LONDON METROPOLITAN UNIVERSITY

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Module Code & Module Title

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Submitted to: Mr Prasant Adhikari

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INTRODUCTION

In this workshop, we concentrate on deploying a plain HTML website to a Windows Server 2022 and configuring Remote Desktop Protocol. Windows Server is the platform for building an infrastructure of connected applications, networks, and web services, from the workgroup to the data center. Windows Server bridges on-premises environments with Azure, adding additional layers of security while helping you modernize your applications and infrastructure. IIS is the service of the Windows Server wherein we can host static webpages and dynamic webpages as well.

Remote Desktop Protocol (RDP) is a secure network communication protocol developed by Microsoft. It enables users to control and operate computers from a distance remotely. By establishing an encrypted communication channel, RDP facilitates the secure exchange of information between connected machines. Such technologies are required due to the more extensive practice of working remotely and the management of servers without physical access.

Though other options like AWS, Azure, Linux, Apache and other cloud hosting services are available Windows Sever hosting is still in demand because it is fully compatible with Microsoft products or services. This integration makes it easier for organizations that are more or less dependent on Microsoft solutions like .NET application or SQL server databases. Moreover, because the Windows Server can integrate with IIS, it is considered ideal for hosting websites in the Microsoft-environmental networks.

 But, we have disadvantages that are associated with the usage of Windows Server. The costs of licensing are higher than with open source products such as Linux which is available at no cost and is much more flexible. Moreover, Windows Server can be comparatively heavier and does need more attention or professional to manage the system properly. Open-source solutions, by their turn, are somewhat more flexible and can be customized to a far greater extent in environments not dominated by Microsoft. Nevertheless, Windows Server remains an enterprises' reliable operating system in situations where the integration with Microsoft products is necessary.

OBJECTIVES

The main objective of this workshop is to host static websites on a guest operating system running Windows Server 2022, making them accessible from the host operating system as well as from other devices connected to the same Local Area Network (LAN). Additionally, the workshop aims to enable Remote Desktop features on Windows Server 2022, allowing users to remotely access and manage the server from the host operating system. This will help participants develop skills in configuring web hosting services using IIS and setting up remote management capabilities, both of which are essential for IT professionals working with server environments.

REQUIRED TOOLS AND CONCEPTS

Hardware:

1. Computer with Virtualization Support – A system with at least 4 GB of RAM, multi-core CPU, and 40 GB free disk space.

2. Network Connectivity – A stable LAN connection for accessing the guest OS from the host and other devices.

Software:

1. Oracle VirtualBox – For creating and managing the virtual machine.

2. Windows Server 2022 – The guest OS used for hosting the static website and enabling remote desktop.

3. Internet Information Services (IIS) – To host the static website on Windows Server 2022.

4. Remote Desktop Client – To access the guest OS remotely from the host.

5. VirtualBox Extension Pack – To enable RDP and other features.

6. Web Browser – For testing the hosted website.

Concepts:

1. <u>Virtualization</u> – Creating a virtual version of a physical machine to run multiple operating systems.
2. <u>Network Configuration</u> – Setting up the guest OS with a bridged network to allow it to be accessed by the host and other devices.
3. <u>IIS (Internet Information Services)</u> – A web server for hosting websites on Windows Server 2022.
4. <u>Remote Desktop Protocol (RDP)</u> – A protocol for remotely accessing and controlling another computer via a network.
5. <u>Static Website Hosting</u> – Hosting websites with fixed content like HTML and CSS files on a web server.
6. <u>LAN (Local Area Network)</u> – A network connecting devices within a limited area, allowing communication between the host OS, guest OS, and other devices.

STEPS OF REPLICATE:
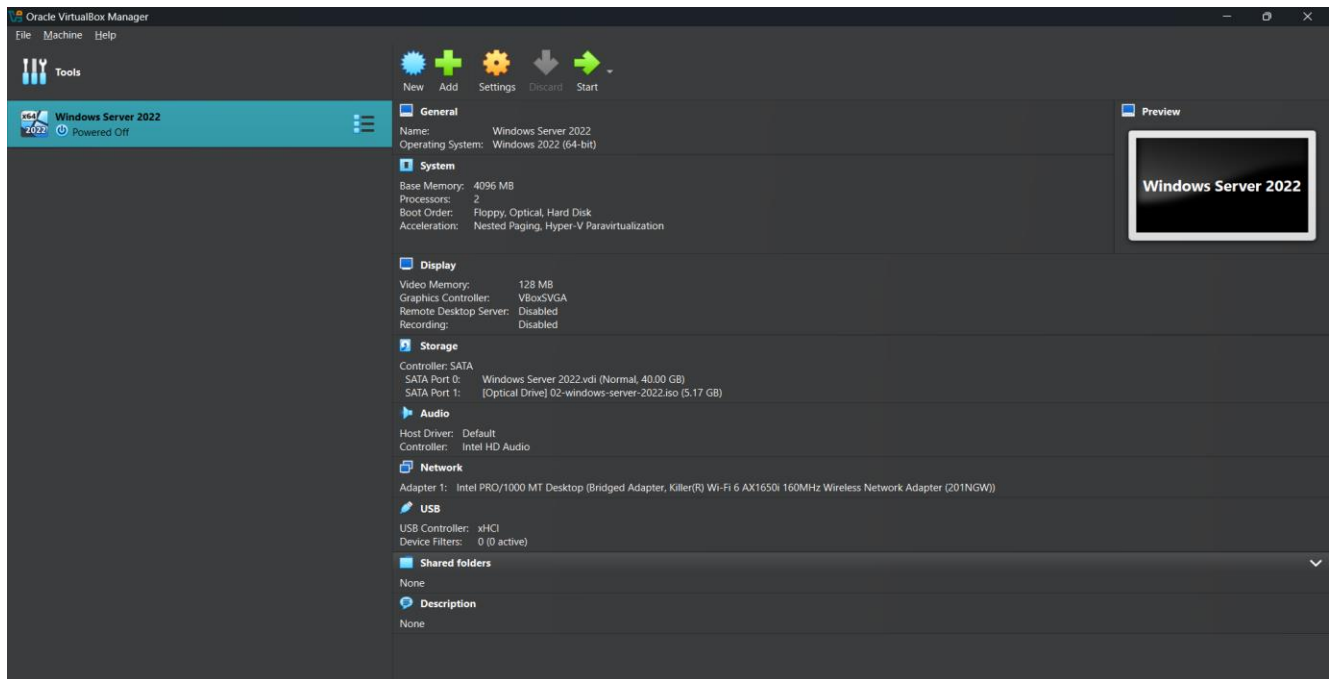
Figure 1: Oracle Virtual box Manager
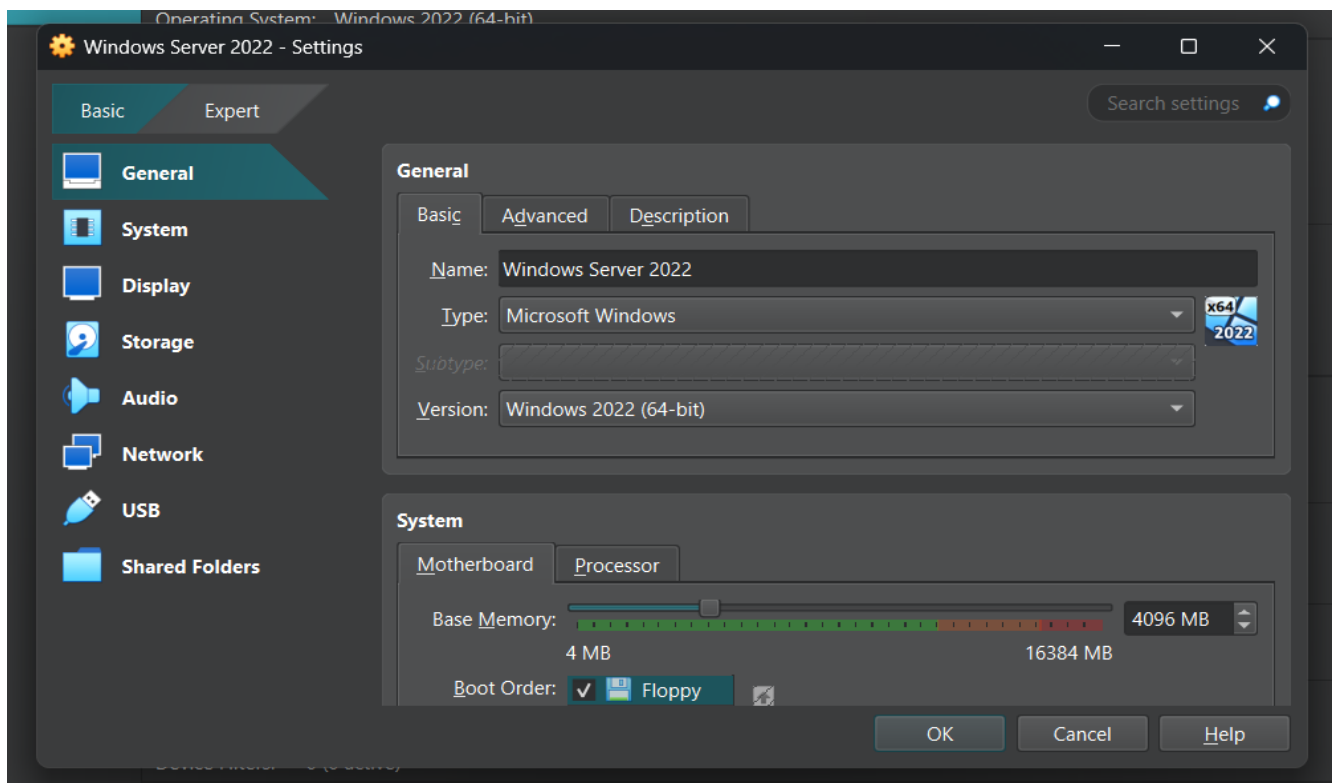
Figure 2: Windows Server 2022 General settings
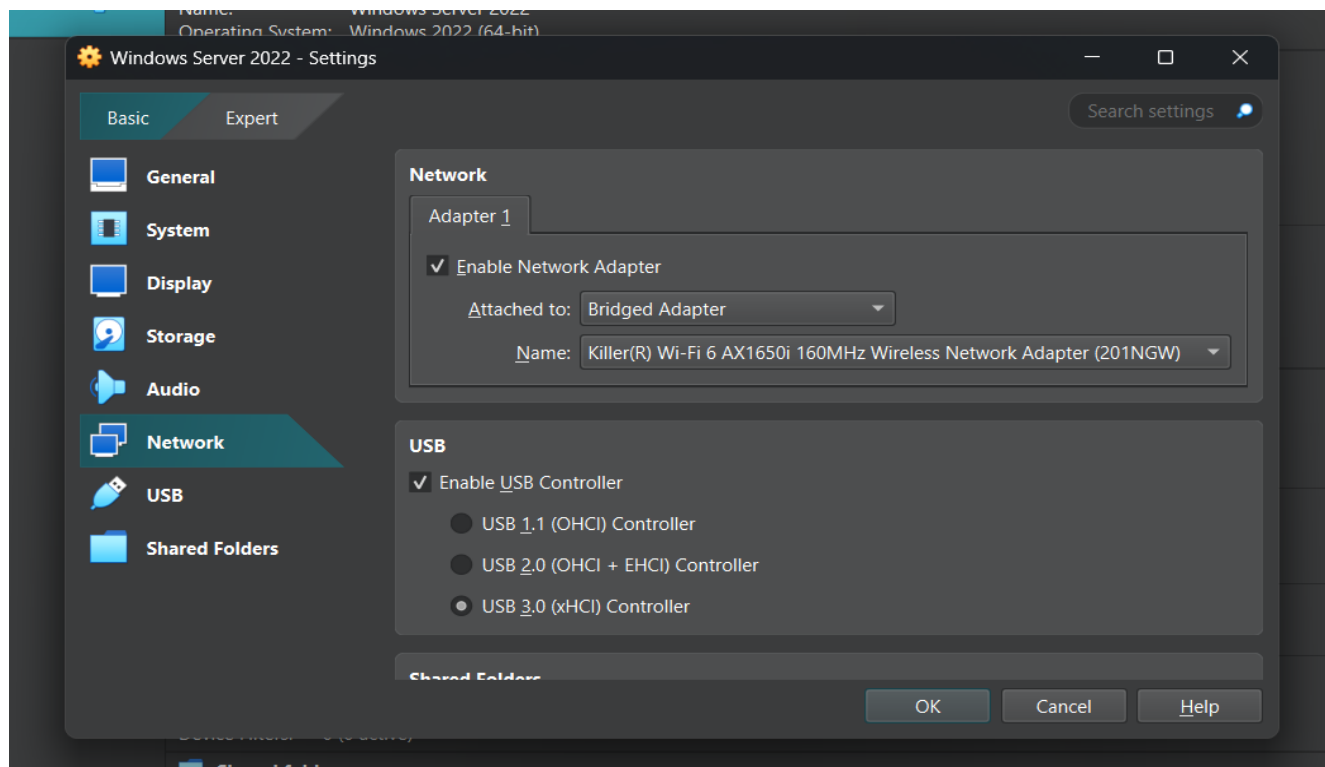
Figure 3: Selecting Bridged Adapter in attached to option
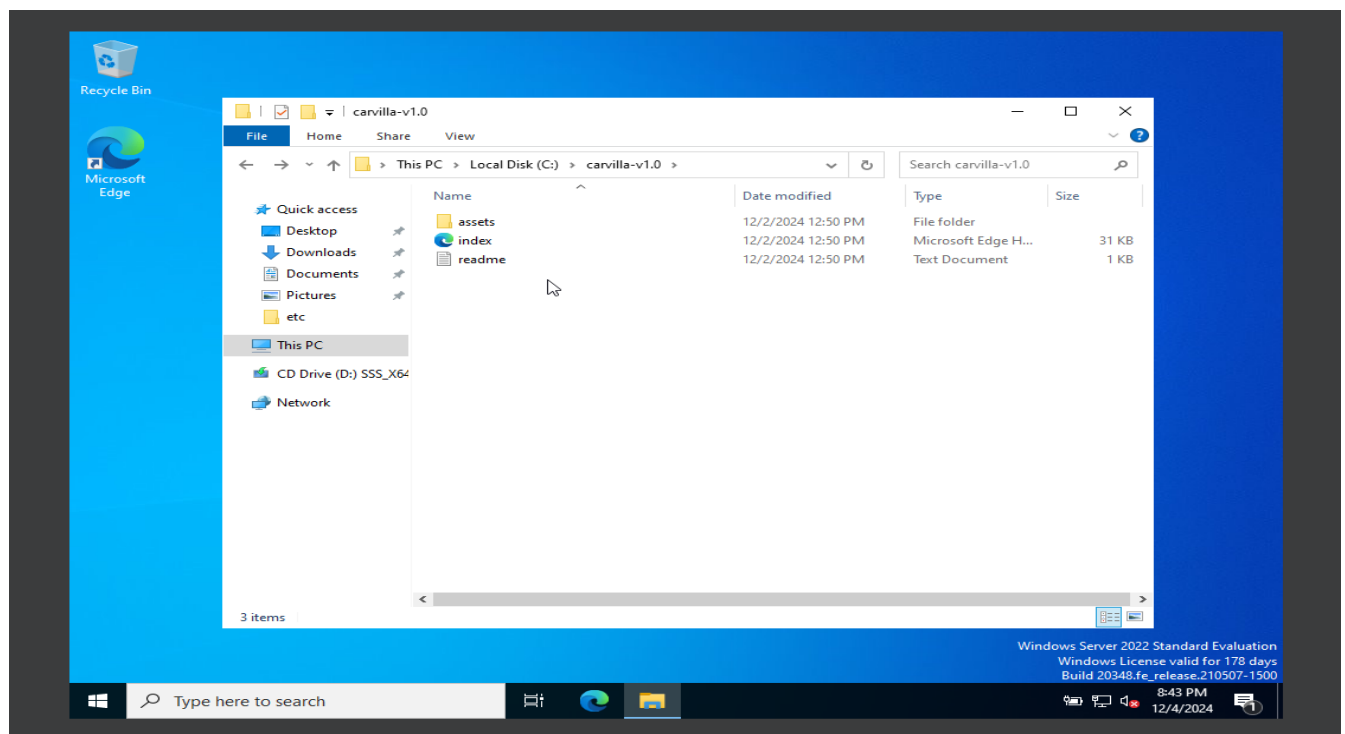
Figure 4: Website files in local Disk C drive
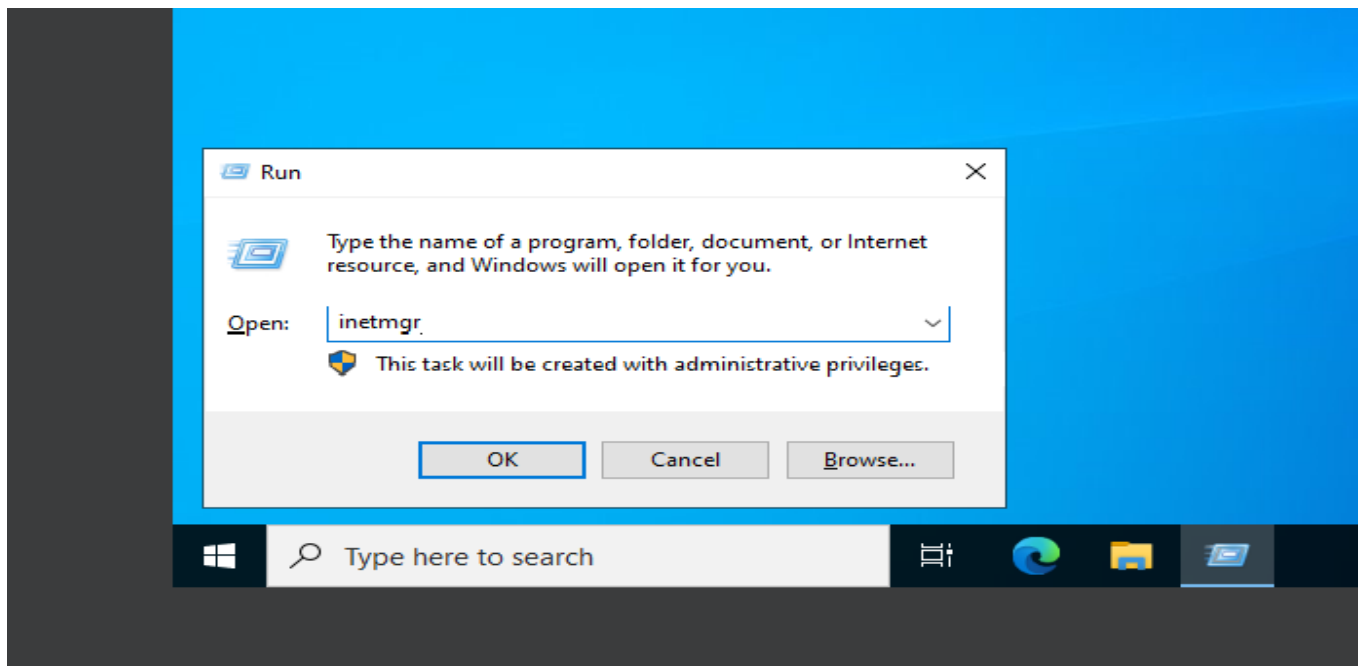
Figure 5: Entering "inetmgr" in run
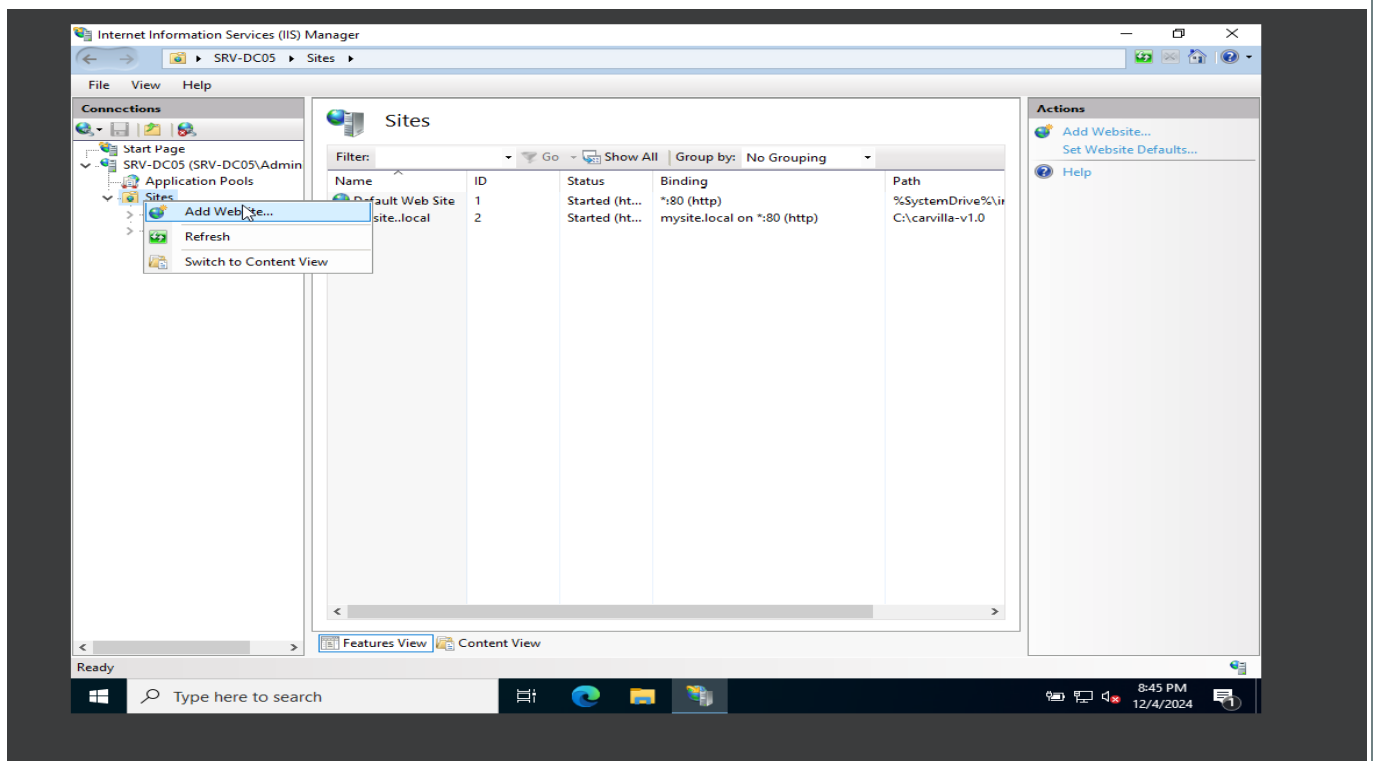
Figure 6: Adding new Website
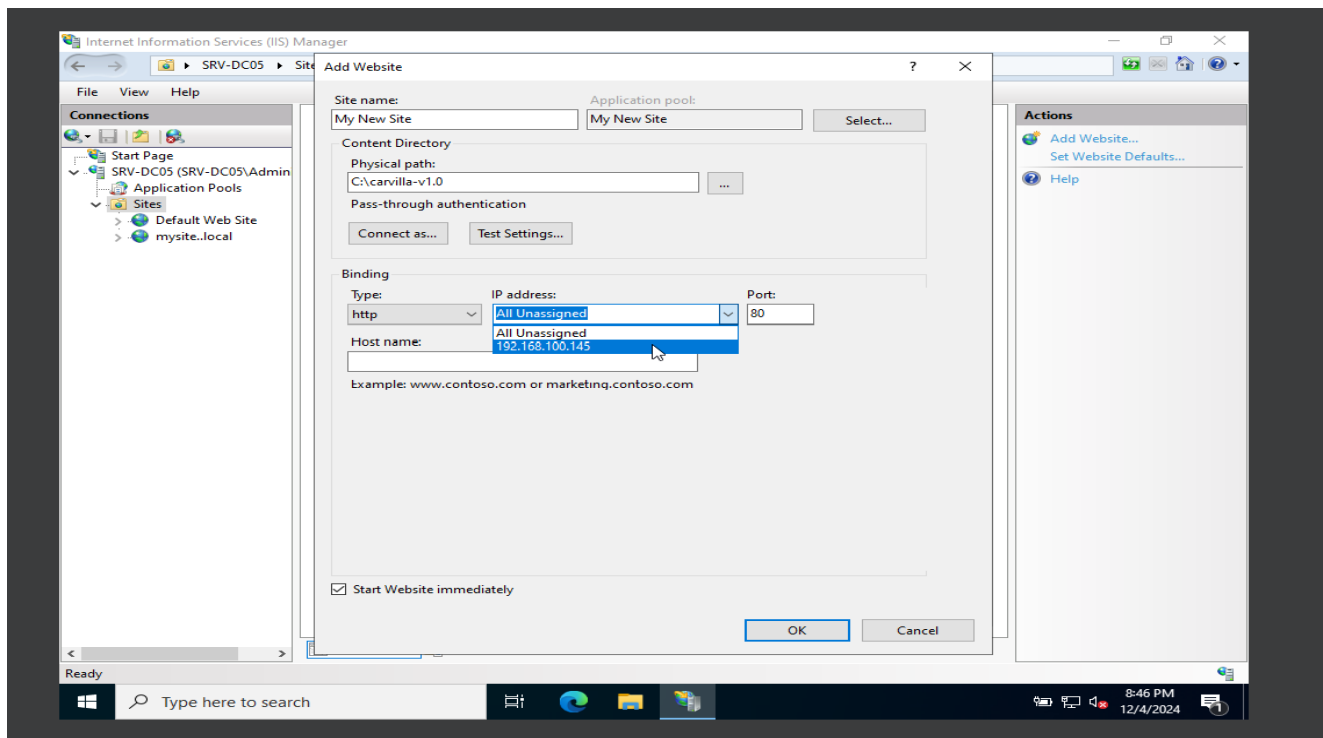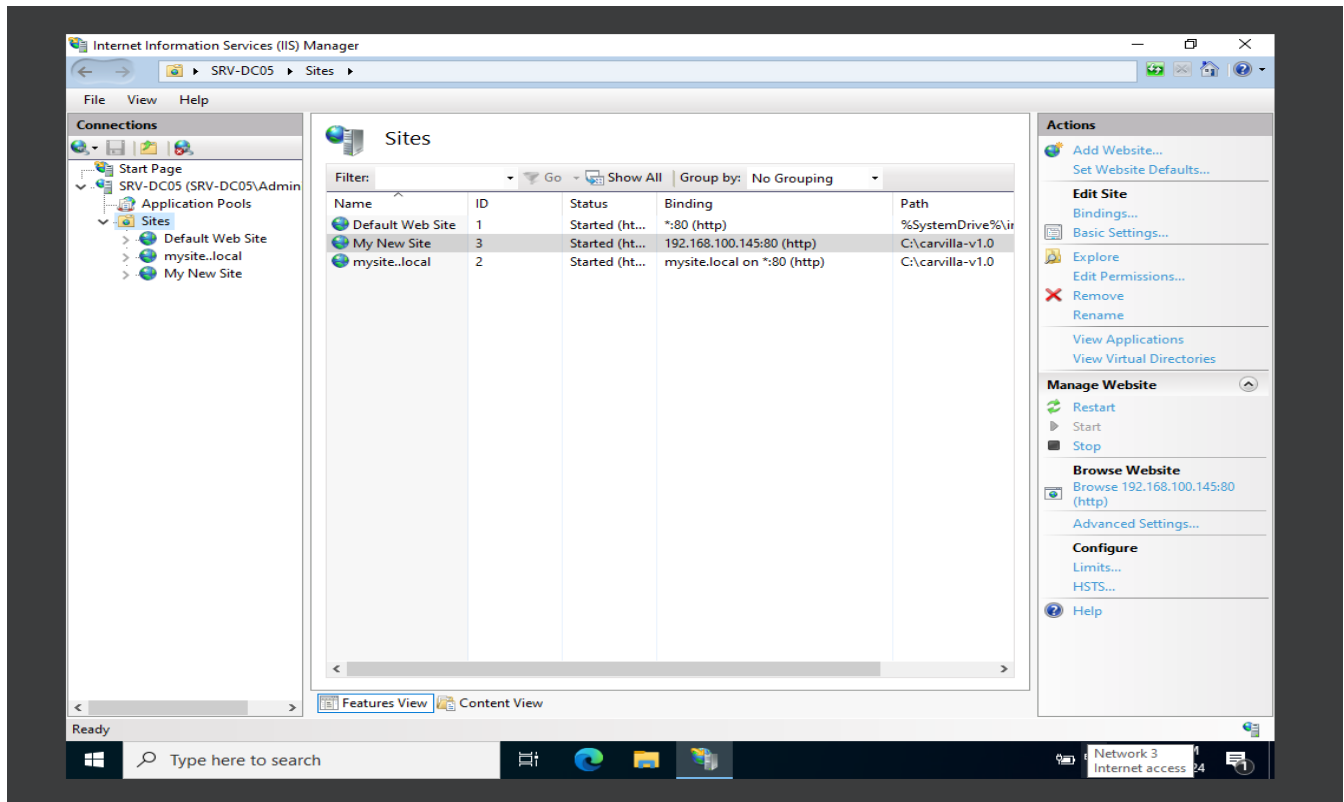
Figure 7: Selecting IP Address the given IP address
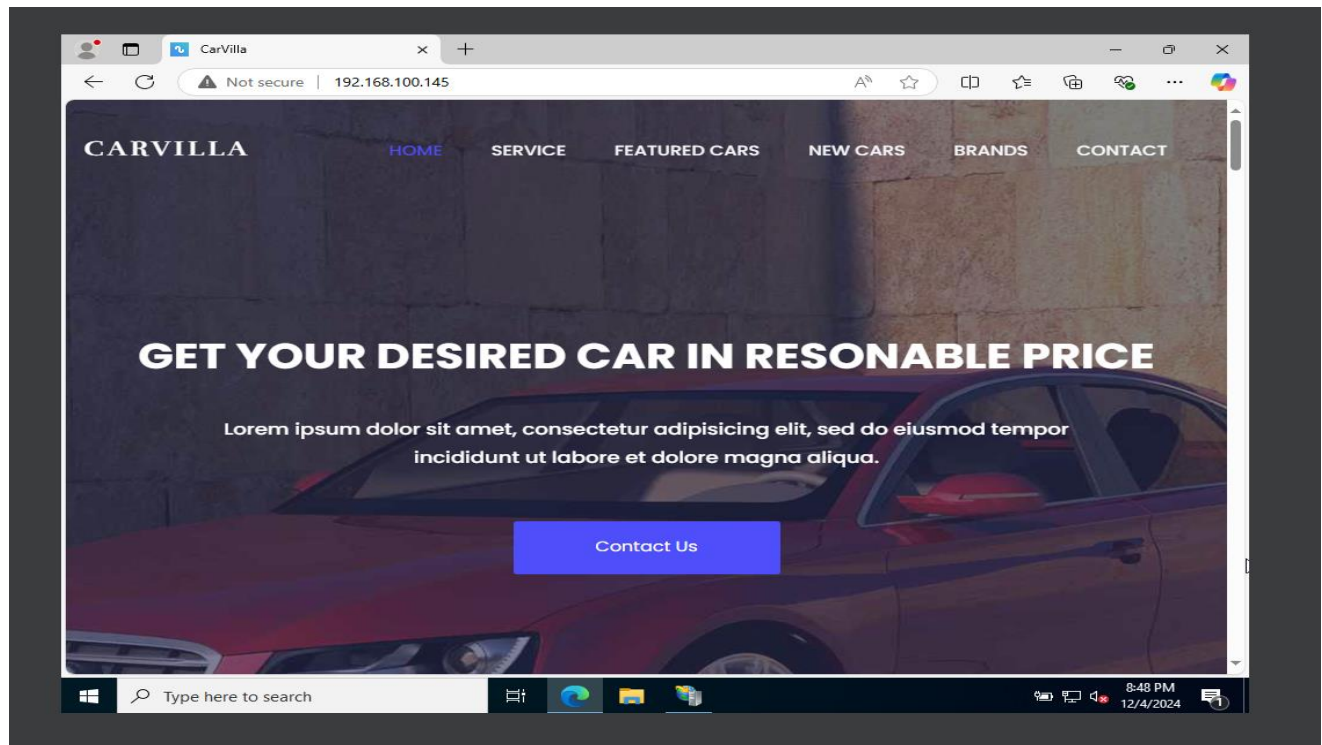

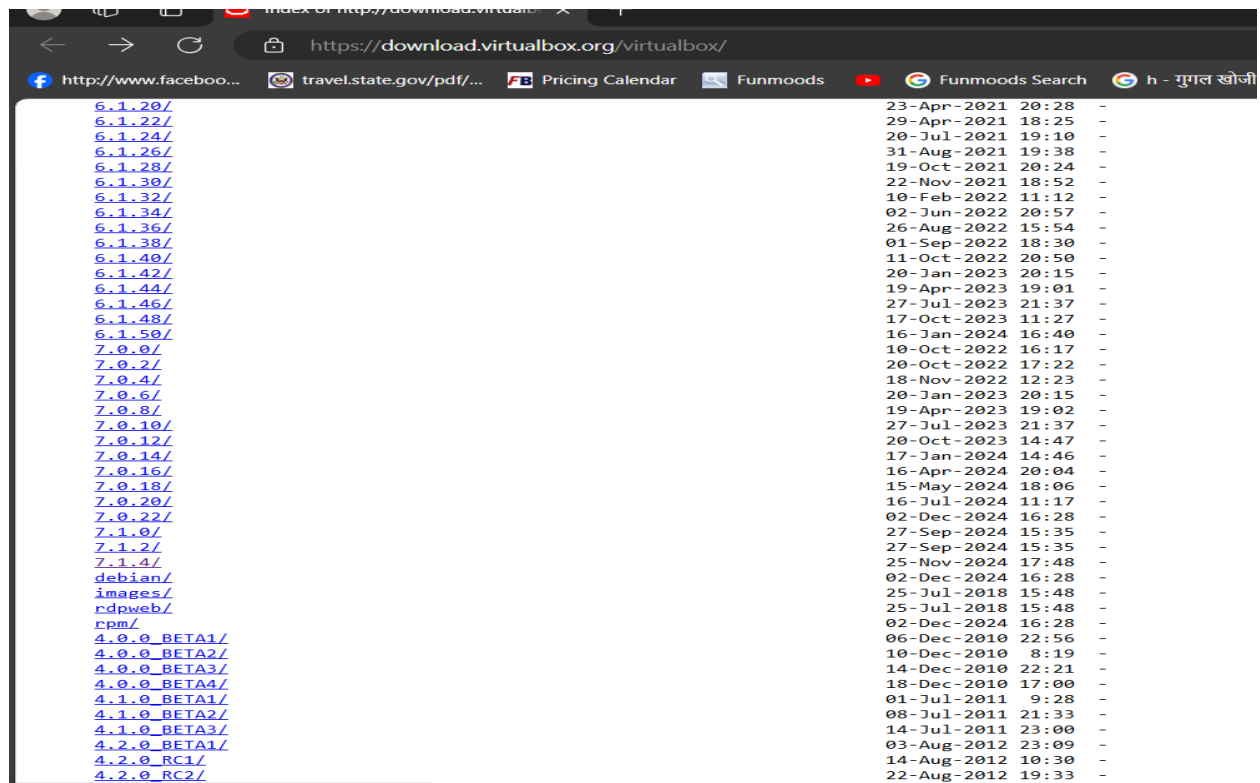*Figure 8: Now we can see our site name*

Figure 9: Our live website

Figure 10: Selecting the right version of the virtual box that i have
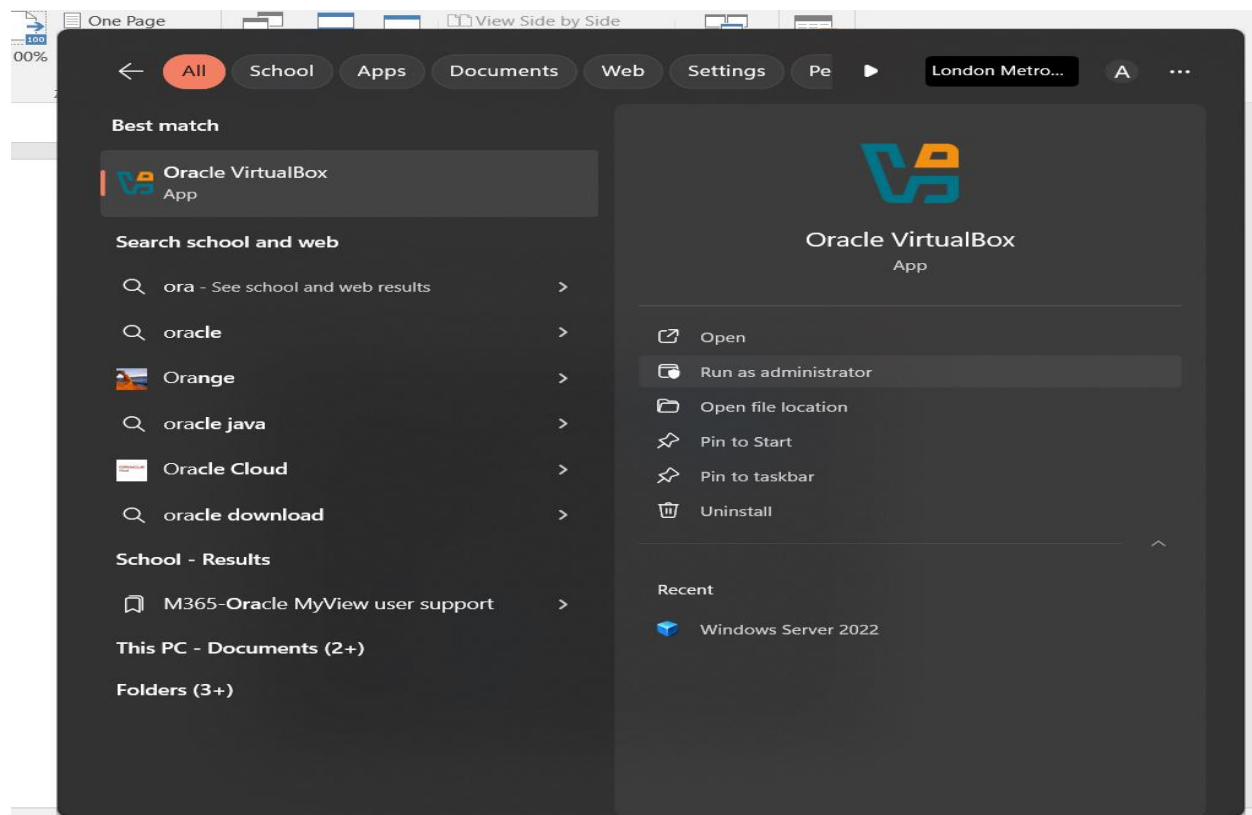
Figure 11: Selecting the extpack

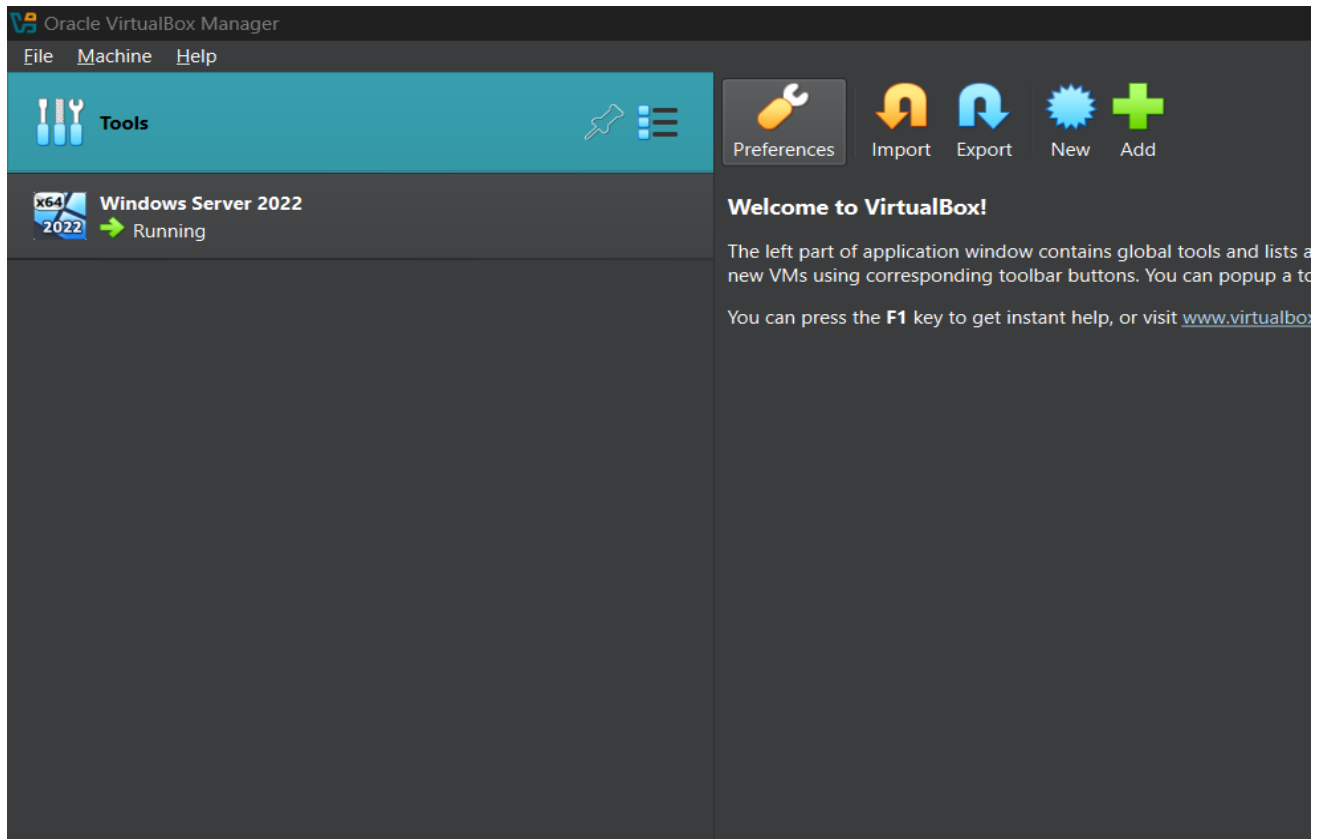Figure 12: Going to run oracle virtualbox as administrator

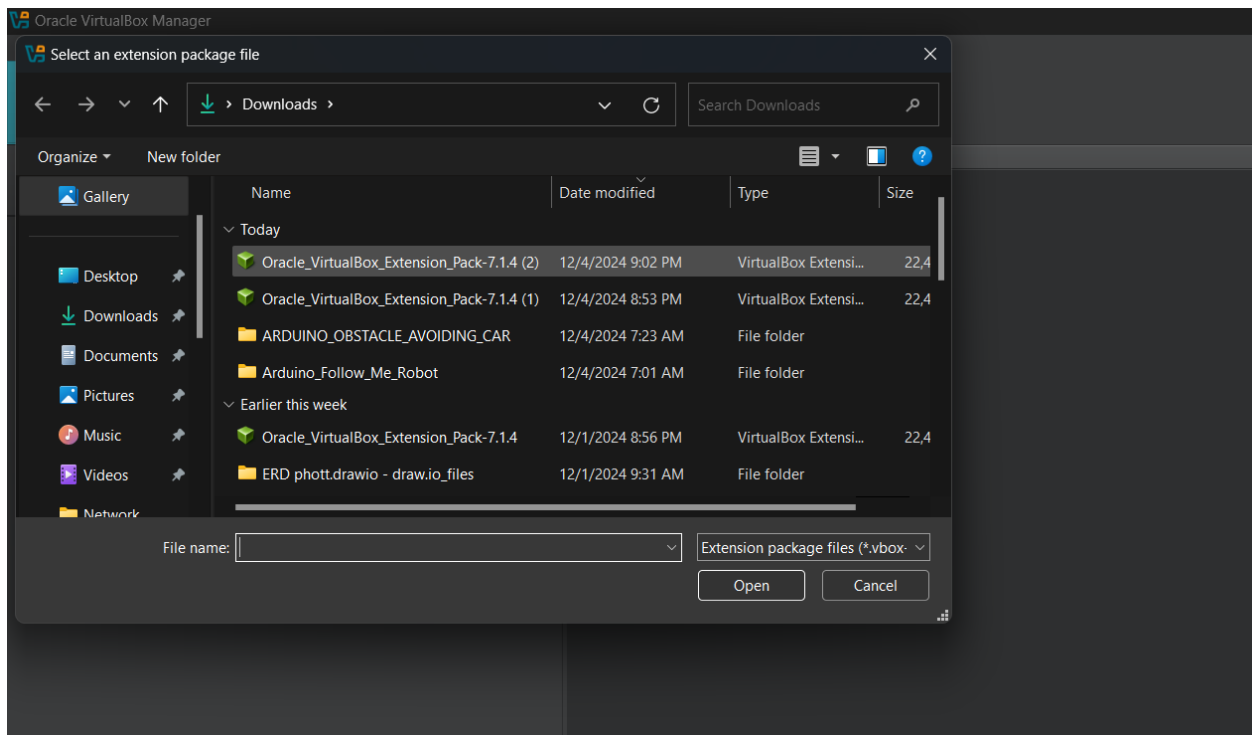*Figure 13: Going to tools preferences*

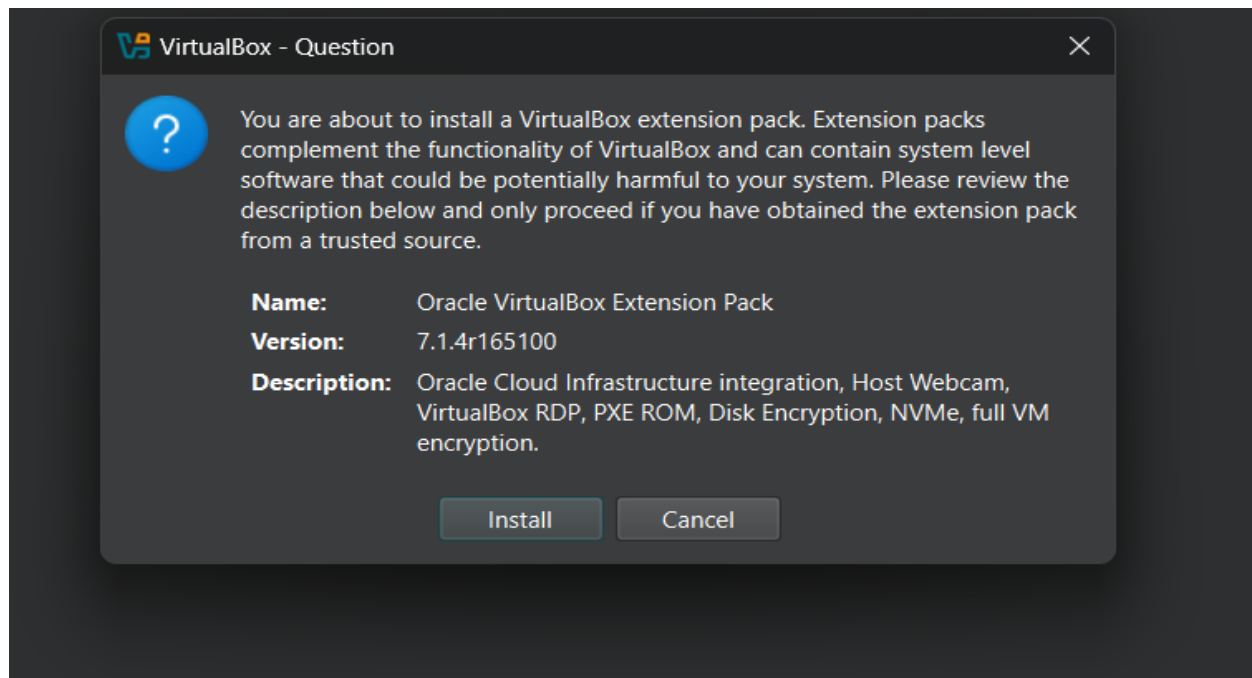*Figure 14: Selecting the virtual box extension pack*

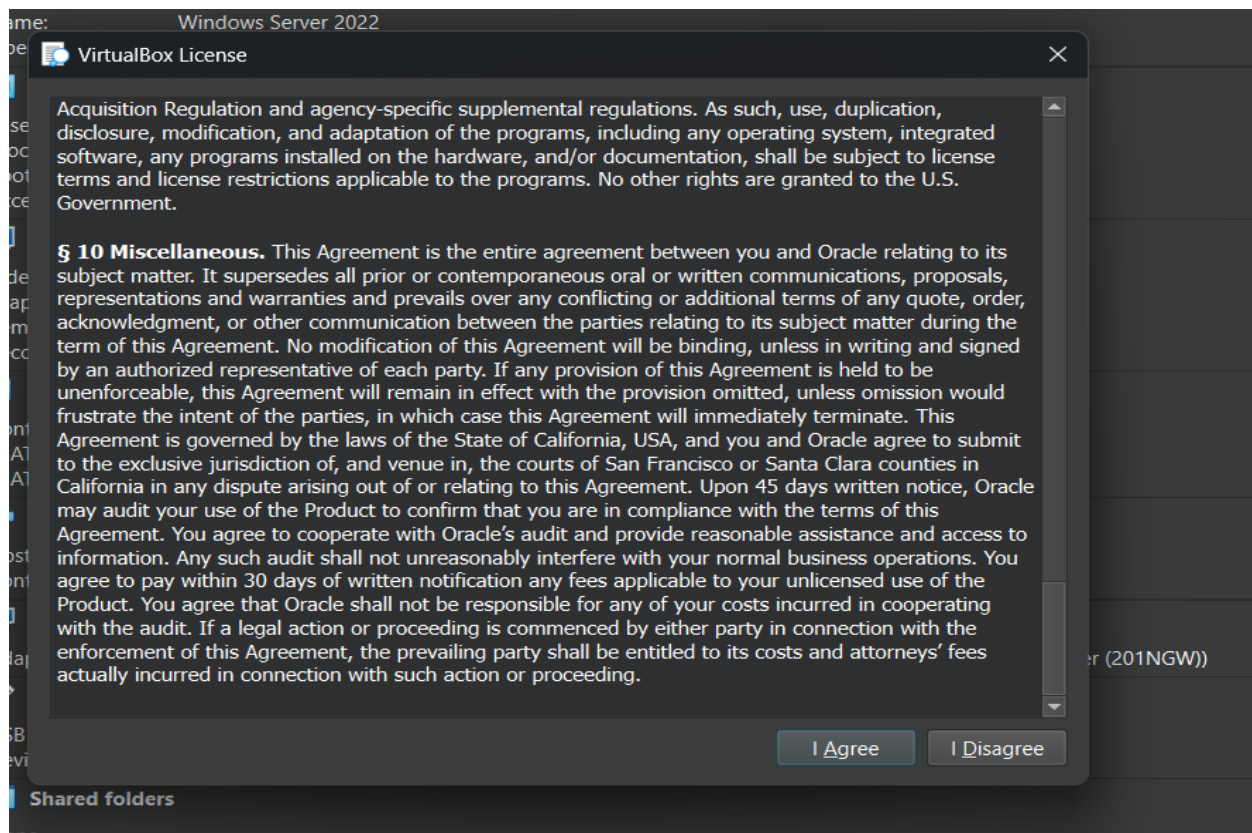*Figure 15: Going to install extension pack*

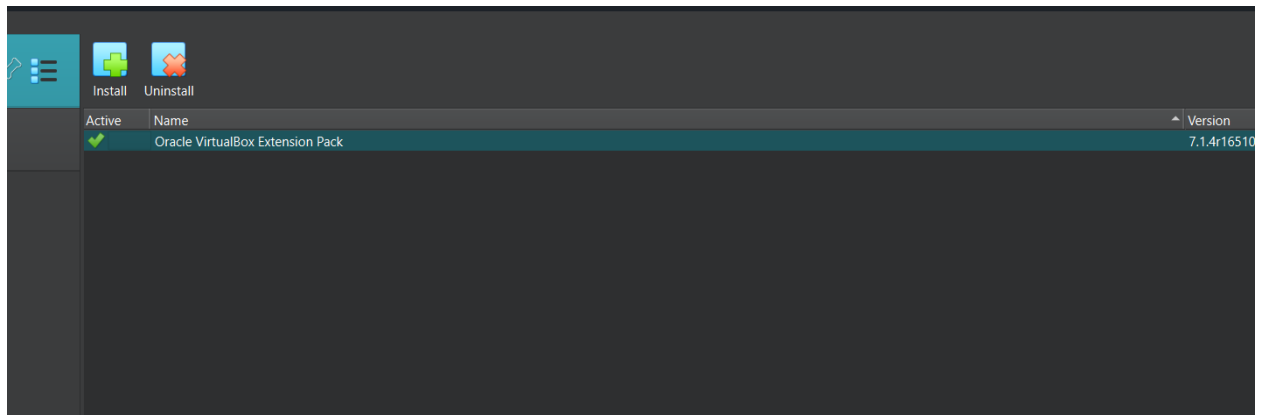*Figure 16: Agree the virtual box license*

Figure 17: Finally the extension pack was intalled successfully
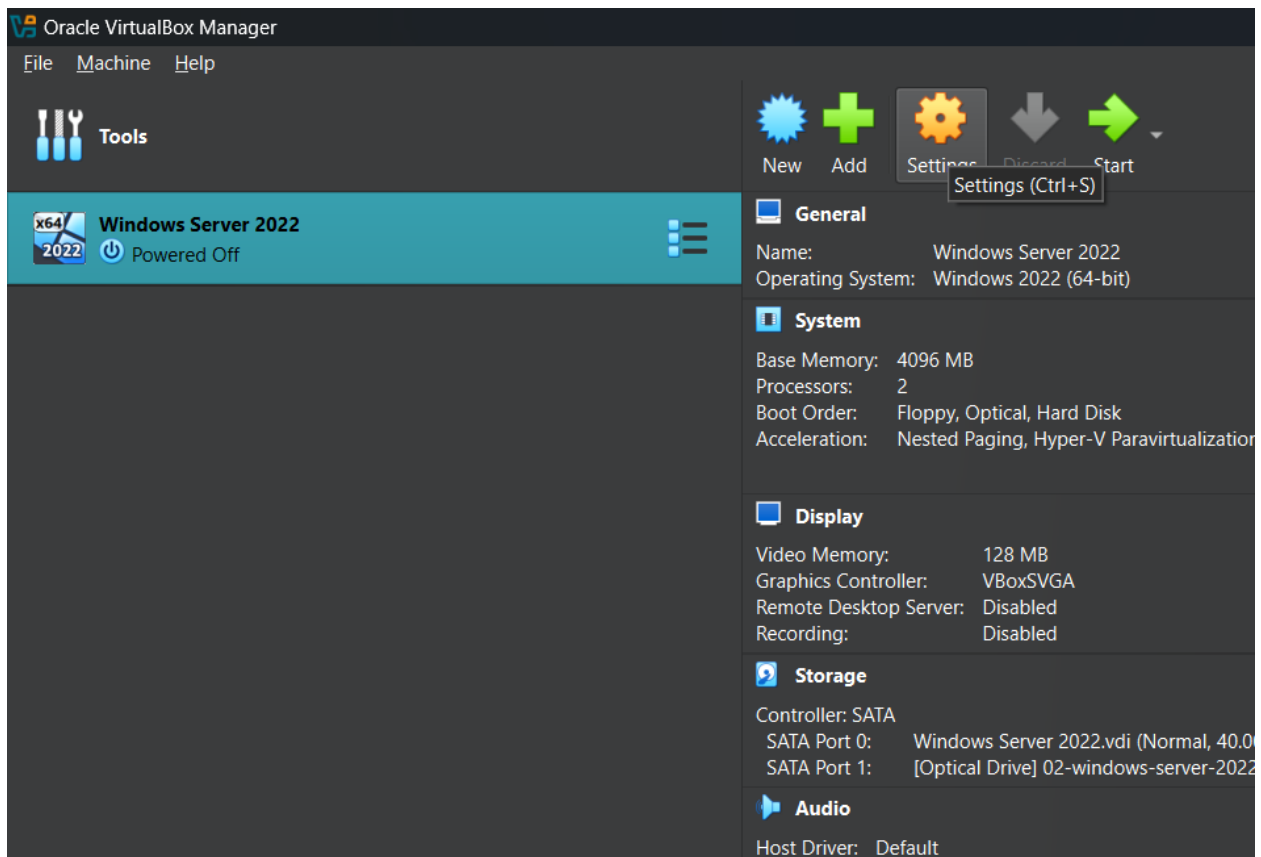

Figure 18: Going to windows server settings

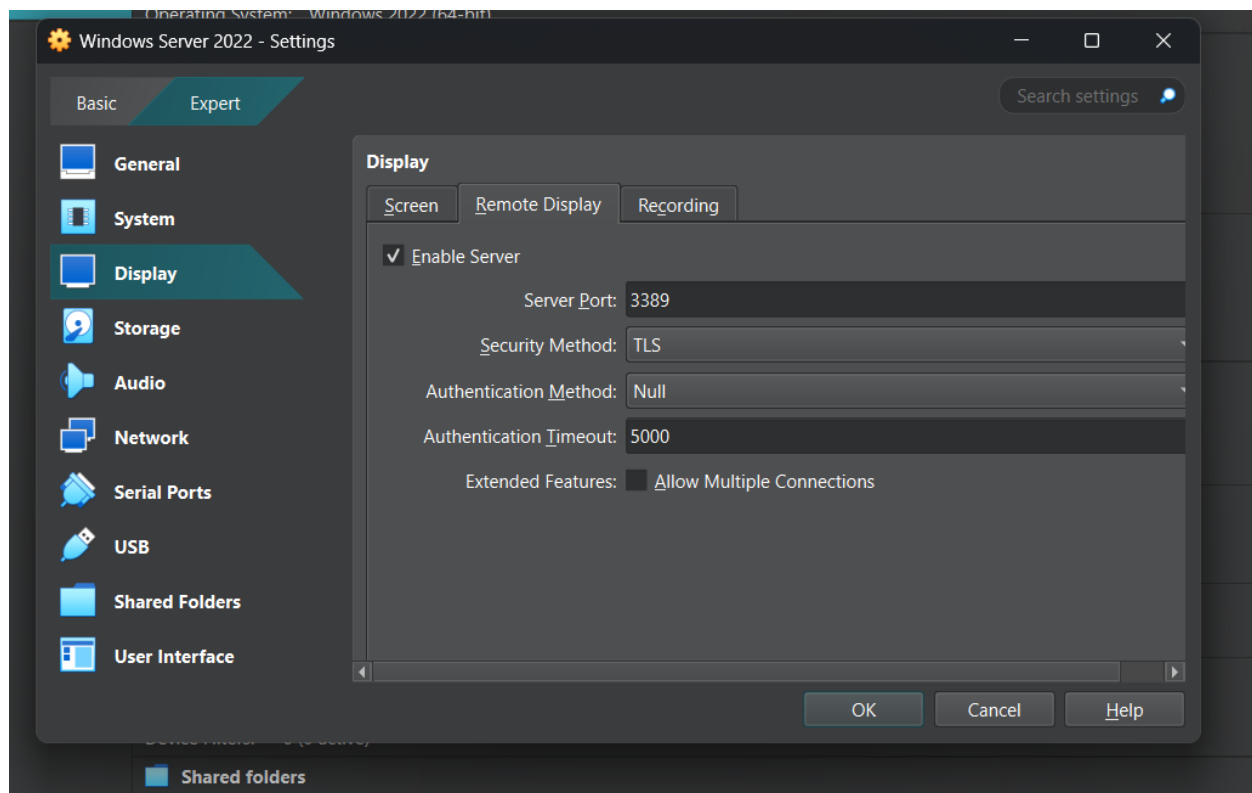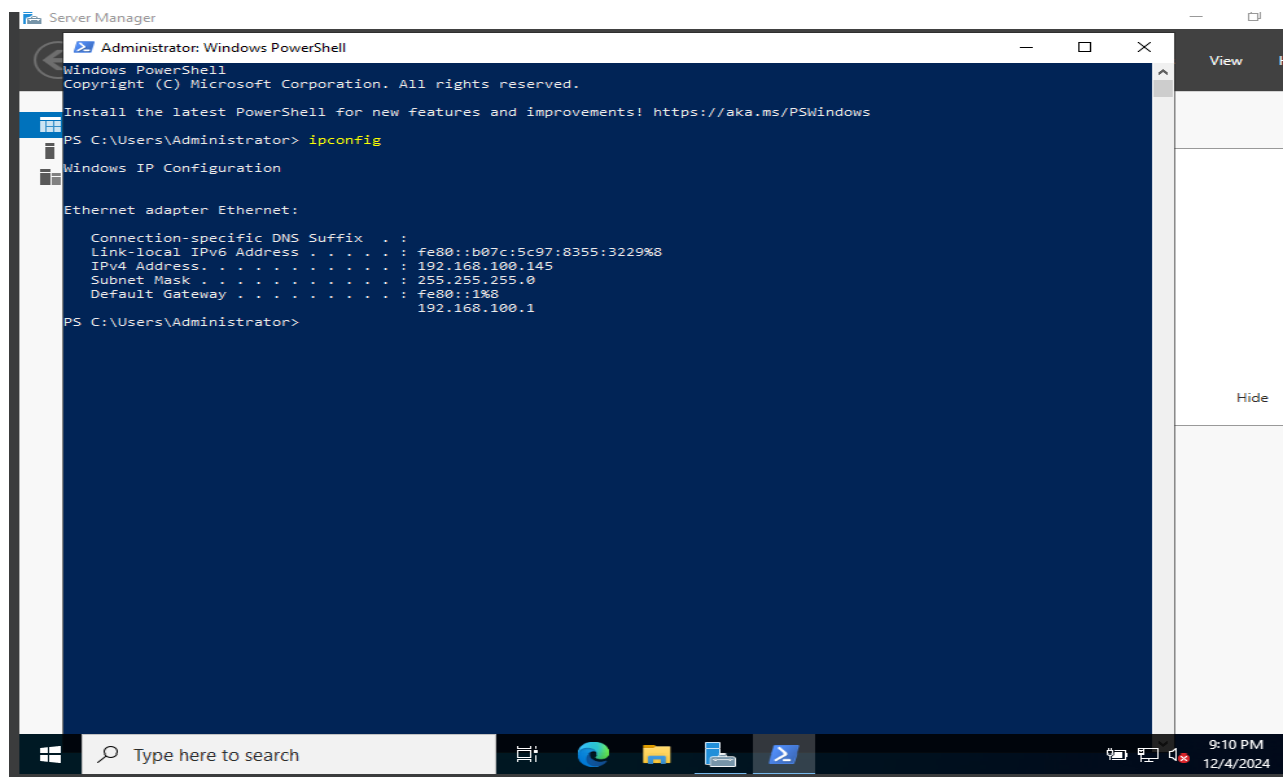*Figure 19: Going the remote display to enable server*

Figure 20: Now checking the ip address of the windows server
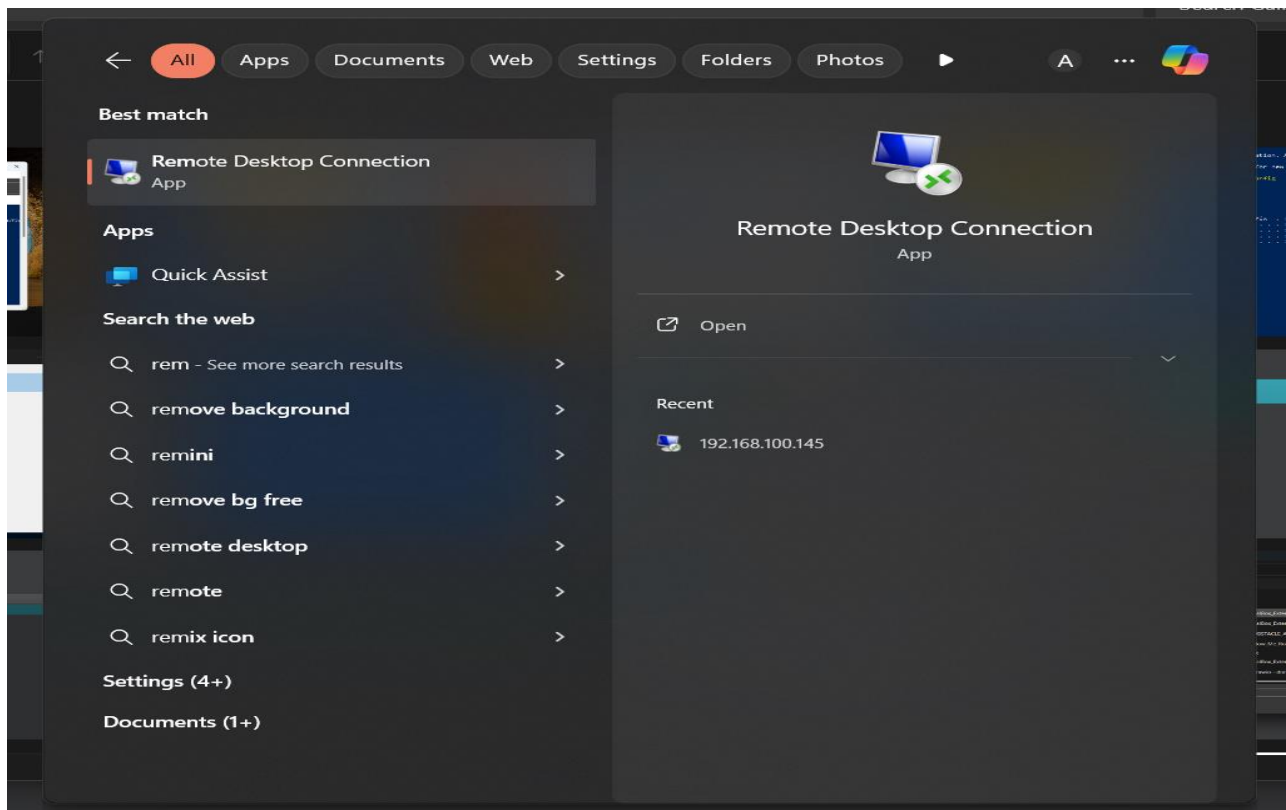
Figure 21: Opening the remote desktop connection in host OS
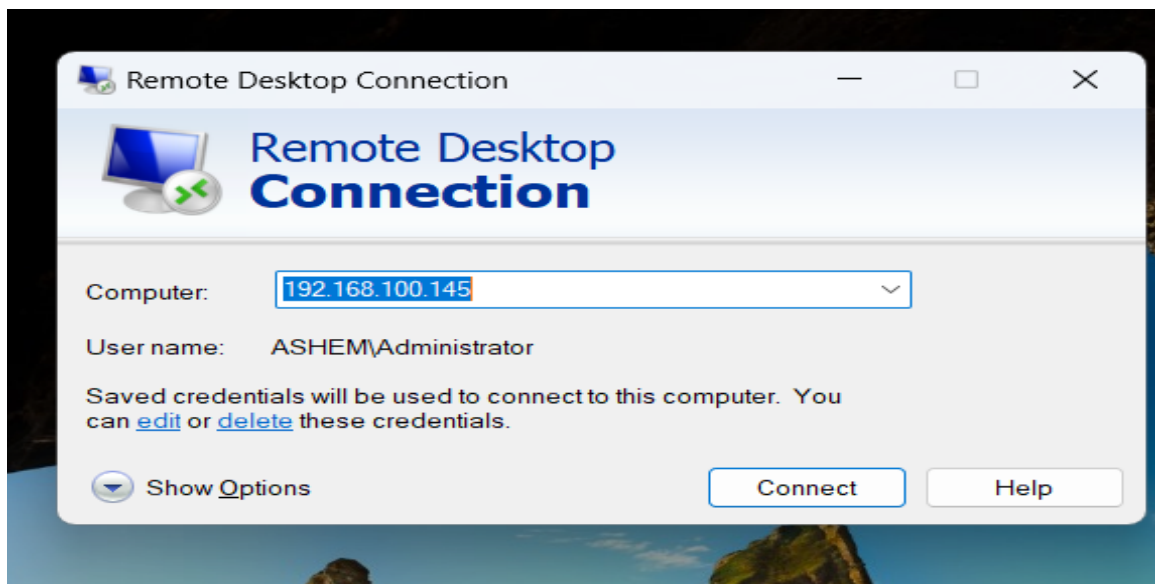

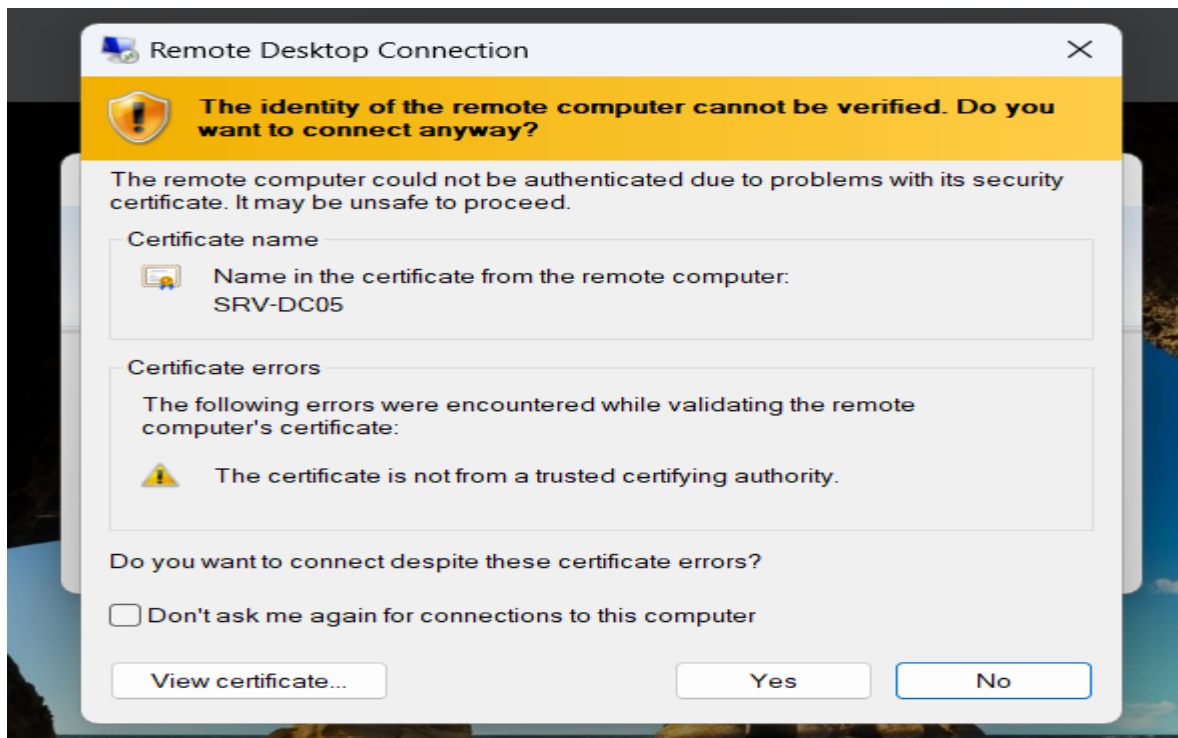*Figure 22: Entering the ip address of the guest os ip address in host os*

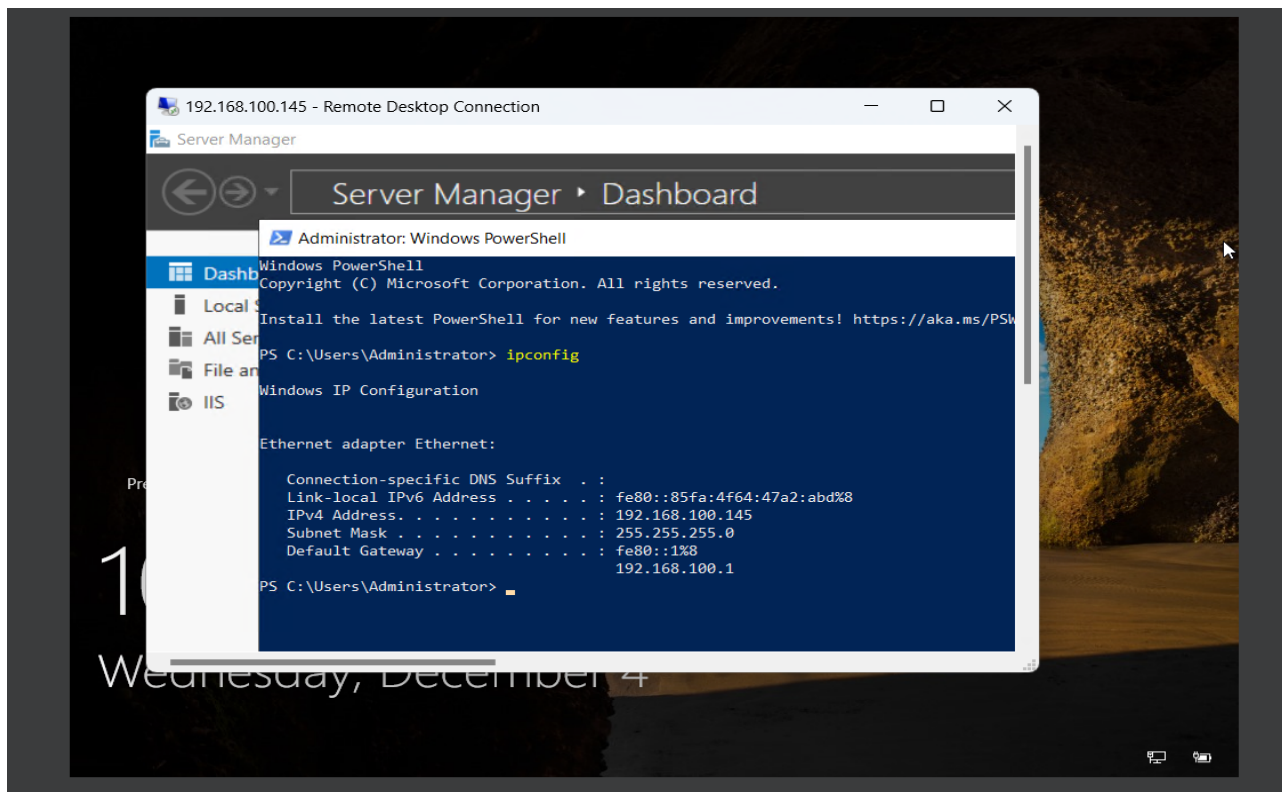*Figure 23: Going to connect remote computer*

Figure 24: Boom now we are able to access our guest os from host os using remote desktop

CONCLUSION

In this workshop, I learned how to set up a static website on a Windows Server 2022 virtual machine using VirtualBox, and I also enabled Remote Desktop Protocol (RDP) to manage the server remotely. I started by configuring the virtual machine so it could be accessed from both my host computer and other devices on the same network. After that, I used Internet Information Services (IIS) to host the website and tested it by accessing it from different devices to ensure everything was working. I also enabled Remote Desktop, which allowed me to control the server from my host computer, making management much easier.

This hands-on experience gave me a solid understanding of web hosting, network configuration, and remote server management—skills that are important for any IT professional. By the end of the workshop, I had successfully hosted a website and learned how to manage a server remotely, which will definitely help me with future IT tasks. Additionally, the skills I acquired in configuring network settings, using IIS, and enabling remote desktop access are directly applicable to real-world IT environments, making me more confident in handling server-related tasks. This workshop has provided a strong foundation for future projects and IT challenges, and I am eager to apply these skills in professional settings.

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