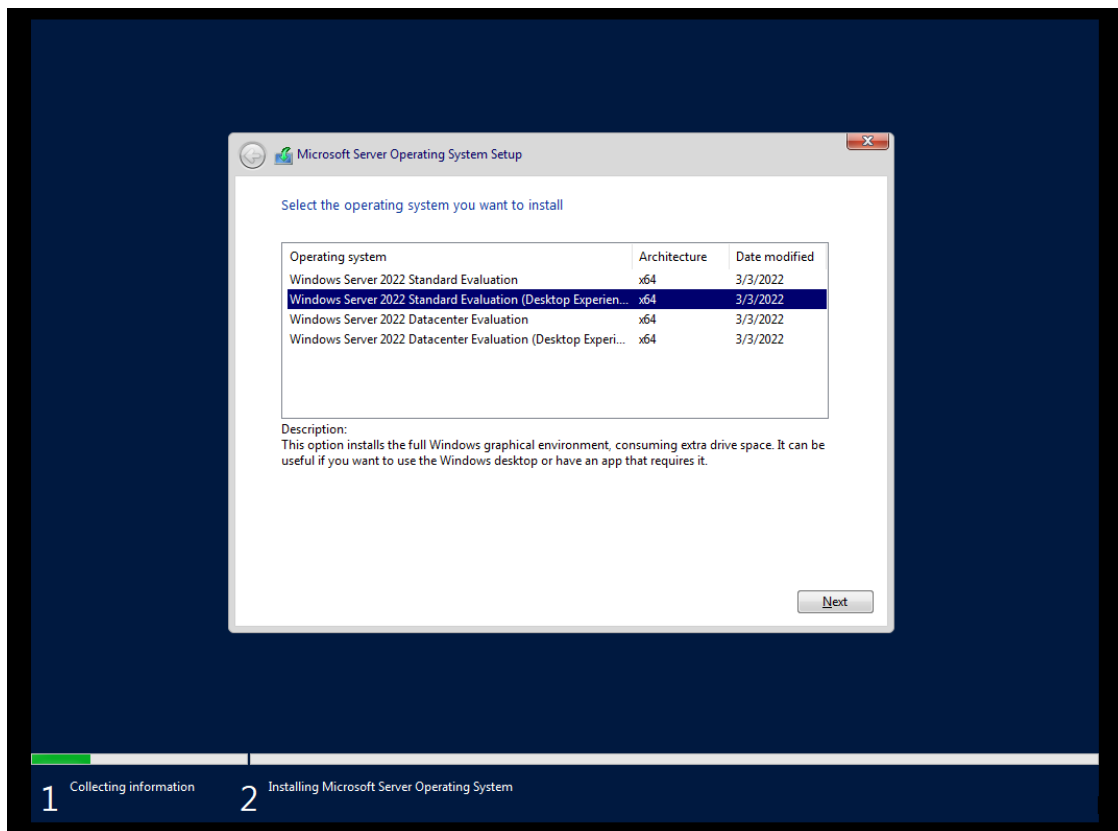


Figure 9:selecting desktop edition

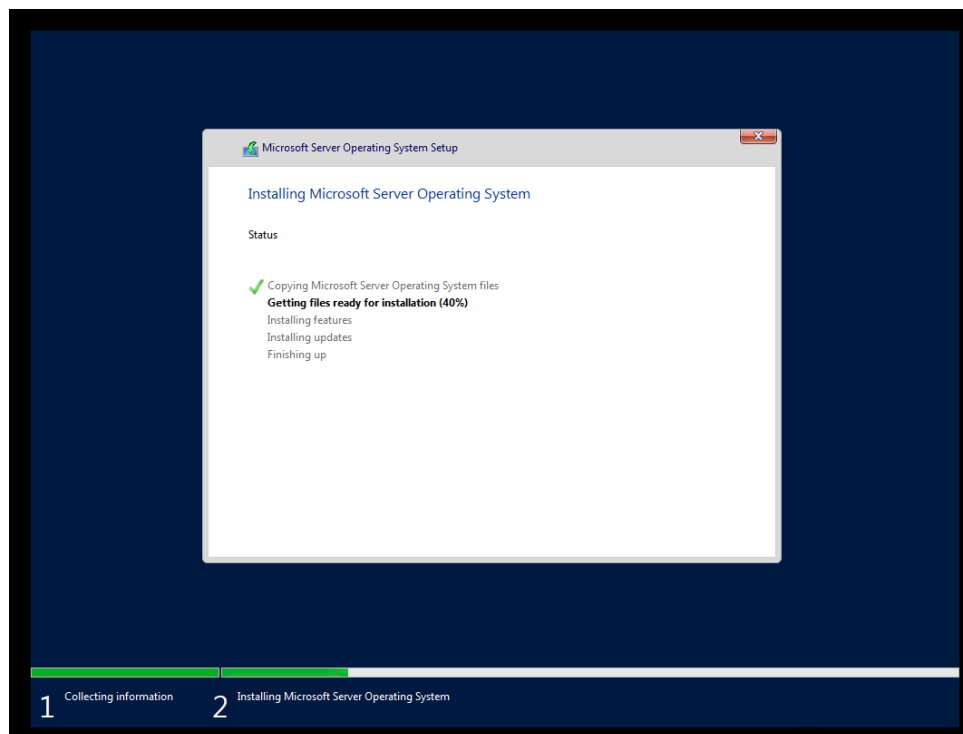


Figure 10:installation on process

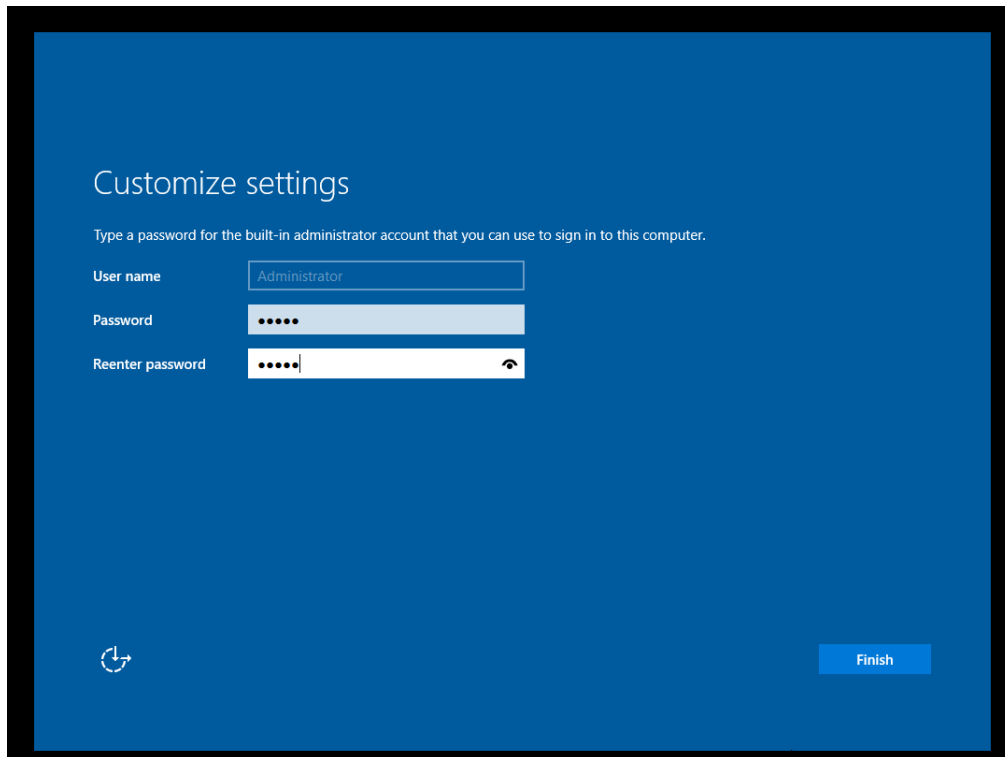


Figure 11: setting up administrator account

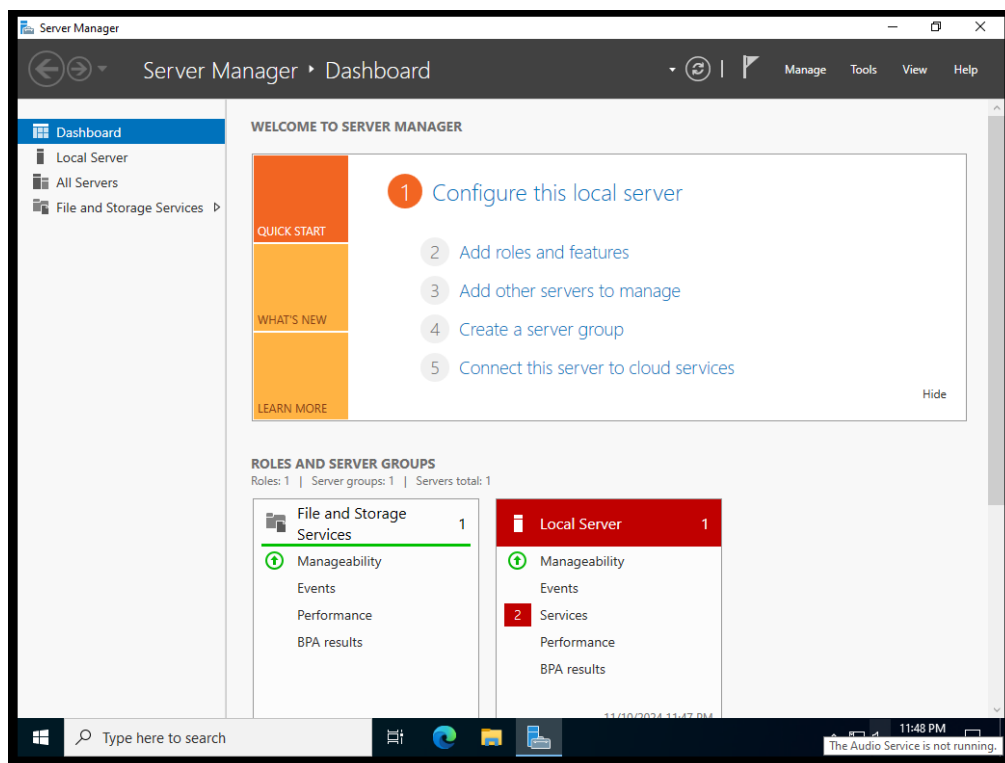


Figure 12: server dashboard

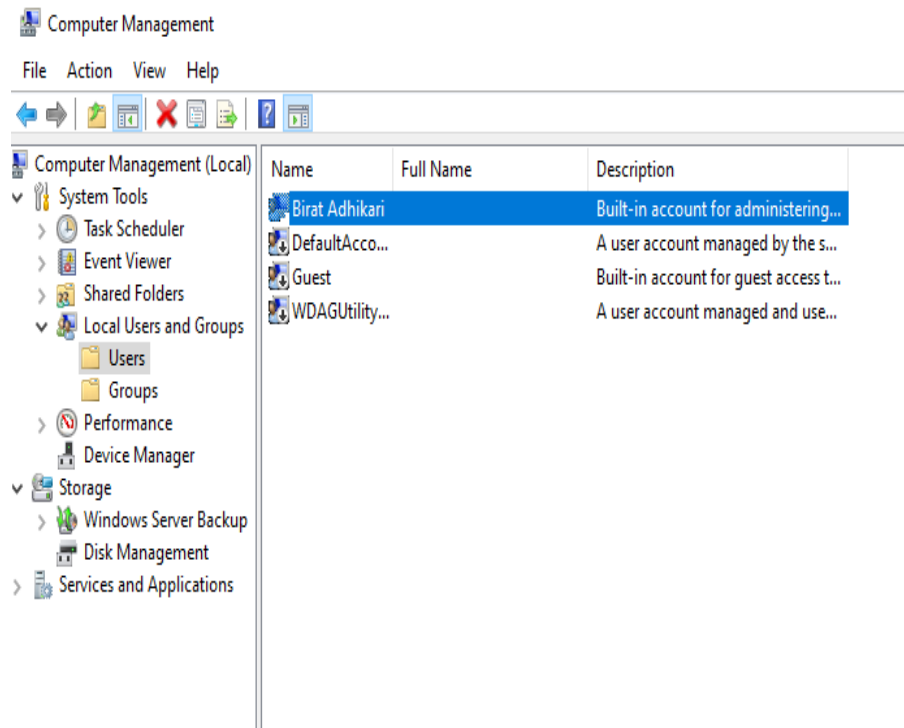


Figure 13:changing administrator name

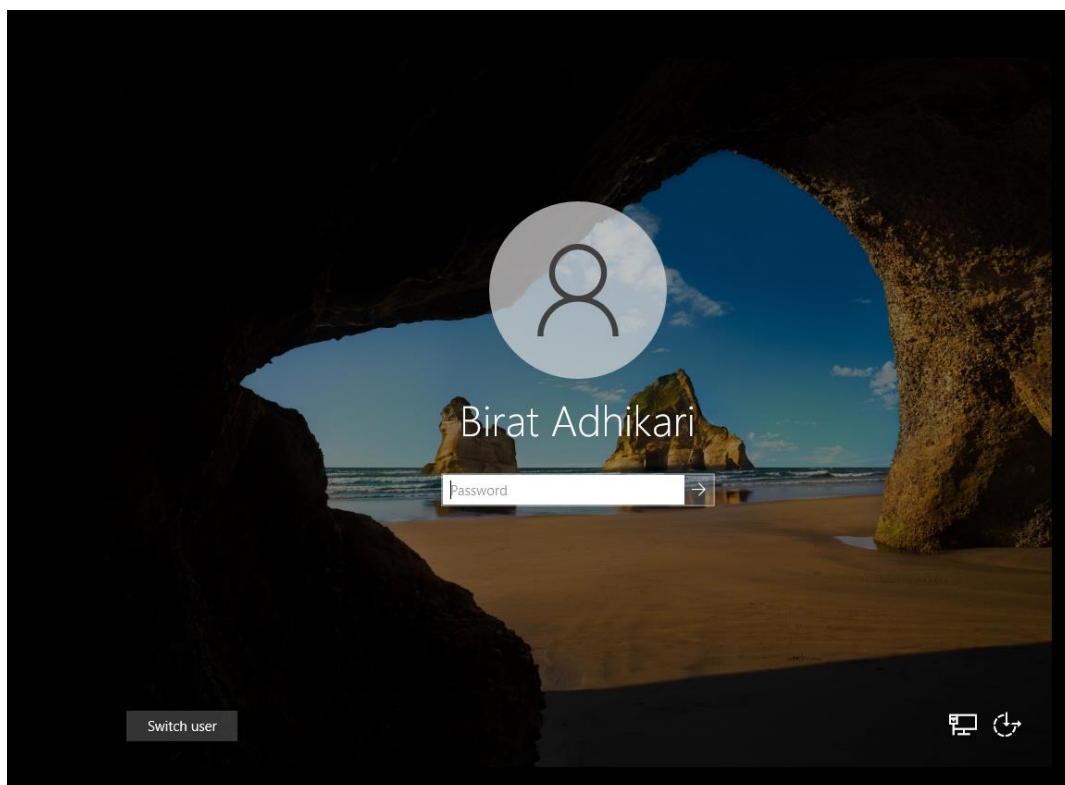


Figure 14:Login window

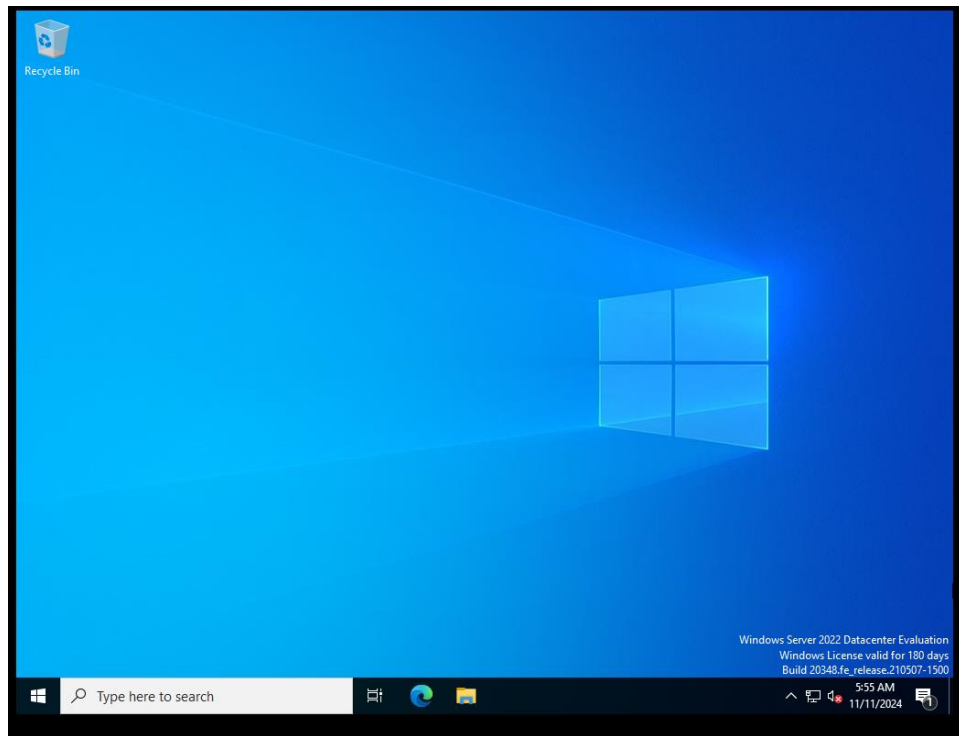


Figure 15:home window

Conclusion-: In this lab we installed windows server 2022 using virtual machine using VMware. The whole installation or set up includes configuring hardware settings, installing iso file for windows server, set up file for vmware. We get to learn how the virtualization technique is implemented in real world.

References:-

Li, P., 2010. Selecting and using virtualization solutions: our experiences with VMware and VirtualBox. *Journal of Computing Sciences in Colleges*, 25(3), pp.11-17.

Rodríguez-Haro, F., Freitag, F., Navarro, L., Hernández-sánchez, E., Farías-Mendoza, N., Guerrero-Ibáñez, J.A. and González-Potes, A., 2012. A summary of virtualization techniques. *Procedia Technology*, 3, pp.267-272.

Dauti, B., 2022. *Windows Server 2022 Administration Fundamentals: A beginner's guide to managing and administering Windows Server environments*. Packt Publishing Ltd.