LONDON METROPOLITAN UNIVERSITY

Module Code & Module Title

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Submitted To: Mr. Prashant Adhikari

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.

Contents

1.Introduction

The goal of this session is to teach participants how to use the Windows Server 2022 guest operating system as a web server to build up and host static websites. Both host operating systems and other Local Area Network devices will be able to access the hosted static server. (LAN). Web hosting is supported by the robust Windows Server platform via Internet Information Services (IIS).

2.Objectives

The goal of this workshop is to host static webpages on the guest OS, Windows Server 2022, and access them from the host OS and other computer devices on the same network.

This workshop aims to enable remote desktop functionality in Windows Server 2022 and provide access from the host operating system.

3.Required tools and concepts

I. Software Components:

a. Windows Server 2022: This operating system will host the website.

b. Internet Information Services (IIS): An inherent web server function in Windows Server. It accepts HTTP/HTTPS queries.

c. Web Browser: To evaluate website hosting, we use web browsers such as Edge, Google Chrome, and Firefox.

II. Network Setup:

Static IP Address: Set a set IP address for the Windows Server to ensure constant LAN connectivity.

To enable LAN connectivity, ensure that the host and visitor are on the same subnet.

Static Web Components

• HTM Files: The basic framework of your website.

• CSS files: Used to style the webpage.

• JavaScript Files: To add interaction (if necessary)

• Other static assets, such as photos and fonts.

III. Firewall and security

The Config Firewall permits HTTP (Port 80) and HTTPS (Port 443) communication.

User Permissions: Setting up the proper file permissions so that IIS may deliver static files.

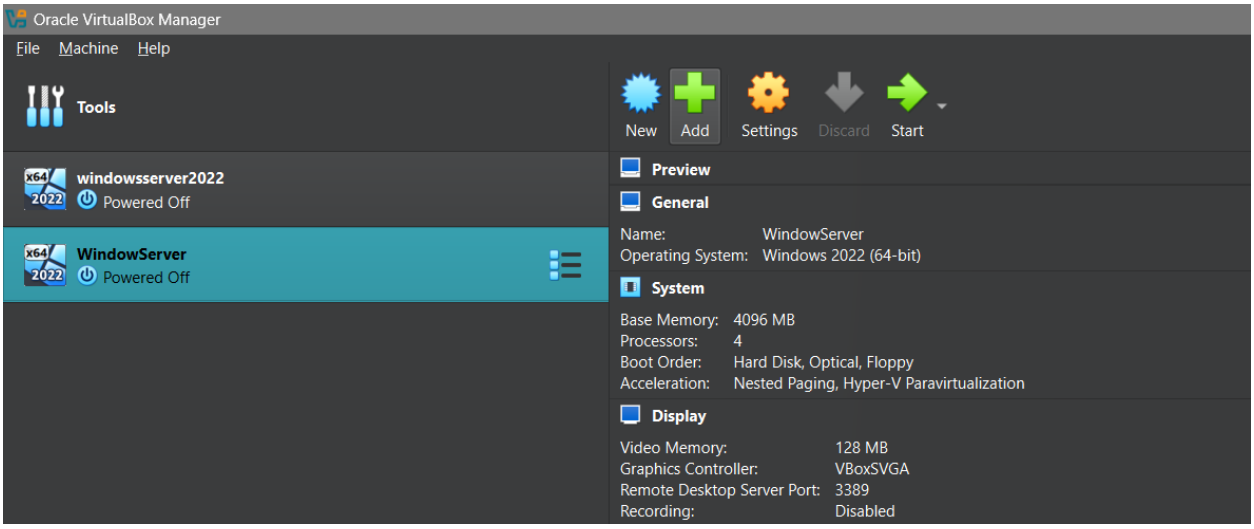
IV. Additional Tools:

Code Editor: Used for modifying static website files. (For example, Notepad++ and others.)

4.Steps of Replicate:

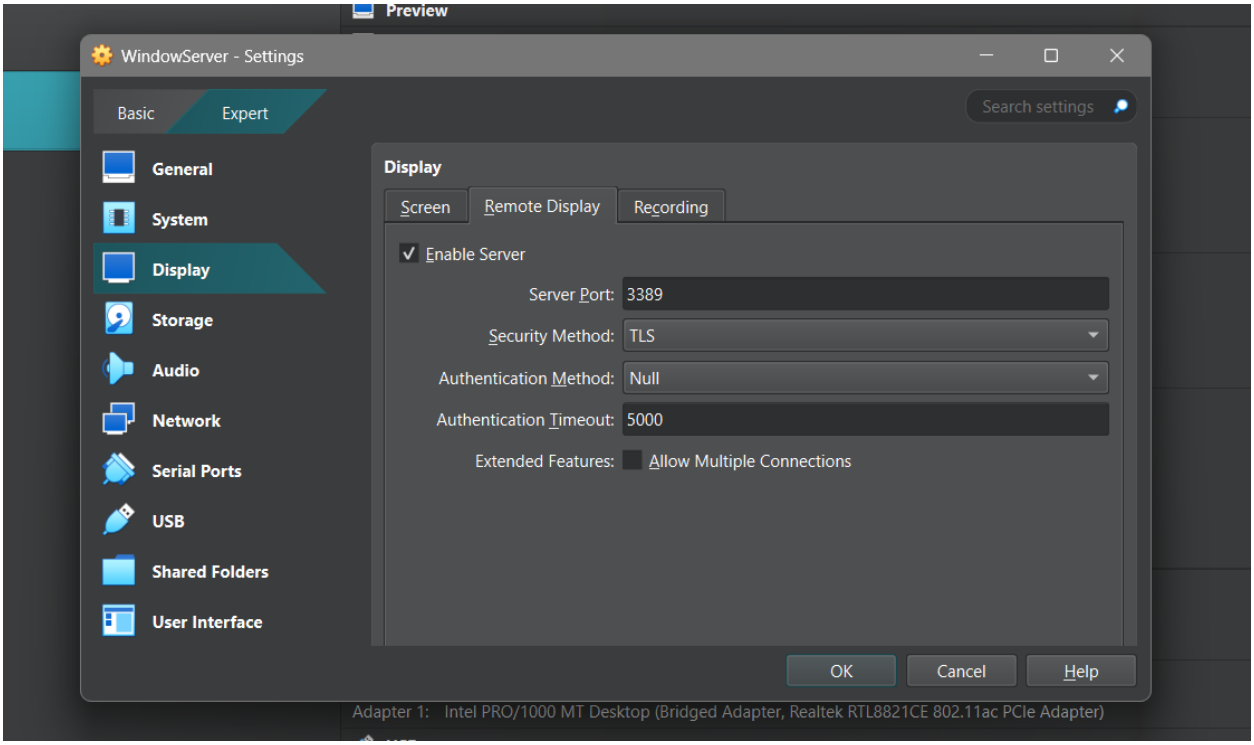
I. Open Virtual Box and choose a virtual environment.

Open Virtual Box and choose a virtual environment. After selecting the virtual environment, click the "Setting" option.



II. Selecting Bridge Adapter

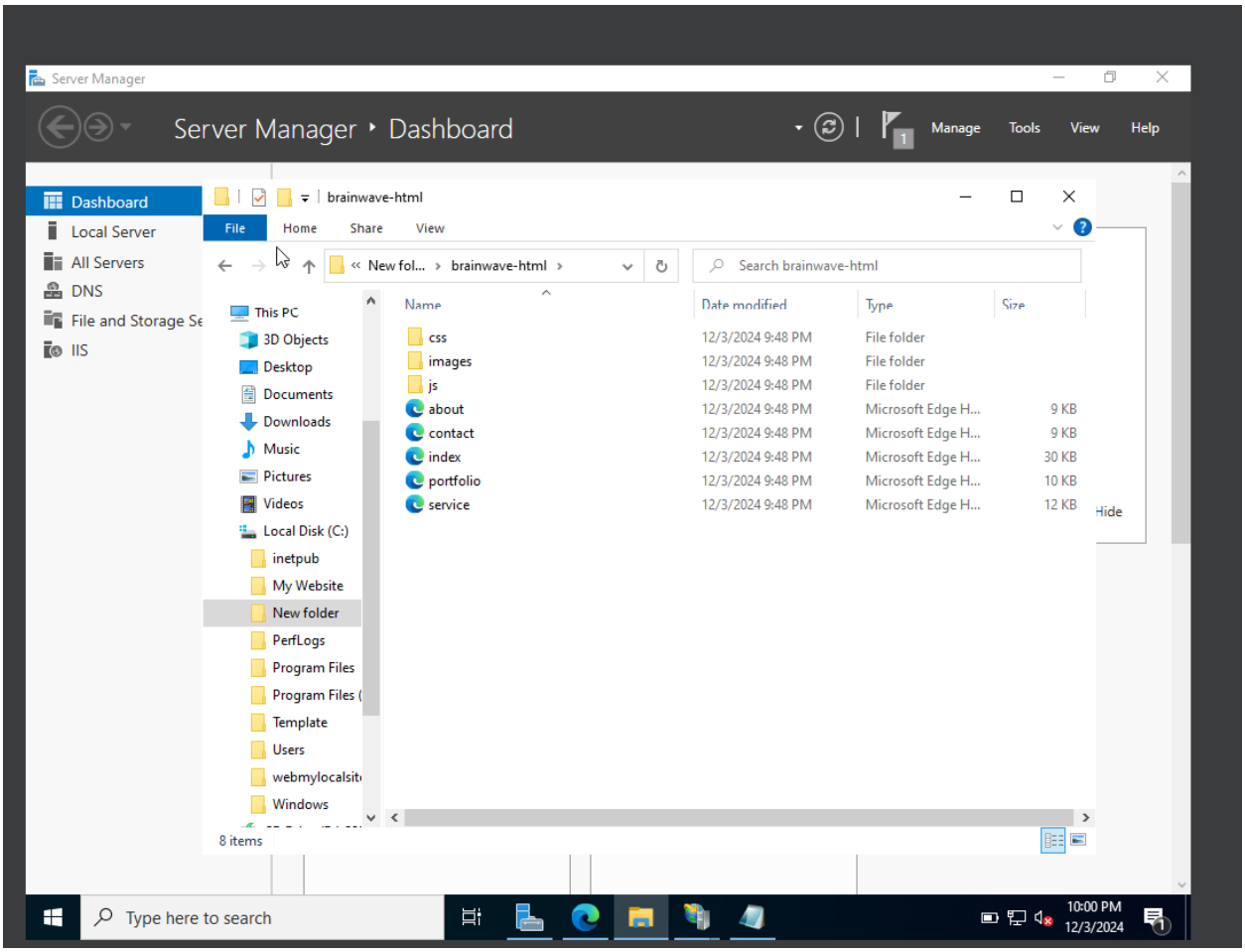
Click Network now, then choose Bridge Adapter under Network in Attached.



To option on the right side. Now click on OK button and run our windows server 2022.

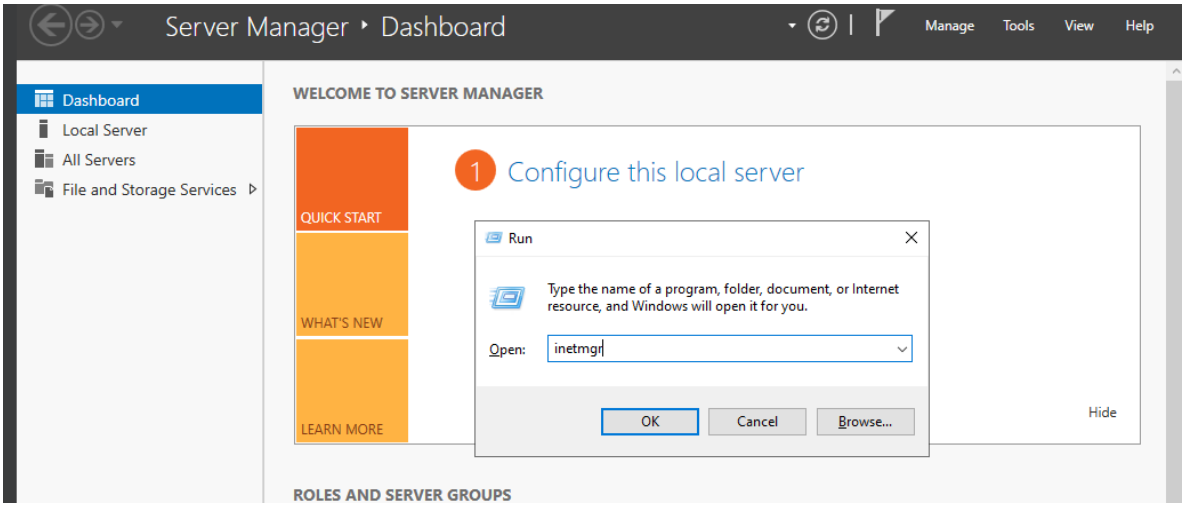
III. Placing website file in Disk C

As in the last workshop, save your website files on Windows Server 2022's Local Disk C disk, as seen in the accompanying image.



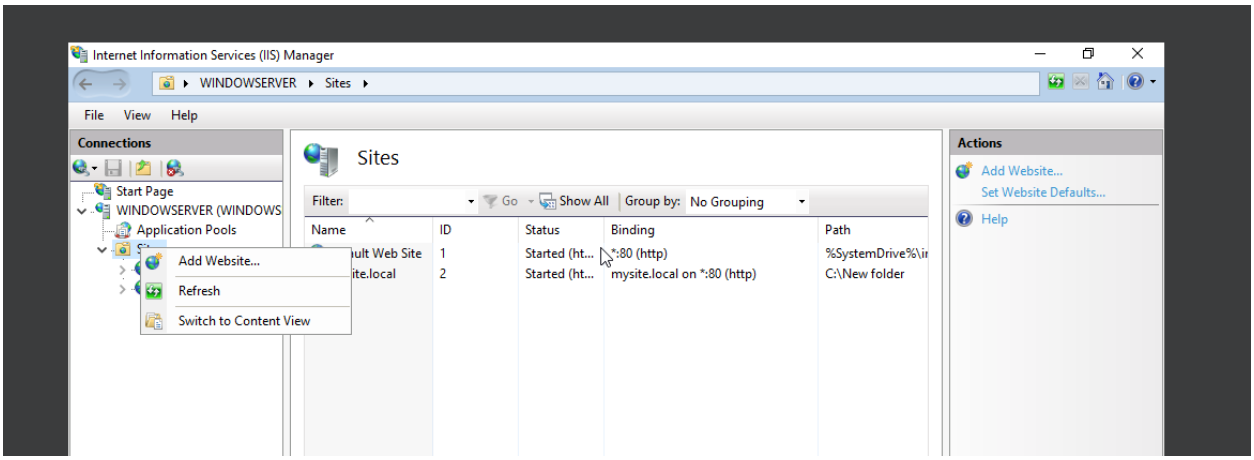
IV. Opening internet information service (IIS)

Open run the type “inetmgr”.it will open our internet information service from where we can set up hosting.



V. Adding Website

As in the last workshop, expand the server's name, right-click on "Sites," and select the "Add Website" option.



VI. Adding website Details and IP Adress

We now need to include the following website details:

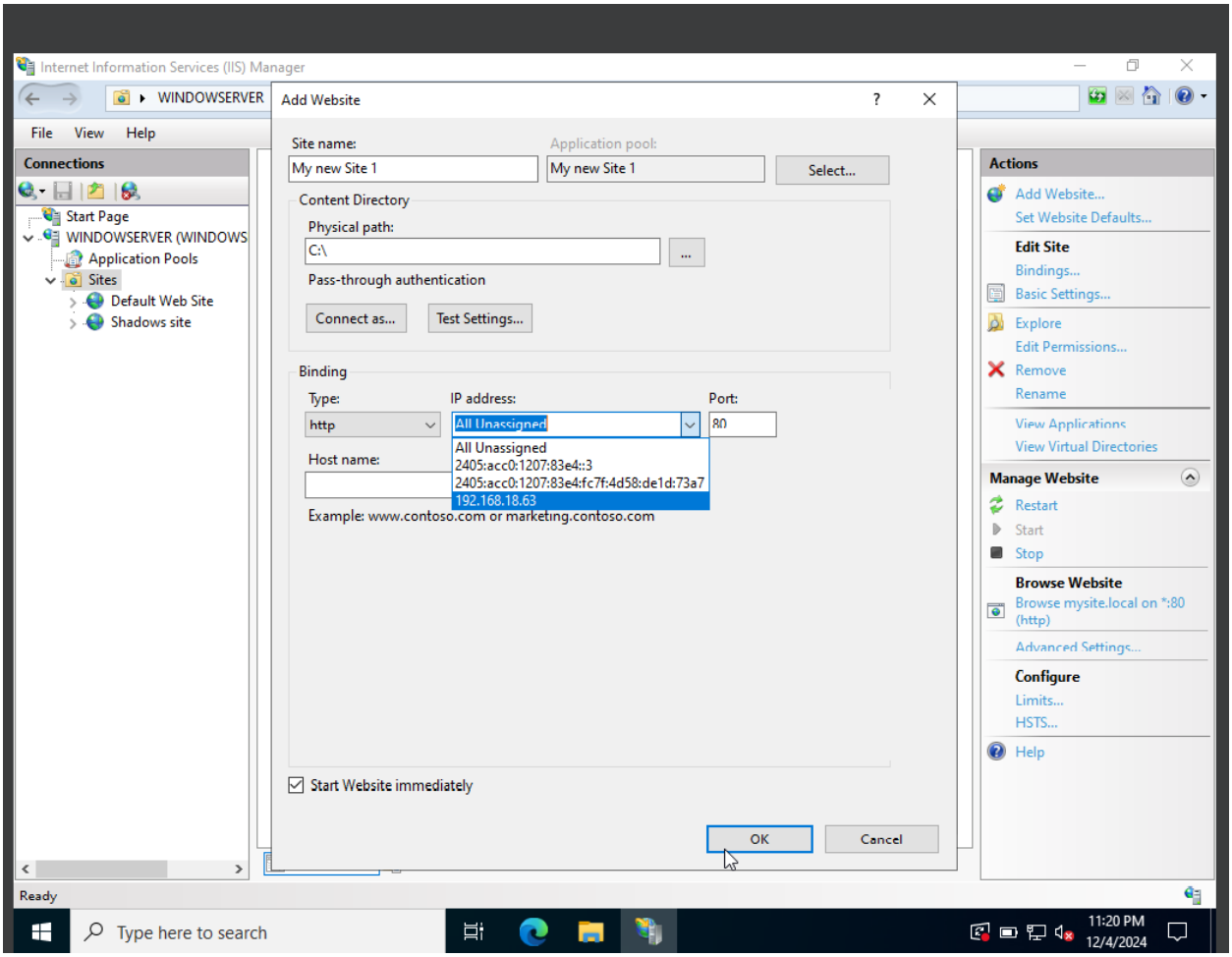
➢ Enter whatever name you choose under Site name.

➢ Provide the path to the folder containing the files for our website under Physical path.

➢ From the drop-down menu under IP address, choose the specified IP address.

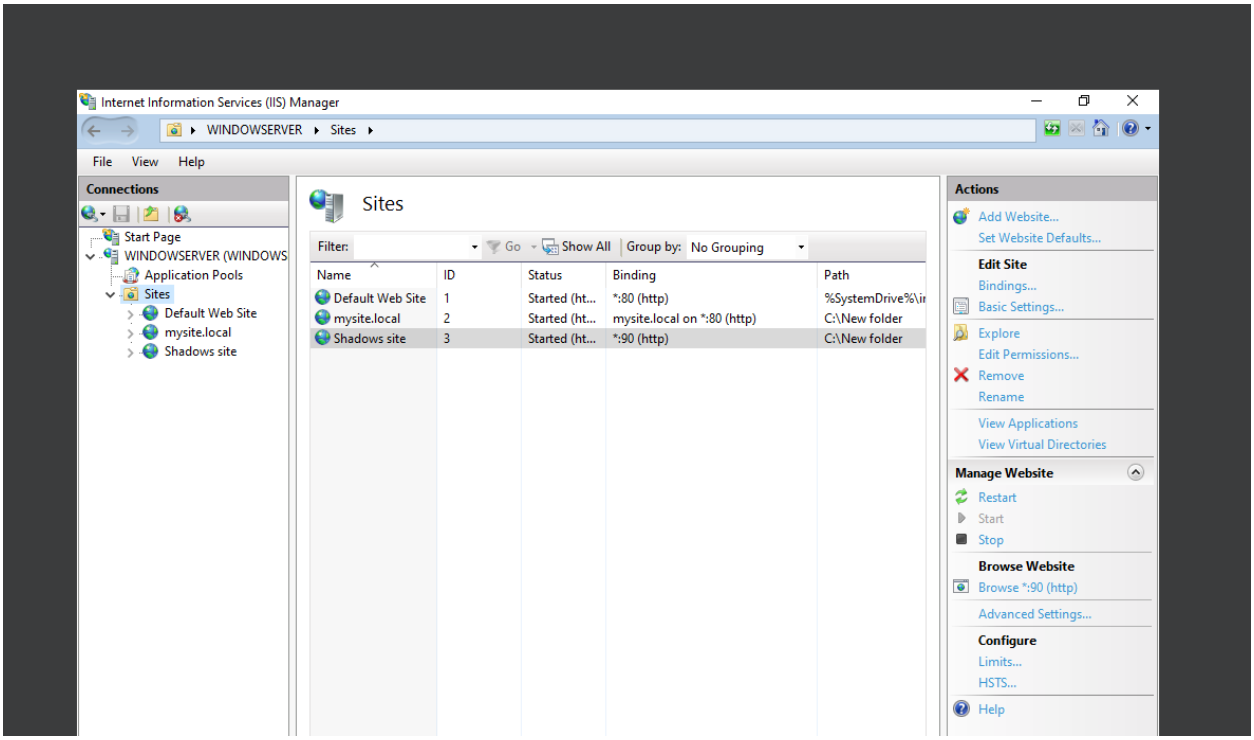
[Note: Your IP address will change if you switch networks, such as from home to college, and you will need to update it to have access.]

Click "OK" and leave the other choices at their default settings.

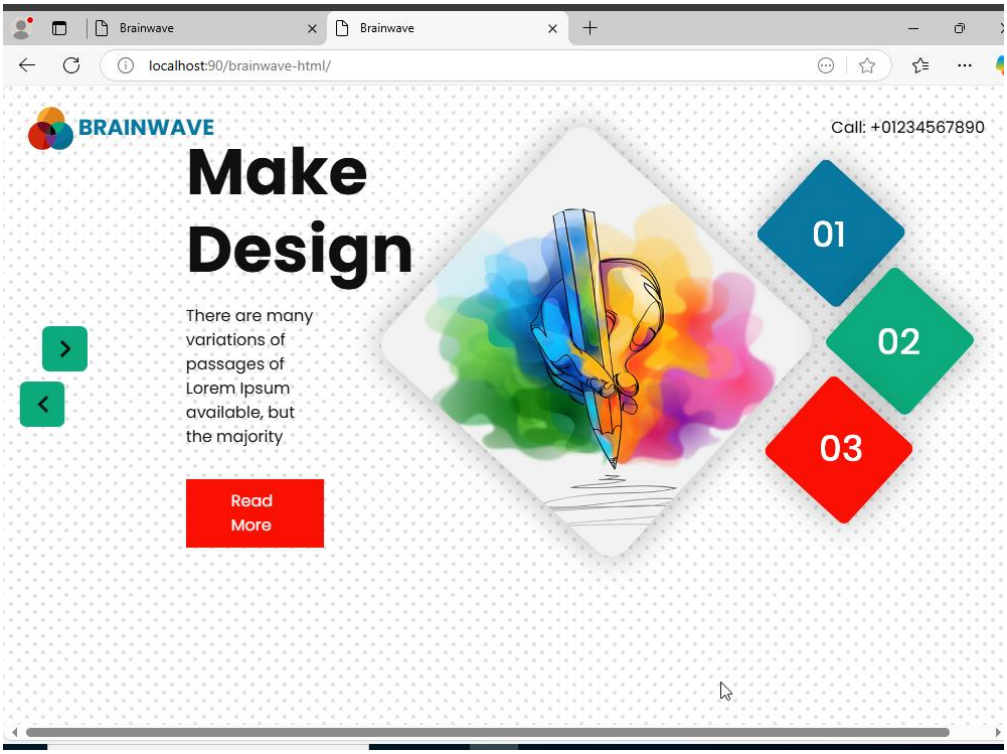


VII. Browsing the site with IP Address

We can now see the name of our website on the list. Let's now explore our website by selecting "Browse" on the right side and then entering your IP address. Our website will open in a browser as a result.



We can see our website is live now



VIII. Accessing website from Host Operating System(OS)

Enter the Guest OS's IP address in the Host OS browser to see whether the Host OS can visit your website.

IX. Downloading Extension Pack for virtual box

Additionally, open the webpage on your smartphone by entering the Guest OS's IP address, and check to see whether it works on your device.

[Note: You need to be on the same network as your phone and server.]

Let's now establish a remote connection between our Windows server and the host operating system.

We are now moving toward a remote connection to the Guest OS from the Host OS, taking into account the VMs above configuration.

Conditions: We must download the Virtual Box Extension Pack. Download the extension pack from the following site after verifying the version of Virtual Box you are using: Index of http://download.virtualbox.org/virtualbox. Make sure you are using the correct version of Virtual Box.

My version is 7.1.4 in this instance. By selecting Help in the virtual box manager and then About VirtualBox, you may see the version of your virtual box.

Once your version of the link has been clicked, select the extpacks as shown in the following image and download it.

Index of /virtualbox/7.1.4

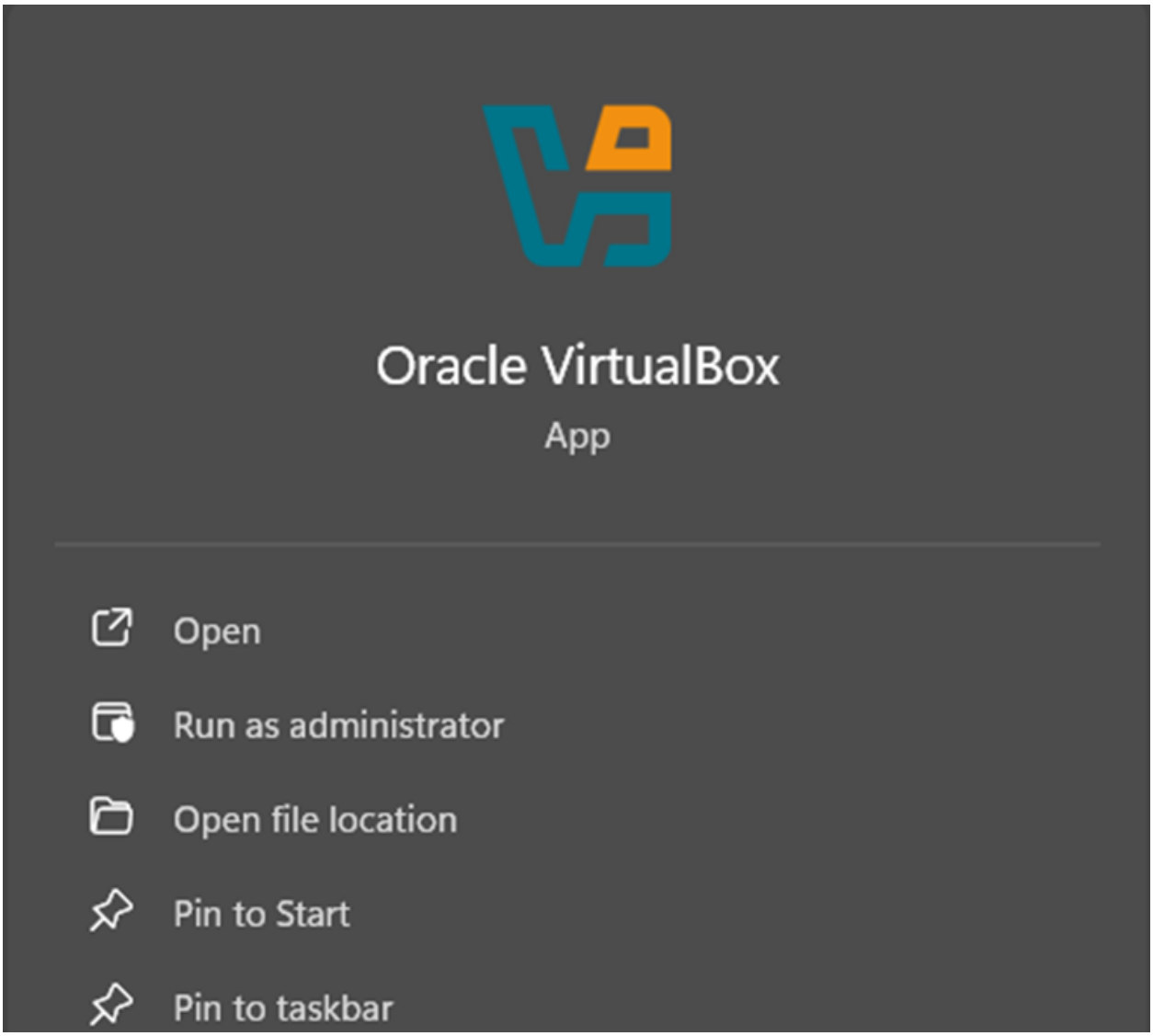
Name	Last modified	Size
Parent Directory		
MD5SUMS	25-Nov-2024 17:48	1.8K
Oracle_VirtualBox_Extension_Pack-7.1.4-165100.vbox-extpack	10-Oct-2024 22:20	22M
Oracle_VirtualBox_Extension_Pack-7.1.4.vbox-extpack	10-Oct-2024 22:20	22M
SDKRef.pdf	10-Oct-2024 22:20	3.1M
SHA256SUMS	25-Nov-2024 17:48	2.6K
UserManual.pdf	10-Oct-2024 22:20	5.3M
VBoxGuestAdditions_7.1.4.iso	10-Oct-2024 22:20	57M
VirtualBox-7.1-7.1.4_165100_el8-1.x86_64.rpm	10-Oct-2024 22:25	107M
VirtualBox-7.1-7.1.4_165100_el9-1.x86_64.rpm	10-Oct-2024 22:25	104M
VirtualBox-7.1-7.1.4_165100_fedora36-1.x86_64.rpm	10-Oct-2024 22:25	105M
VirtualBox-7.1-7.1.4_165100_fedora40-1.x86_64.rpm	10-Oct-2024 22:25	105M
VirtualBox-7.1-7.1.4_165100_openSUSE153-1.x86_64.rpm	10-Oct-2024 22:25	99M
VirtualBox-7.1.4-165100-Linux_amd64.run	10-Oct-2024 22:20	117M
VirtualBox-7.1.4-165100-OSX.dmg	10-Oct-2024 22:20	132M
VirtualBox-7.1.4-165100-Solaris.p5p	10-Oct-2024 22:20	124M
VirtualBox-7.1.4-165100-SunOS.tar.gz	10-Oct-2024 22:20	124M
VirtualBox-7.1.4-165100-Win.exe	10-Oct-2024 22:20	106M
VirtualBox-7.1.4-165100-macOSArm64.dmg	10-Oct-2024 22:20	126M
VirtualBox-7.1.4.tar.bz2	10-Oct-2024 22:20	197M
VirtualBoxSDK-7.1.4-165100.zip	10-Oct-2024 22:20	15M
virtualbox-7.1_7.1.4-165100~Debian~bookworm_amd64.deb	10-Oct-2024 22:07	100M
virtualbox-7.1_7.1.4-165100~Debian~bullseye_amd64.deb	10-Oct-2024 22:07	100M
virtualbox-7.1_7.1.4-165100~Ubuntu~focal_amd64.deb	10-Oct-2024 22:07	100M
virtualbox-7.1_7.1.4-165100~Ubuntu~jammy_amd64.deb	10-Oct-2024 22:07	100M
virtualbox-7.1_7.1.4-165100~Ubuntu~noble_amd64.deb	10-Oct-2024 22:07	91M
virtualbox-7.1_7.1.4-165100~Ubuntu~oracular_amd64.deb	25-Nov-2024 17:37	91M

download.virtualbox.org

After downloading the extension pack. Follow the following steps

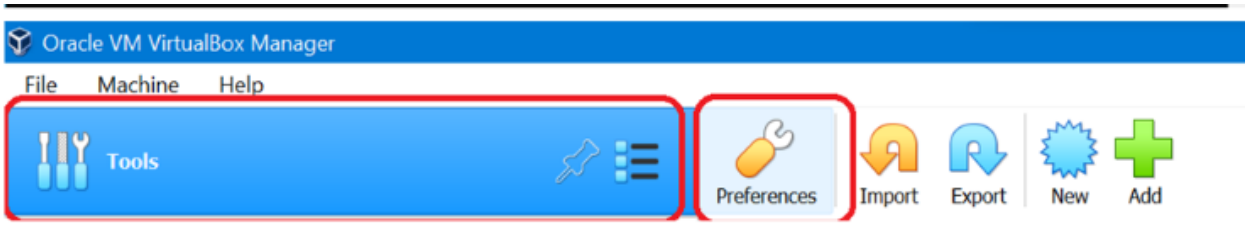
Step 1; Opening virtual Box as Administrator

Close all the VMS running including virtual box. And open virtualBox with “Run as Administrator”.



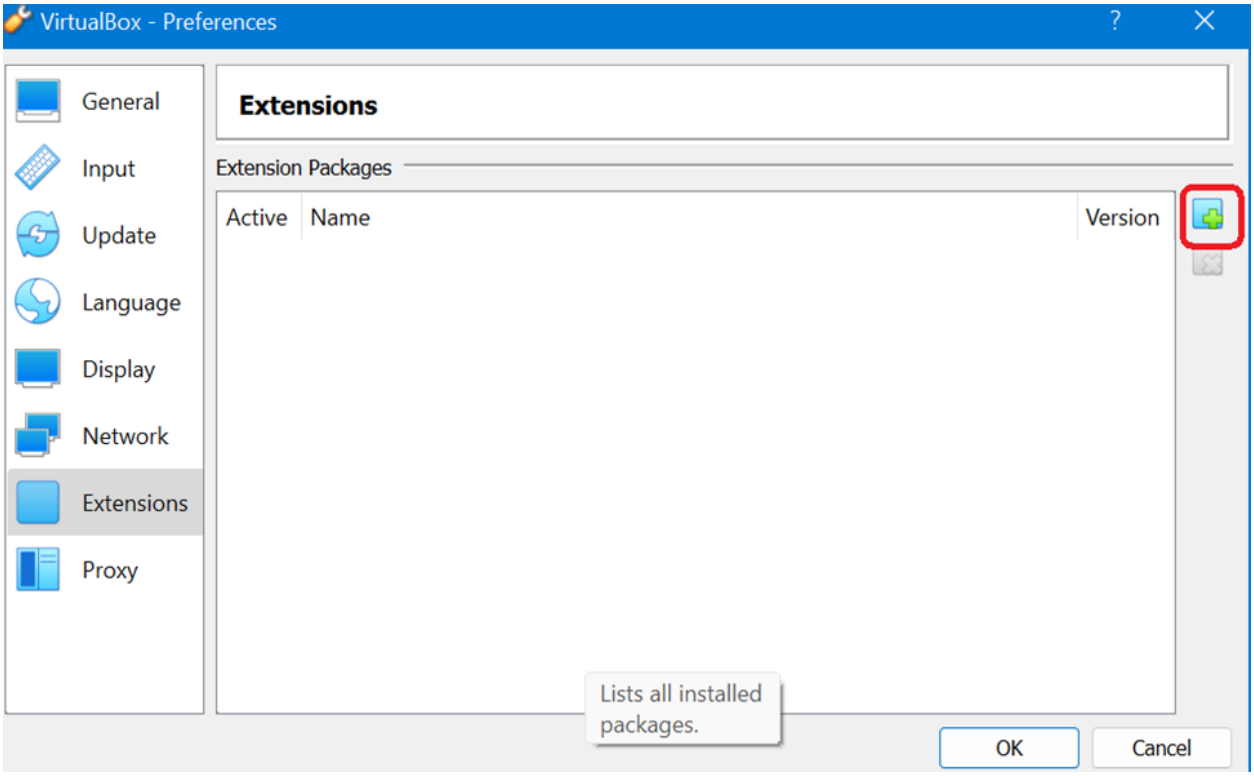
Step 2; Opening Tools and Preferences

Click on “Tools” which is on top. After then, click on preferences.



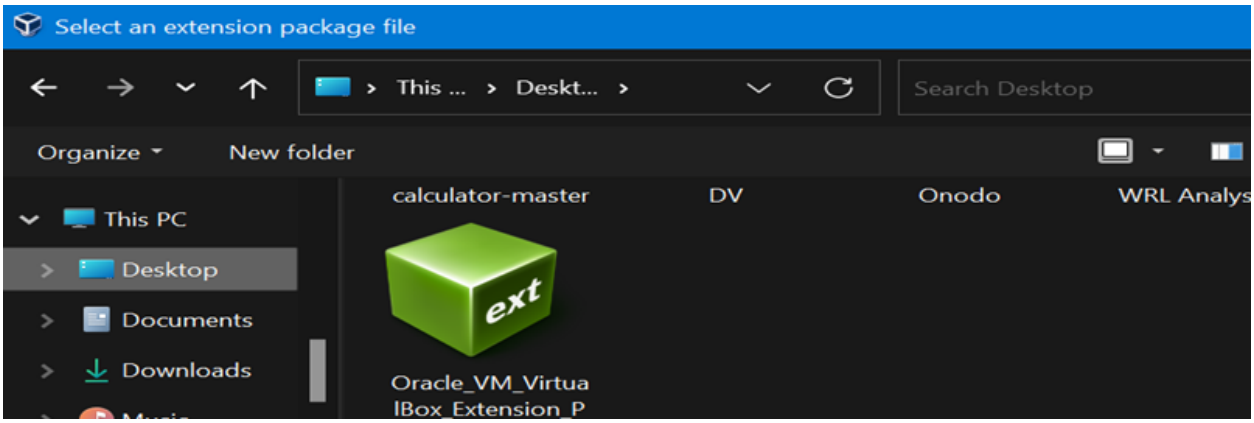
Step 3; Clicking on extensions tab

Now click Extension tab and press green add(+) icon which is on the right side



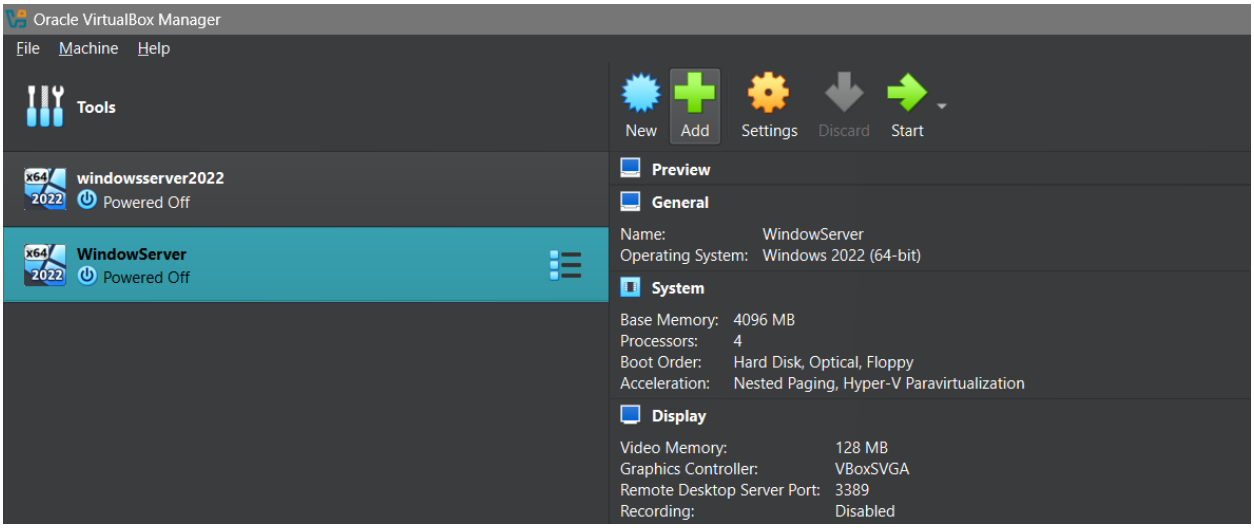
Step 4; Navigation downloaded extension pack

It will open a dialogue box. Navigate to the extension pack file that we have to downloaded earlier and select that, after selecting that click on install.



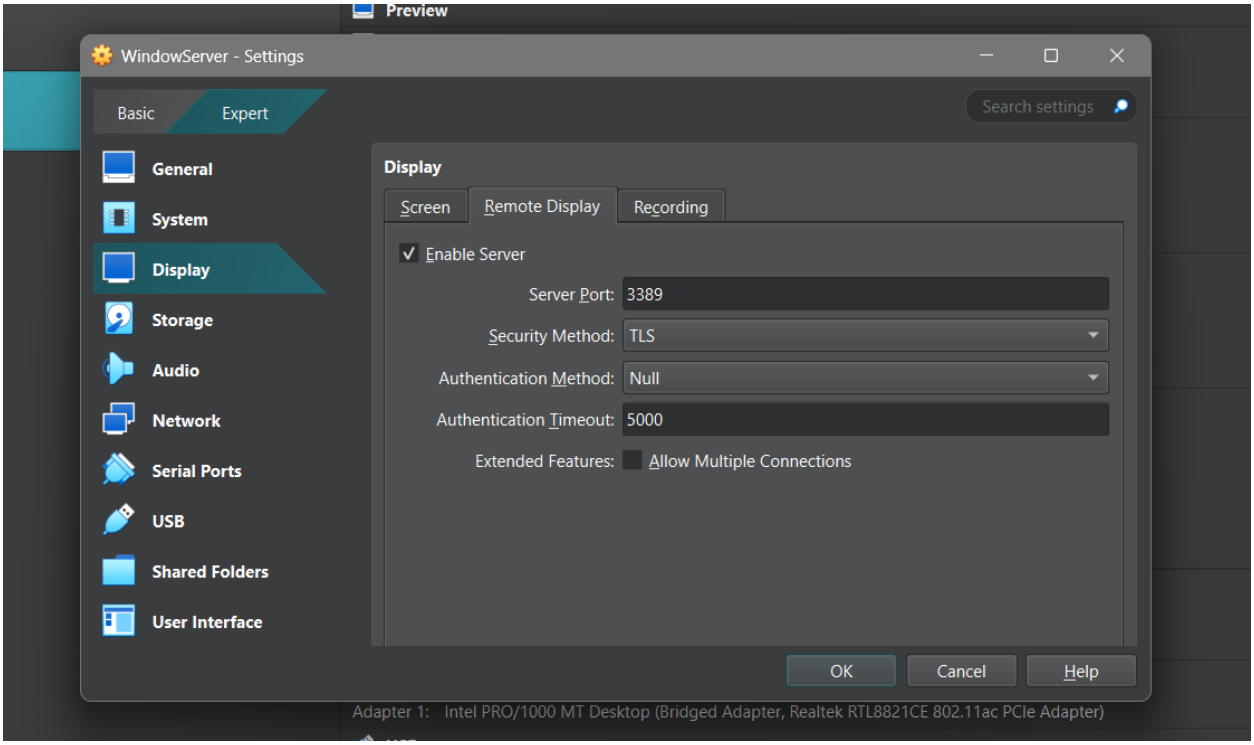
Step 5; Selecting Virtual Environment

Now close the tab and select the server 2022 virtual Environment and on settings.



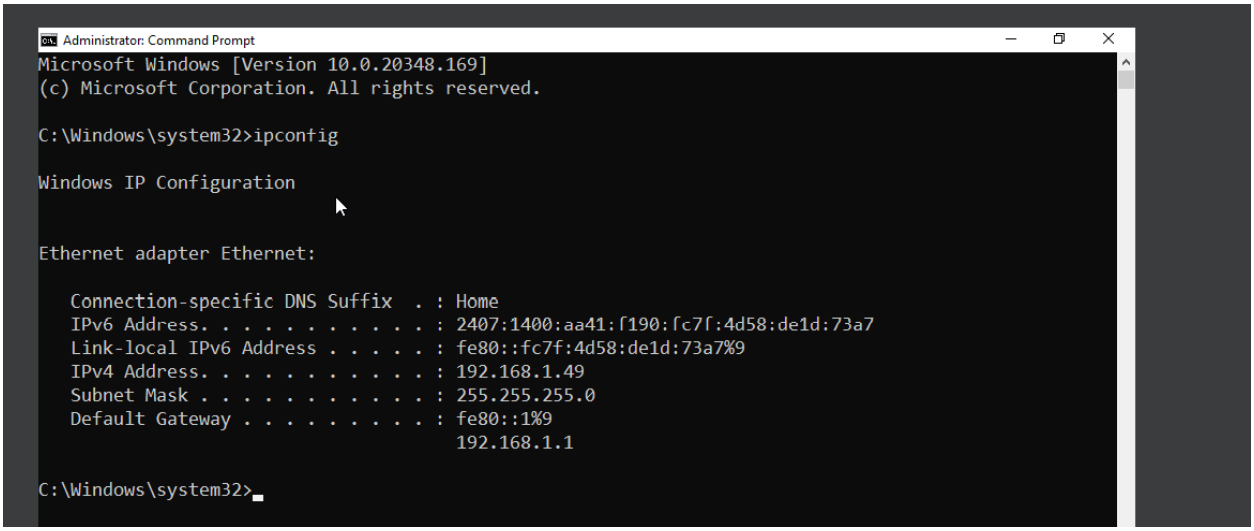
Step 6: Enabling Server

Click on display and click on Remote Display and click on Enable Server and click OK.



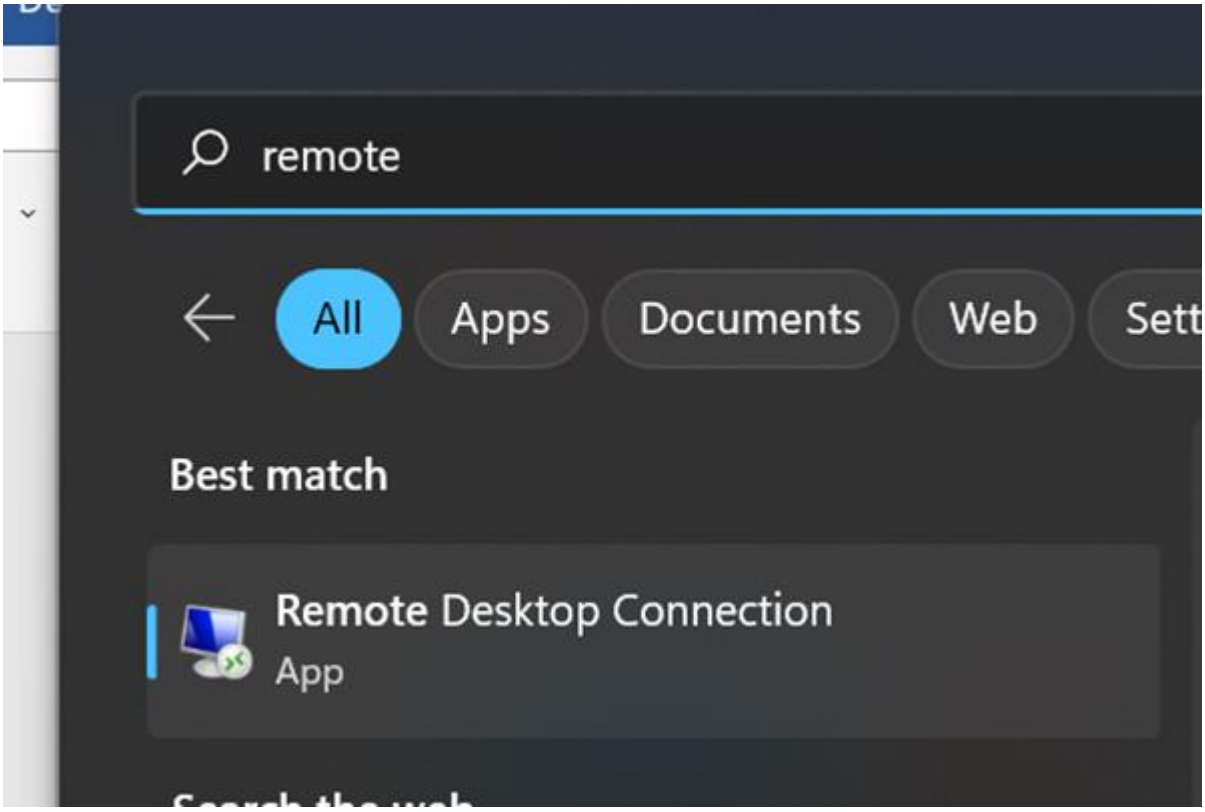
Step 7; Seeing IP Adress of guest OS

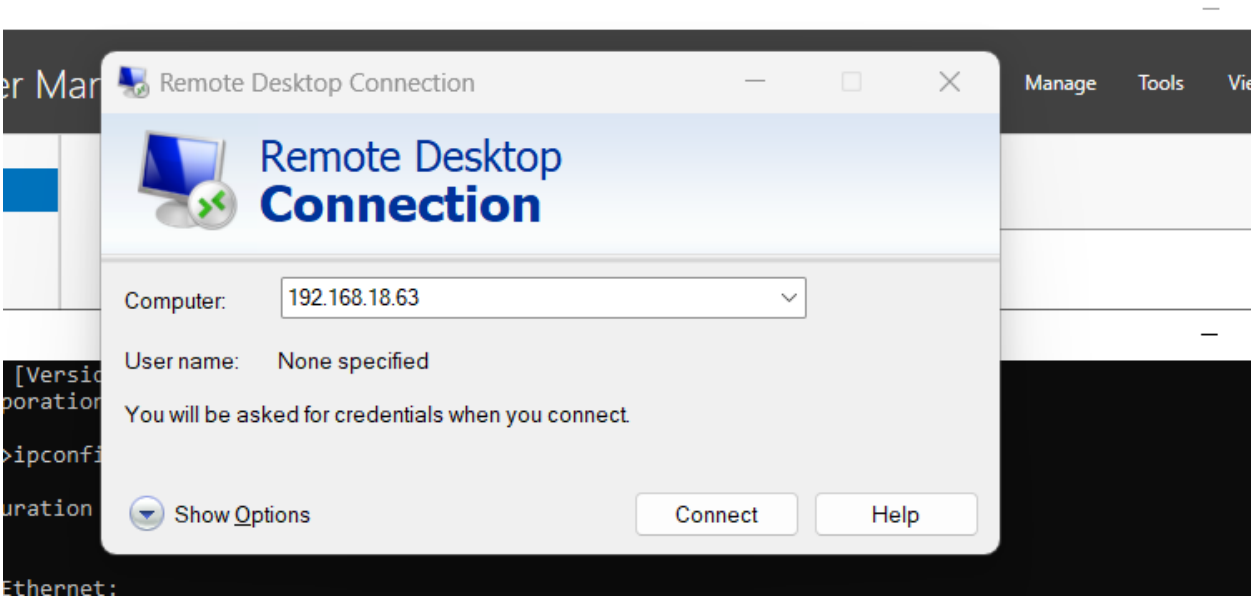
Now start our windows server 2022 and see your IP address of your Guest OS.

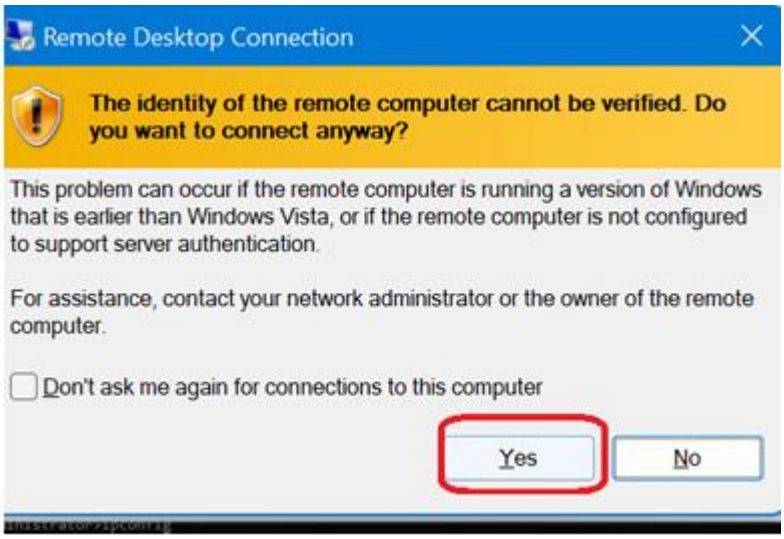


Step 8; Opening remote Desktop in host OS

Click "Connect" after opening a Remote Desktop connection from the host operating system and entering the guest operating system's IP.

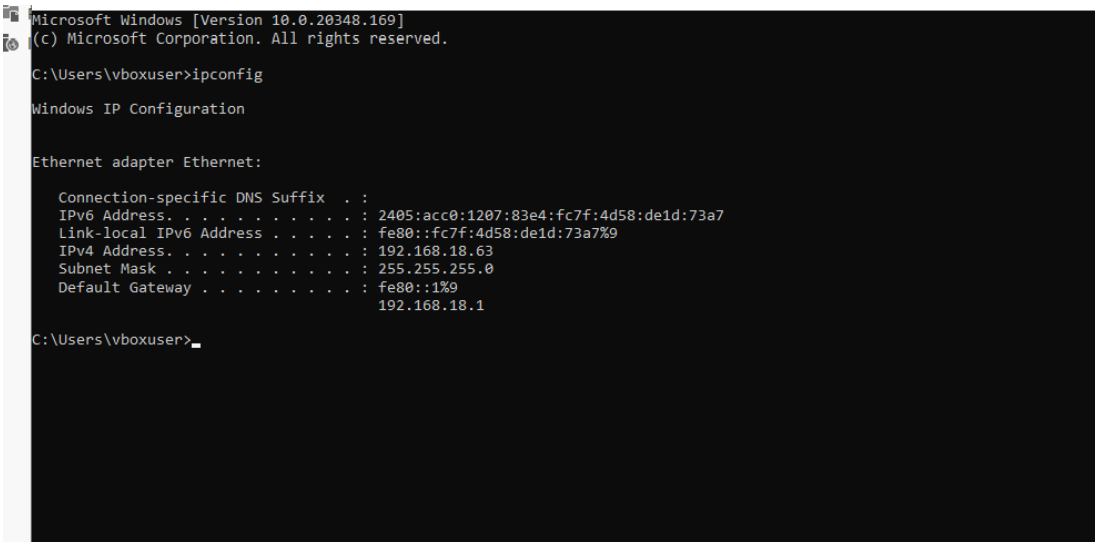

remote
All
Apps
Documents
Web
Sett
Best match
Remote Desktop Connection
App


Remote Desktop Connection
Remote Desktop
Connection
Computer:
192.168.18.63
User name:
None specified
You will be asked for credentials when you connect.
Show Options
Connect
Help
Manage
Tools



Step 9: Accessing Guest OS from Host OS using remote desktop

Boom. Now we are able to access our Guest OS using a remote Desktop.



Conclusion:

Using Windows Server 2022 to host a static website integrates the fundamentals of web technology, networking, and server management. This workshop's primary goal is to host and manage websites within a Local Area Network (LAN) by configuring Guest OS to Host OS via a remote desktop connection. Participants gain knowledge of file management, security, network accessibility, and server setup and configuration.

The purpose of this session is to learn about server management, network configuration, and web hosting. Within a Local Area Network (LAN), members can set up a safe and accessible web server.