LONDON METROPOLITAN UNIVERSITY

informatics college • pokhara

Module Code & Module Title

Level 5 – Networking Operating System

Assessment Type

Logbook 5

Semester

2024 Spring/Autumn

Student Name: Rebina Tulachan

London Met ID: 23048995

College ID: 230077

Assignment Due Date: 7 December

Assignment Submission Date: 7 December

Submitted To: Prasant Adhikari

Word Count (Where Required): 1369

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline 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.

Table Of Contents

Table Of Figures

1. Introduction

In this log it explains how to host static websites on Windows Server 2022 and access them from the host OS and other devices on the same LAN. It also shows how to enable Remote Desktop features in Windows Server 2022 to access it from the host OS. It describes the various processes followed during the workshop to achieve these objectives

2. Objectives

The primary goal of this workshop is to host static websites on the guest OS, which is Windows Server 2022, and access them from the host OS as well as from other devices connected within the same LAN. Another important objective is to enable remote desktop features in Windows Server 2022 so that it can be accessed from the host OS.

3. Remote Desktop, LAN, Static Website

Remote Desktop allows users to connect to a Windows Server from a different location. Users can then connect by entering the server's IP address from their local machine. This feature is useful for remote management and accessing resources (Panek & Wentworth, 2009).

A LAN (Local Area Network) is a network that connects devices within a limited area, like a home or office. It helps share data and resources among those devices (Kizza, 2005). In Windows Server, we can set up a LAN by configuring a static IP, enabling file sharing, and adjusting firewall settings.

Static websites are composed of HTML, CSS, and JavaScript files that are served directly to the user's browser (Petersen, 2016). A static IP address is a permanent internet address assigned to a device.

4. Required Tools and Concepts

We need to get the Extension Pack for VirtualBox. First, check which version of VirtualBox we have, and then download the Extension Pack from the link provided. https://download.virtualbox.org/virtualbox/

Let's start by hosting our static website on Windows Server 2022.

Step 1: Open VirtualBox and choose the virtual environment you want to use. Once you've selected it, click on the "Settings" button.

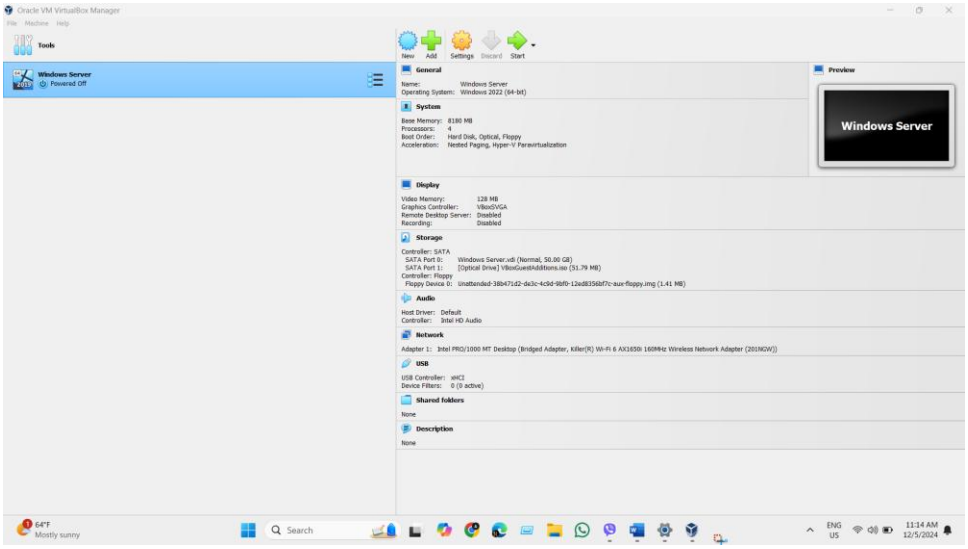

Figure 1 Clicking Settings Button

Step 2: Next, click on the Network option. In the "Attached to" dropdown on the right side, select "Bridged Adapter." After that, click the "OK" button. Now we can start running in Windows Server 2022.

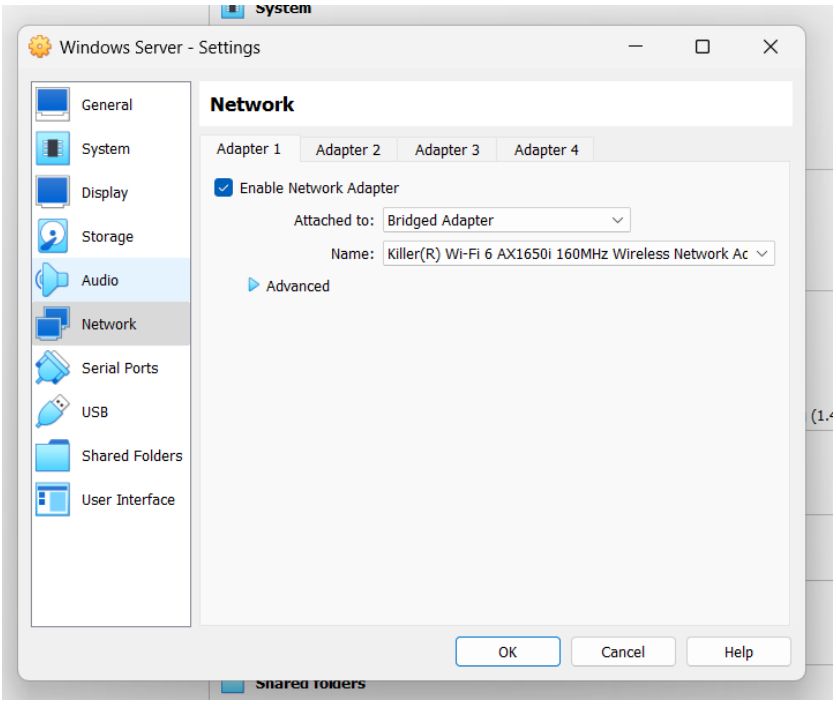

Figure 2 Clicking on Network & Selecting Bridged Adapter

Step 3: Just like in the last workshop, place your website files in the Local Disk C drive on Windows Server 2022, as shown in the following picture.

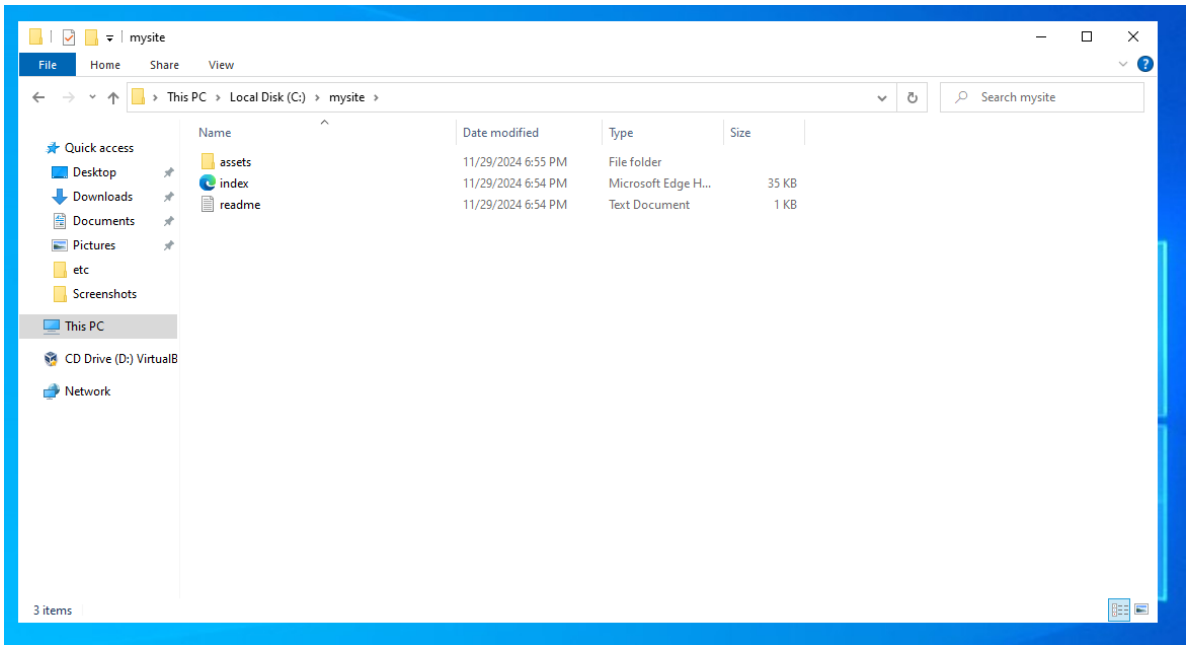

Figure 3 Placing Location of Website in C drive

Step 4: Open the "run" dialog and type in "inetmgr." This will launch our Internet Information Services where we can set up hosting for the website.

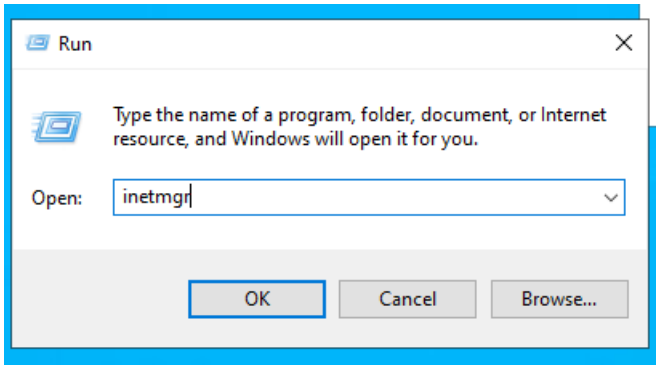

Figure 4 Running "inetmgr"

Step 5: Now, expand the server name, right-click on "Sites," and then click on the "Add Website" option, just like in the last workshop.

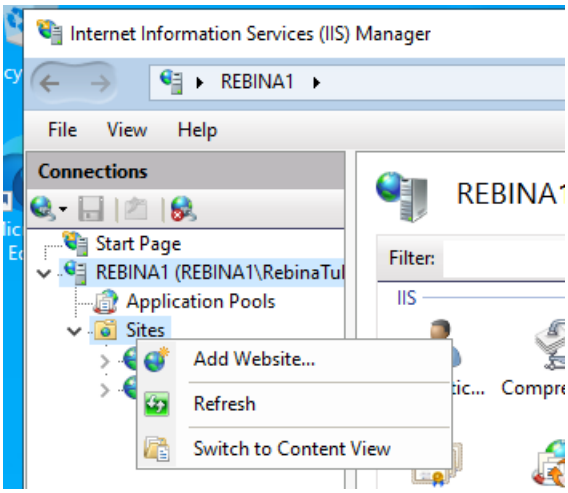

Figure 5 Adding Website

Step 6: Now, Let's fill in the details for our website:

- Choose any name you like for the Site name.

- Enter the path to the folder where website files are located in the Physical path.

- Select the provided IP address from the drop-down menu under IP address.

- Keep the other options as default and then click on "Ok."

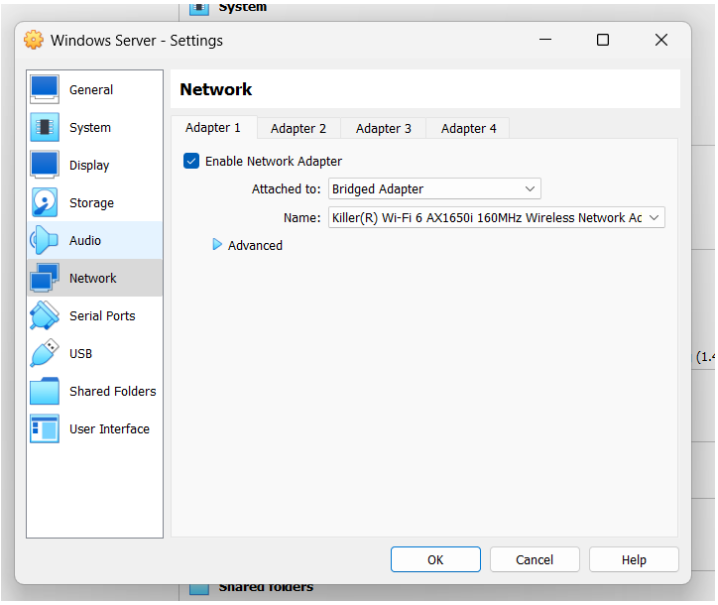

Figure 6 Inserting Ip address to the website

Step 7: Now that we can see our site name on the list, let's browse our site. Click on “Browse” next to IP address on the right side. This will open our website in the browser, and we can check everything is working as expected.

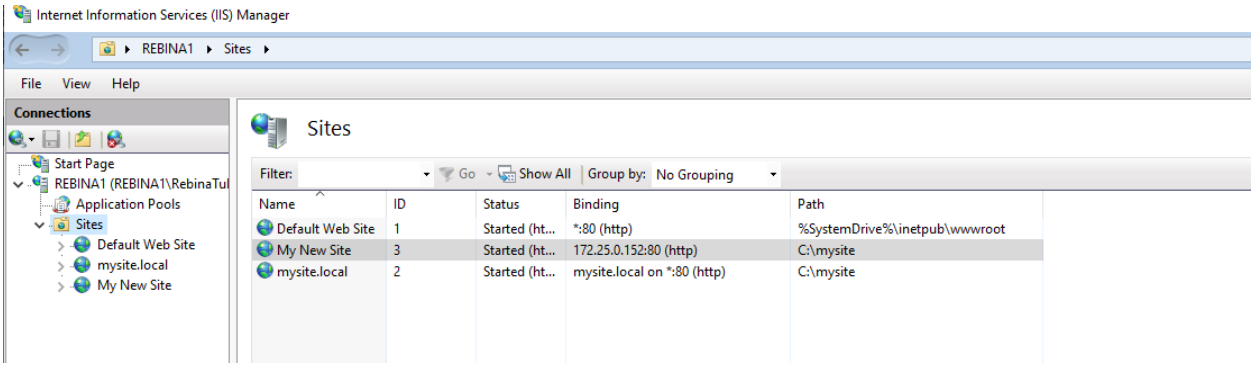

Figure 7 Website has been successfully created

Step 8: Type the IP address of the Guest OS in the browser of the Host OS to see if our website is accessible from there.

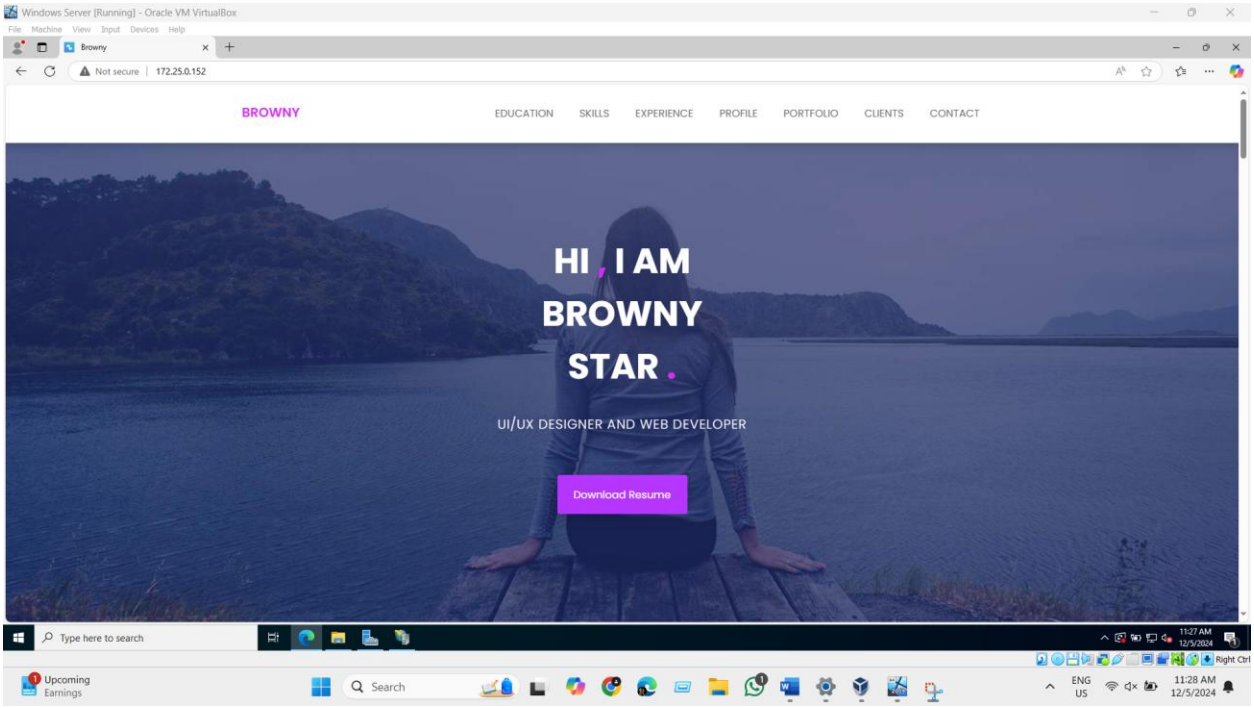

Figure 8 Website in Windows Server 2022

Step 9: Connect to our Windows server from the Host OS using a remote connection. Make sure to select the right version of the VirtualBox that you have. This will help us establish the remote connection to the Guest OS.

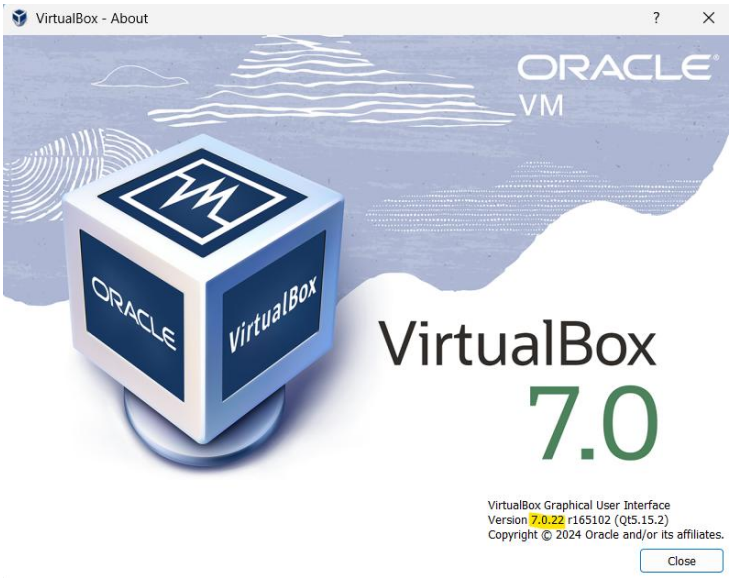

Figure 9 Version of VirtualBox

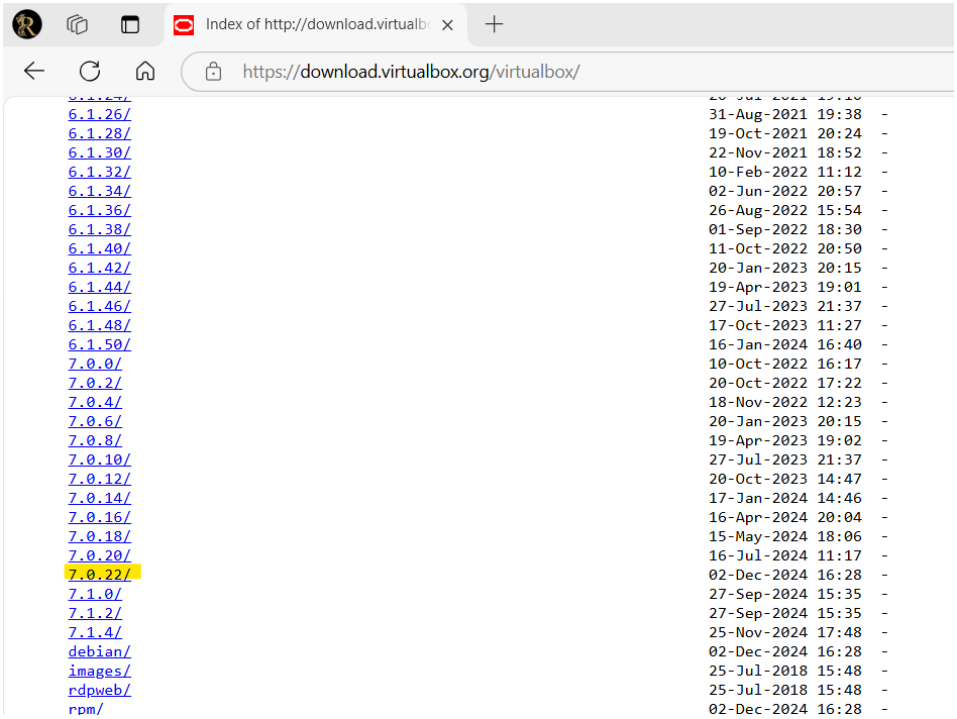

Figure 10 Choosing correct version of VirtualBox

After clicking on version of the link, click on the extension pack as shown in the picture and download it. This will help us to set up the necessary components for VirtualBox.

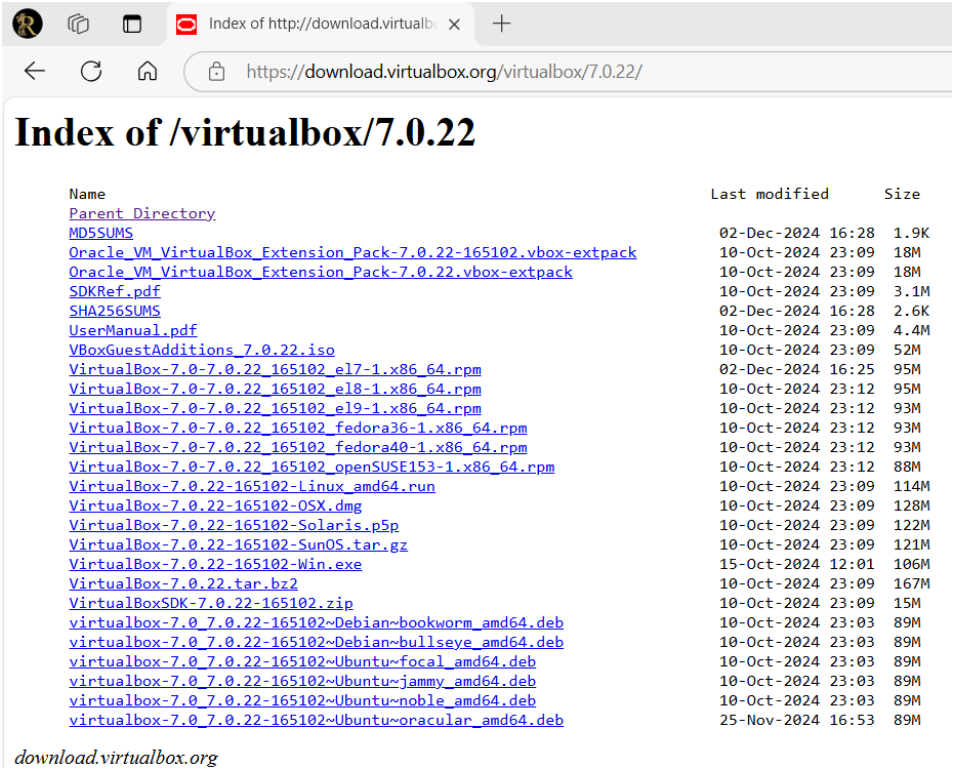

Figure 11 Downloading the extension pack

After downloading the extension pack, let's follow the steps.

Step 1: Close all the VMs running, including VirtualBox. Then, open VirtualBox with “Run as Administrator.” This will ensure everything runs smoothly.

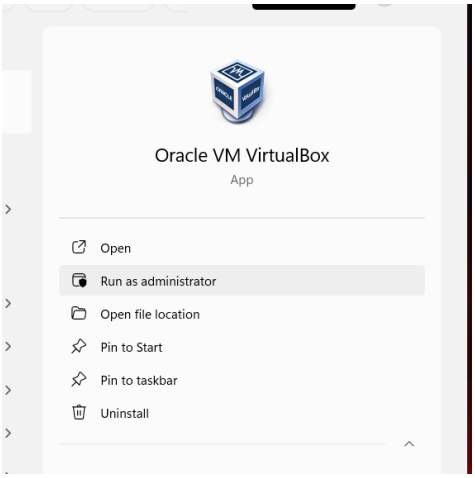

Figure 12 Running VM as administrator

Step 2: Click on “Tools” at the top, then click on Preferences. Now, head to the Extensions tab and press the green add (+) icon on the right side. This will allow us to add the extension pack that we just downloaded.

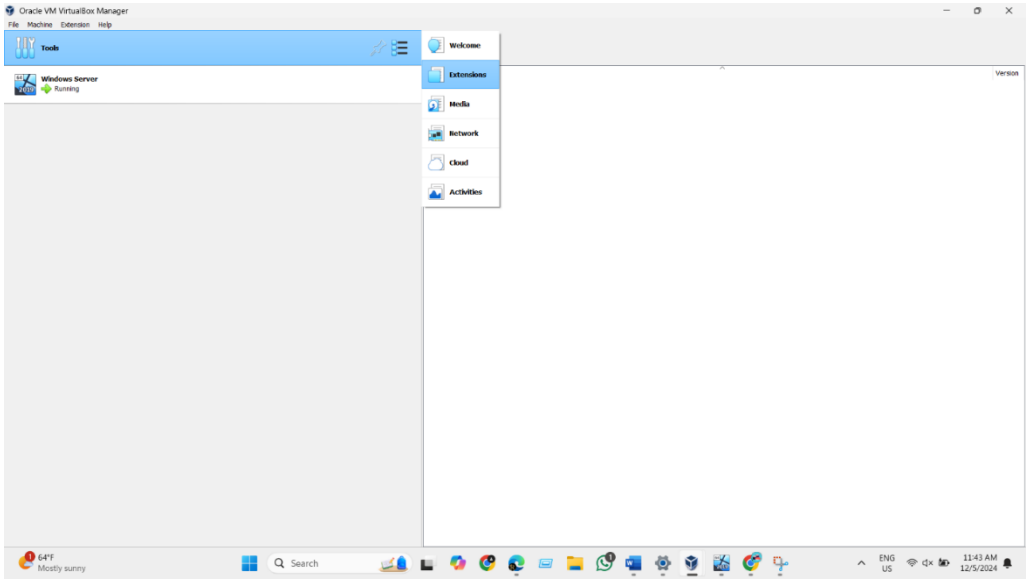

Figure 13 Selecting Tools and select extensions

Step 3: A dialog box will pop up. Navigate to the extension pack file we downloaded earlier and select it. After that, click on Install.

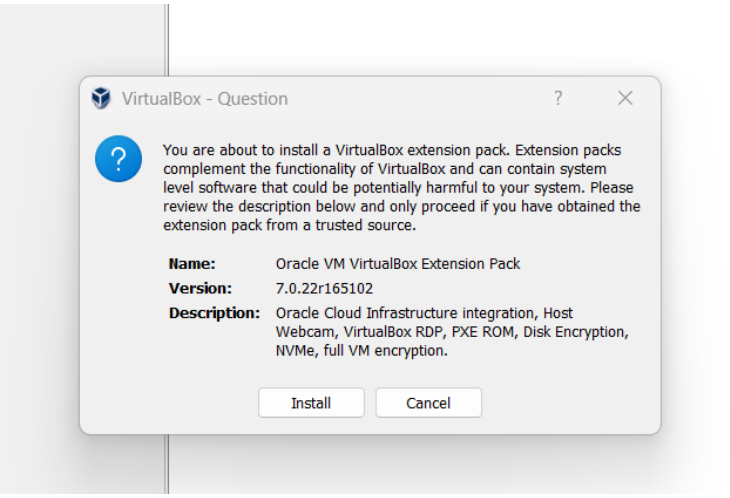

Figure 14 Installing extension pack

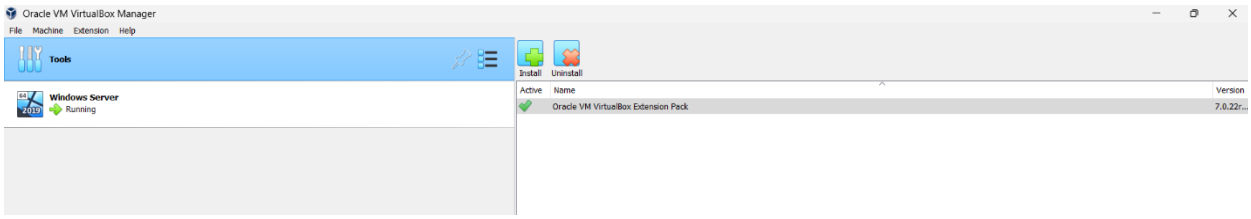

Figure 15 Successfully added extension

Step 4: Now close the tab and select the Server 2022 Virtual Environment and click on Settings.

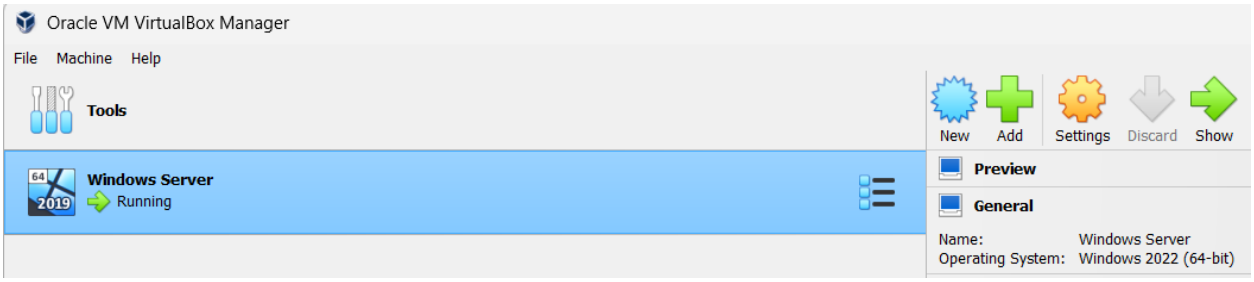

Figure 16 Clicking on Settings

Step 5: Click on Display and click on Remote Display and click on Enable Server and click Ok.

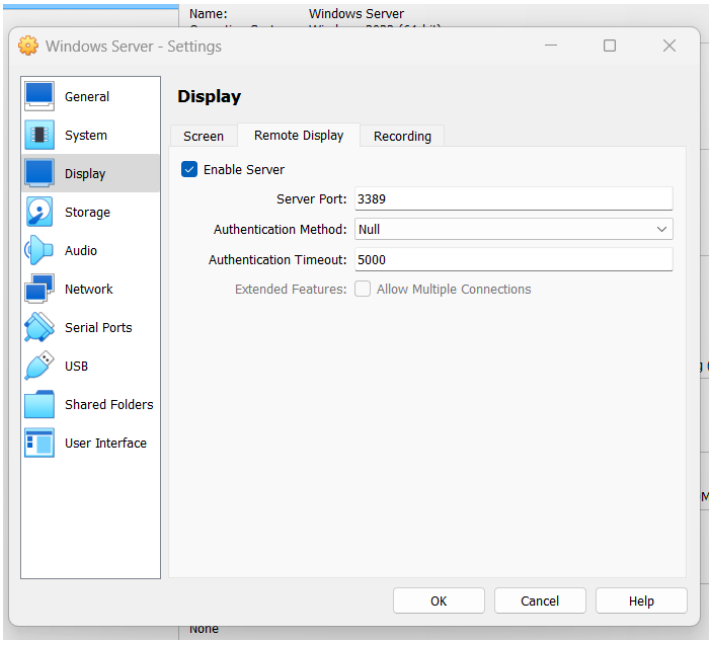

Figure 17 Enabling "Remote Display" server

Step 6: Now start Windows Server 2022 and see the IP address of Guest OS.

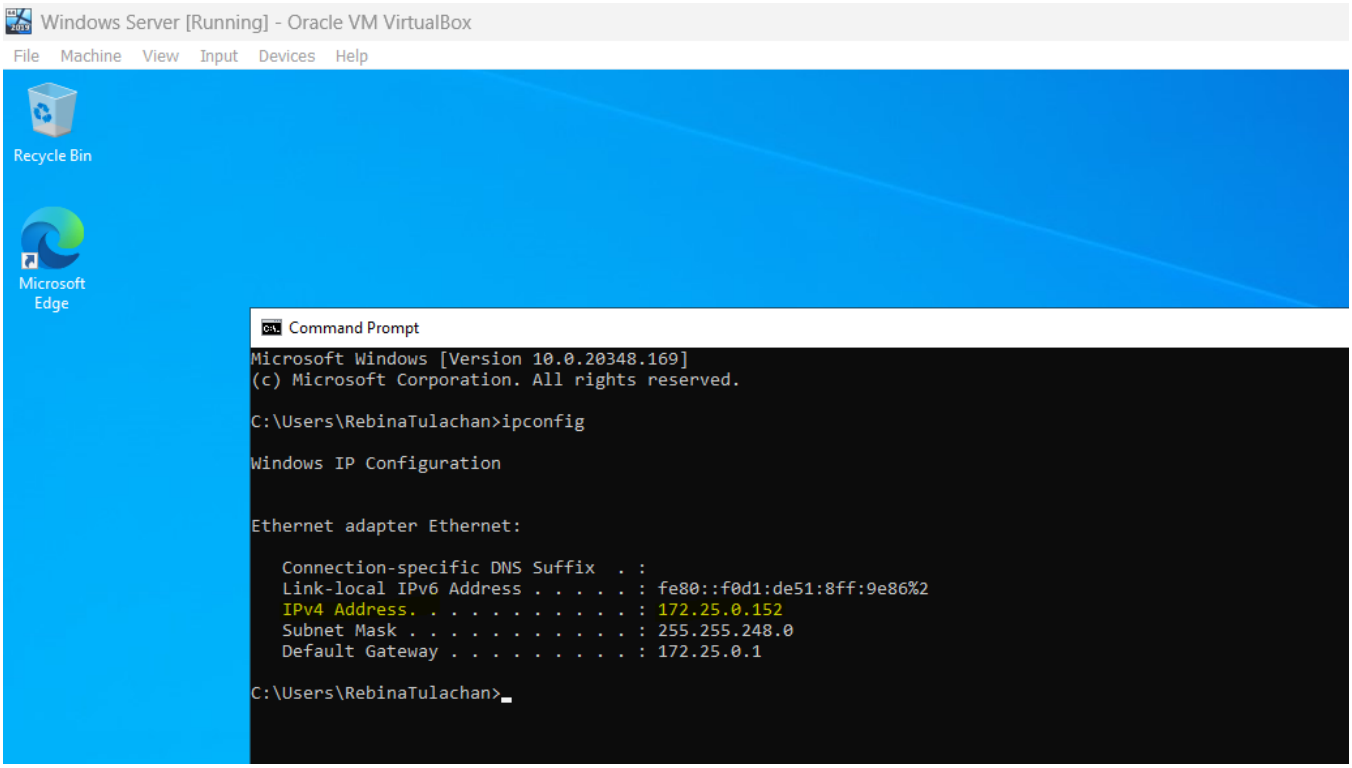

Figure 18 IP address of Guest OS

Step 7: Open Remote Desktop Connection from Host OS and insert IP of Guest OS and click on Connect.

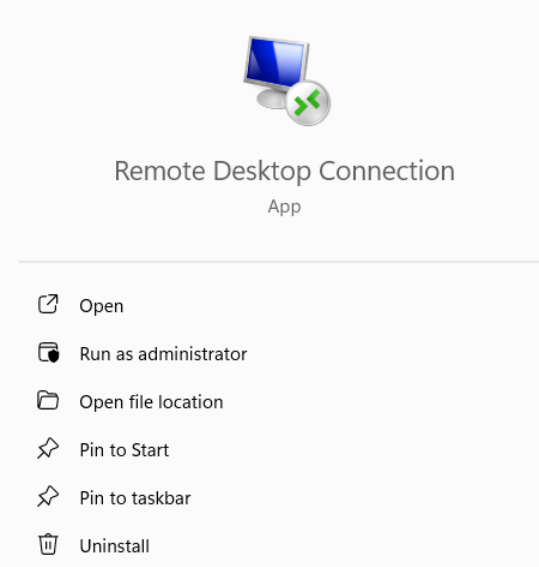

Figure 19 Running Remote Desktop

Figure 20 Opening Remote Desktop Connection and inserting IP address

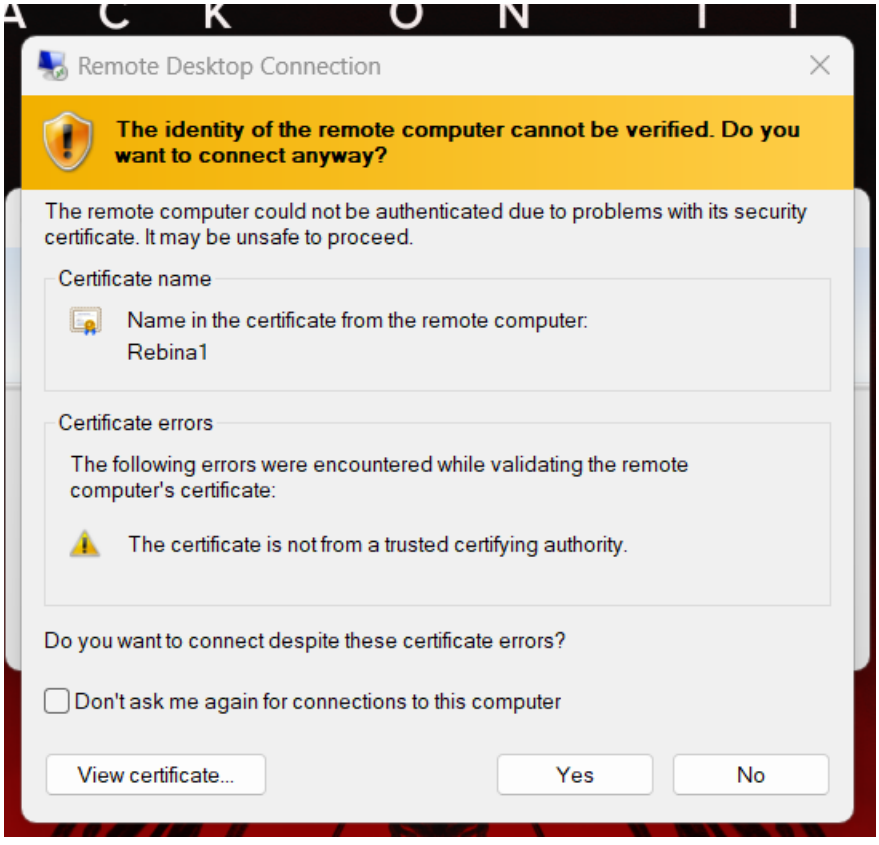

Figure 21 Selecting Yes

Step 8: Now we are able to access our Guest OS from Host OS using Remote Desktop.

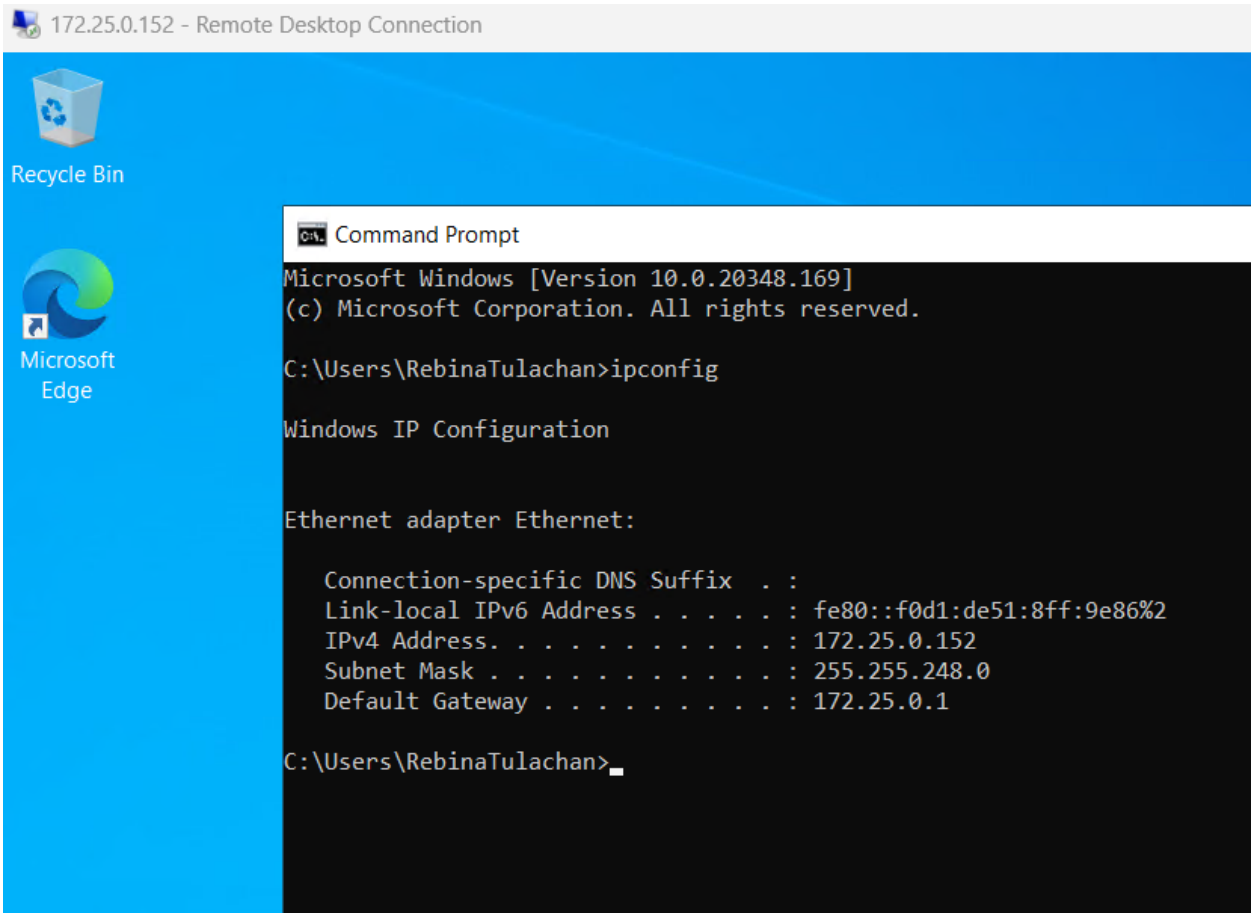

Figure 22 Accessing Guest OS from Host OS

5. Conclusion

To wrap it up, I can confidently say that I can now share any static website from the guest OS to my host computer and other devices on the same network. During this workshop, I picked up a lot of new concepts. I also learned how to access the guest OS through remote desktop control from my host OS. Although I encountered several challenges throughout the workshop, I managed to overcome them with the support of my friends and teacher.

6. References

Kizza, J. M. (2005). *Computer Network Security.*

Panek, W., & Wentworth, T. (2009). *Mastering Microsoft Windows 7 Administration.*

Petersen, H. (2016). *From Static and Dynamic Websites to Static Site Generators.*