



Module Code & Module Title
Level 5 – Network Operating Systems

Assessment Type
Logbook 5
Semester
2023/24 Spring/Autumn

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Assignment Due Date: Saturday, November 28, 2023
Assignment Submission Date: Saturday, November 28, 2023
Submitted To: Enjina Ghimire
Word Count (Where Required):

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. Hosting a static website and enabling remote desktop connection.

1.1 Aims:

In this logbook, we will be hosting a static website on Windows Server 2022 within a local network. We will learn how to set up a static website using Internet Information Services (IIS) and make it accessible not only to our windows server 2022 but also from other devices on the same network. We'll cover the basics of Remote Desktop Connections, allowing us to access our server from anywhere. We will also learn how to install the correct extension for our VirtualBox.

1.2 Objectives:

- Host a static website across the local network:
- How to check version of VirtualBox:
- Download the correct extension for our respective version of VirtualBox:
- Install the downloaded extension in VirtualBox:
- Use RDP to connect to the windows server VM from our host machine:

1.3 Required tools and concepts.

Tools:

Virtual Box

Windows server 2022 VM:

Web browser:

Internet Information Services (IIS) Manager:

Internet Connectivity

Concepts:

Virtualization

Windows server 2022

IIS manager

Remote Desktop Protocol

1.4 Changing VM adapter to Bridged Adapter from NAT

To do this we first need to open the virtual box manager and select the windows server 2022 virtual machine and select the settings icon.

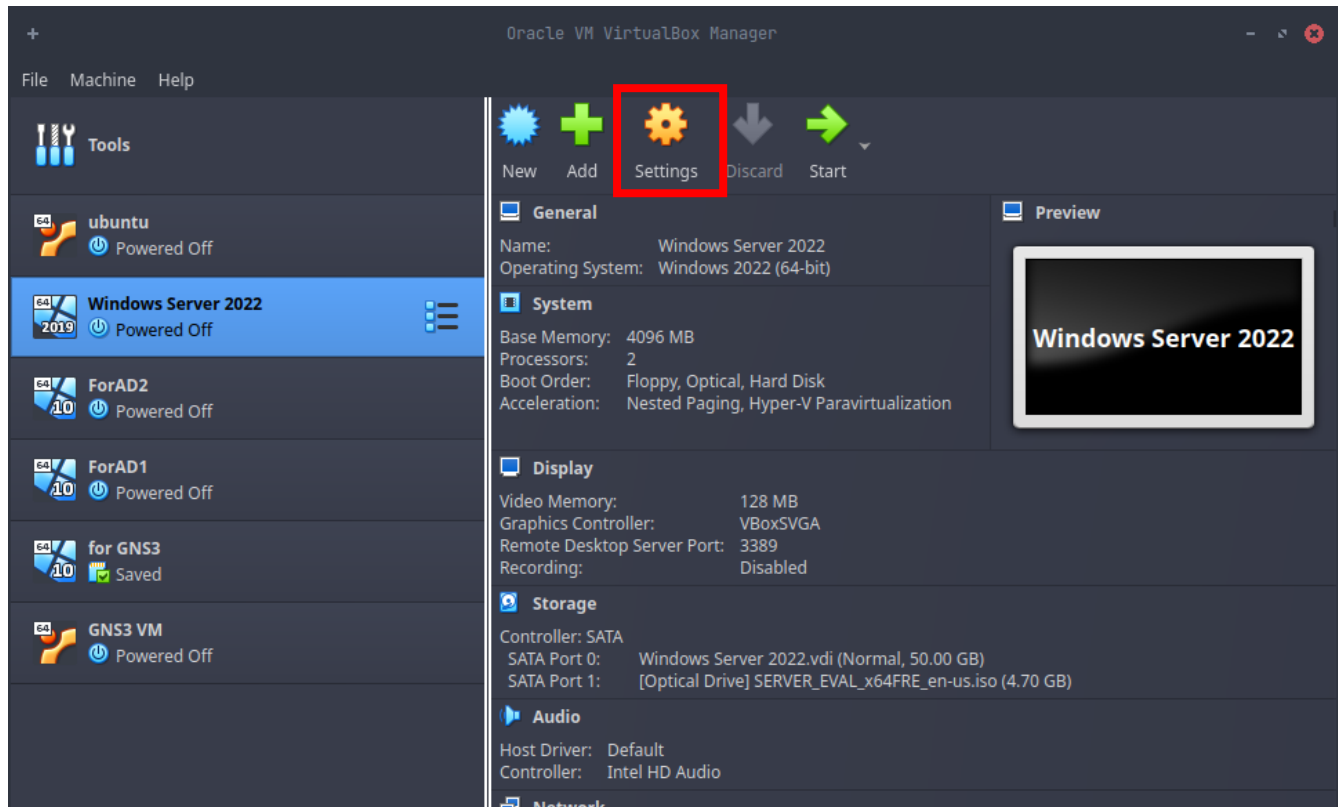


Figure 1 Virtual box manager

After that the settings panel will open and we need to select the Network option and on the network adapter dropdown option we will need to select the Bridged Adapter option instead of NAT, after that click on ok and close the settings manager.

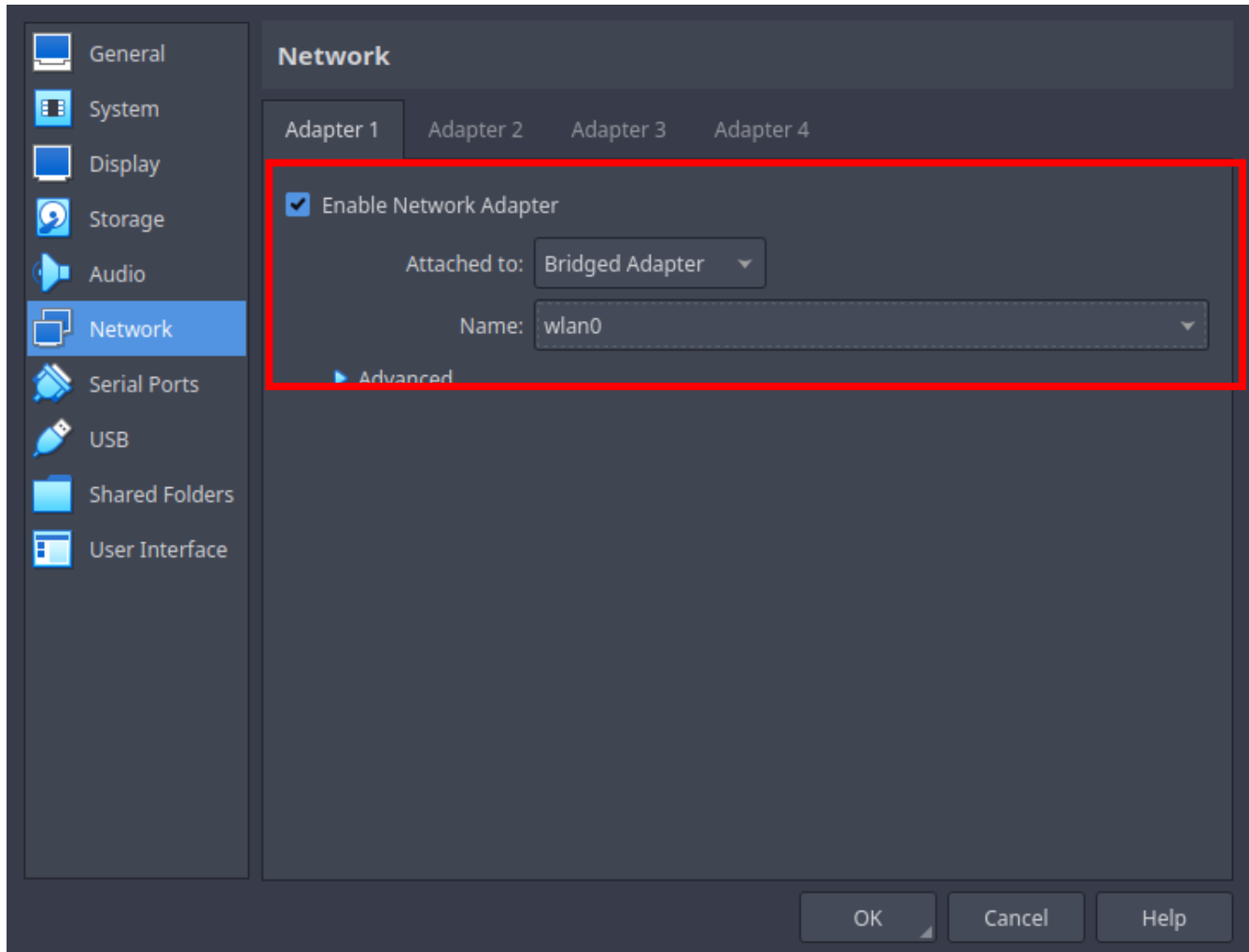


Figure 2 Network settings

After that we will be at the virtual box manager now, we have to select and start our windows server 2022 virtual machine.

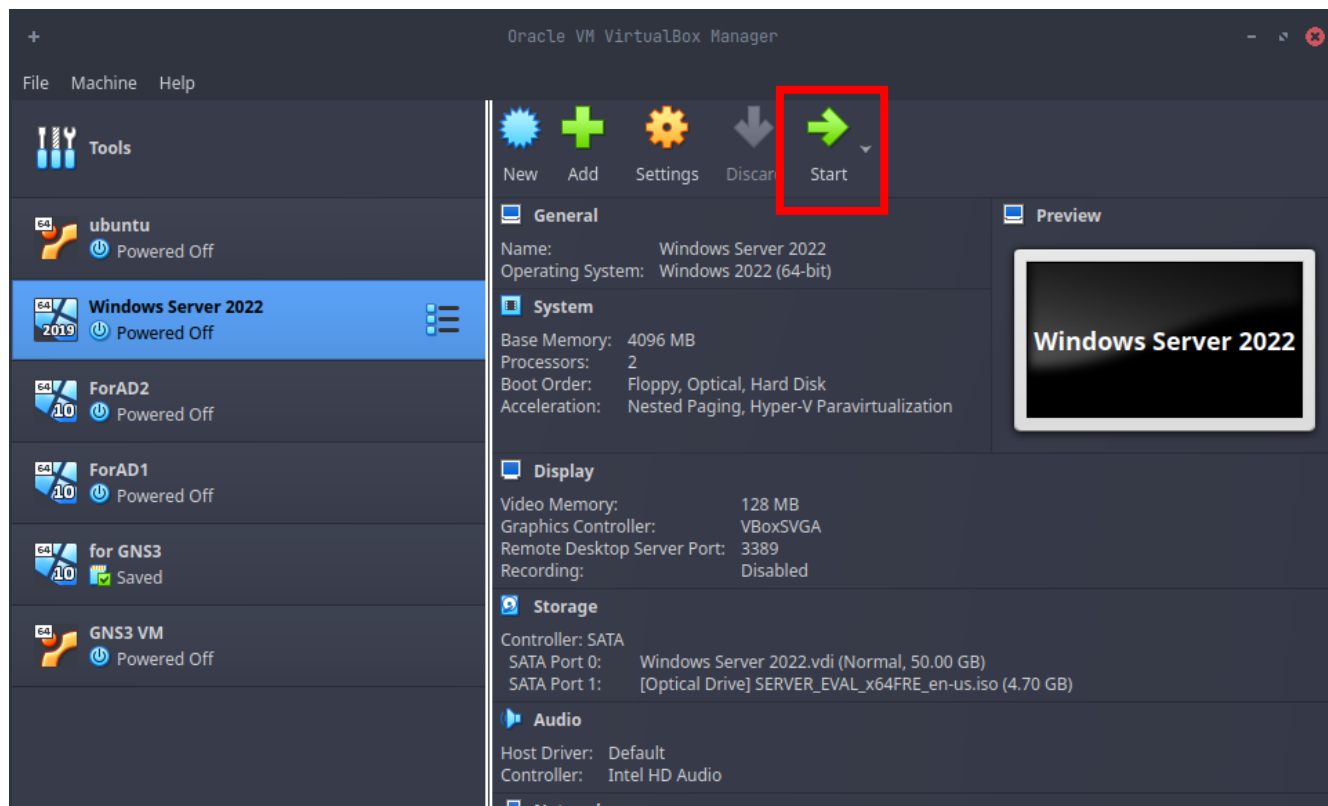


Figure 3 Starting the VM

Once our virtual machine has started successfully, we need to configure the ISS manager and add the path to our website.

1.5 Windows server ISS configuration.

Our windows server has successfully booted up now we need to login with an account which has the highest privilege level i.e., Administrator account or account with root privilege.

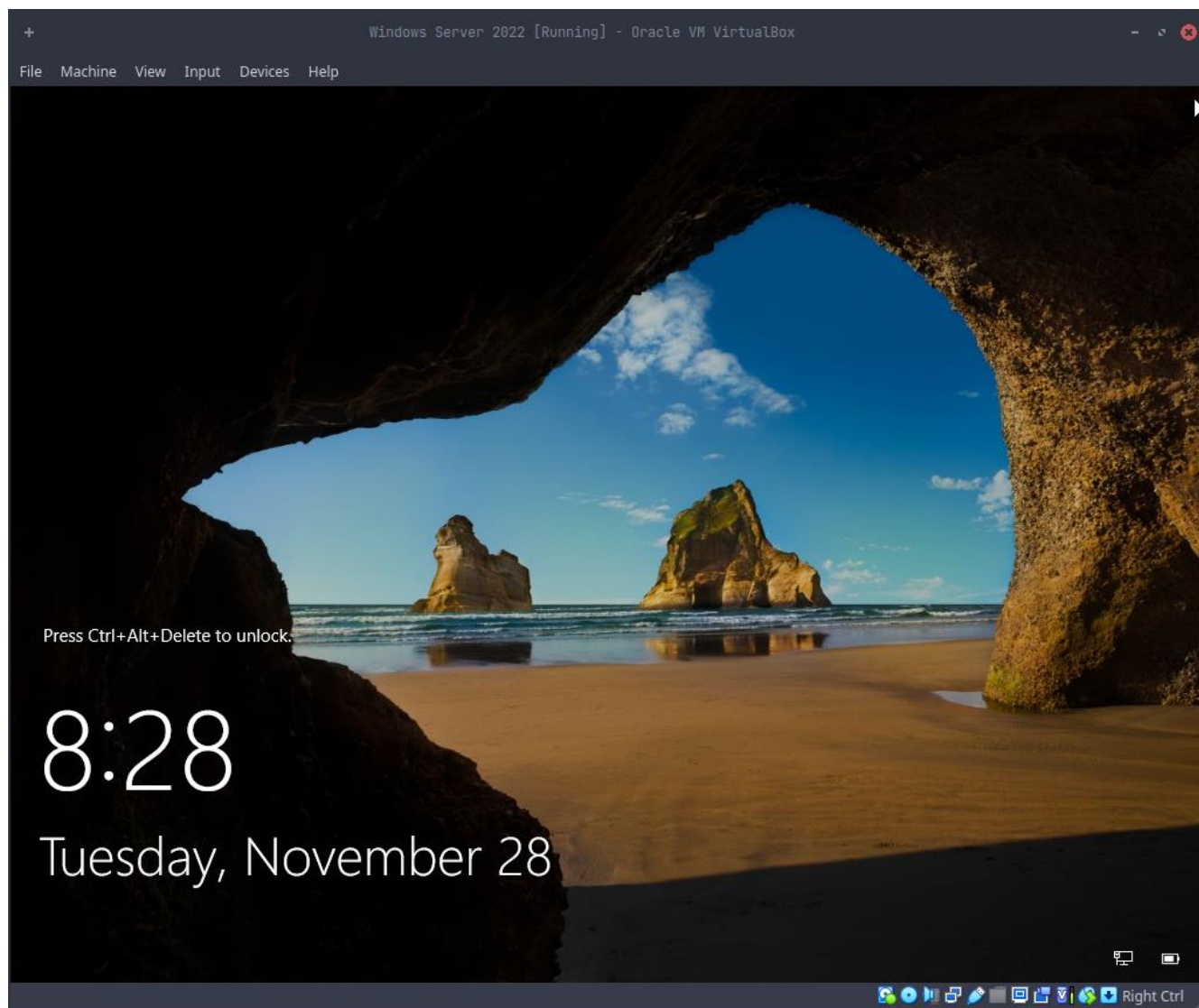


Figure 4 Server lock screen

After logging in we will open the file manager and go to the C drive and open the folder which contains our website templates.

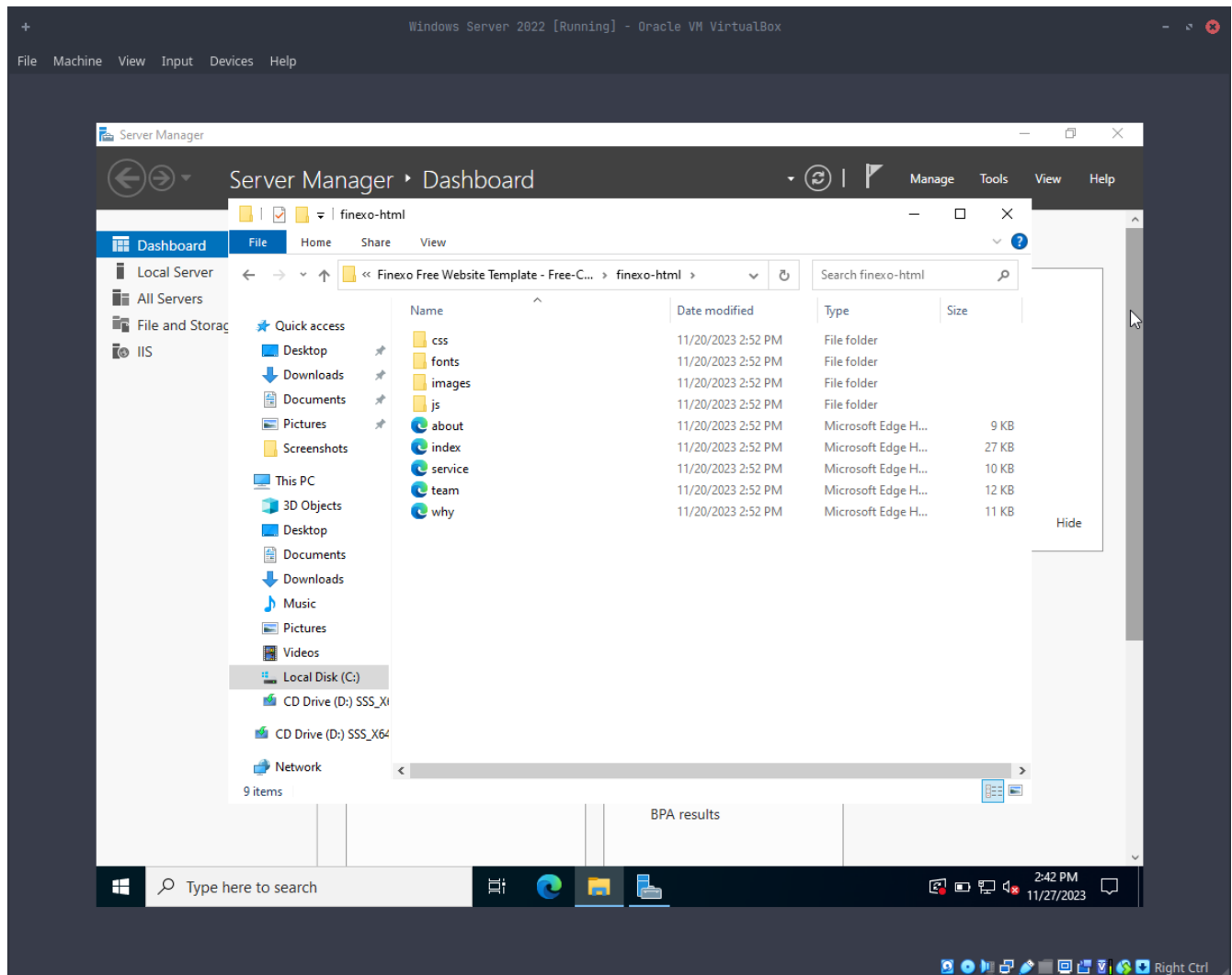


Figure 5 Opening File Manager

Now we will press windows key and R this will open the run window and we will now type **inetmgr** this will open the IIS manager dashboard.

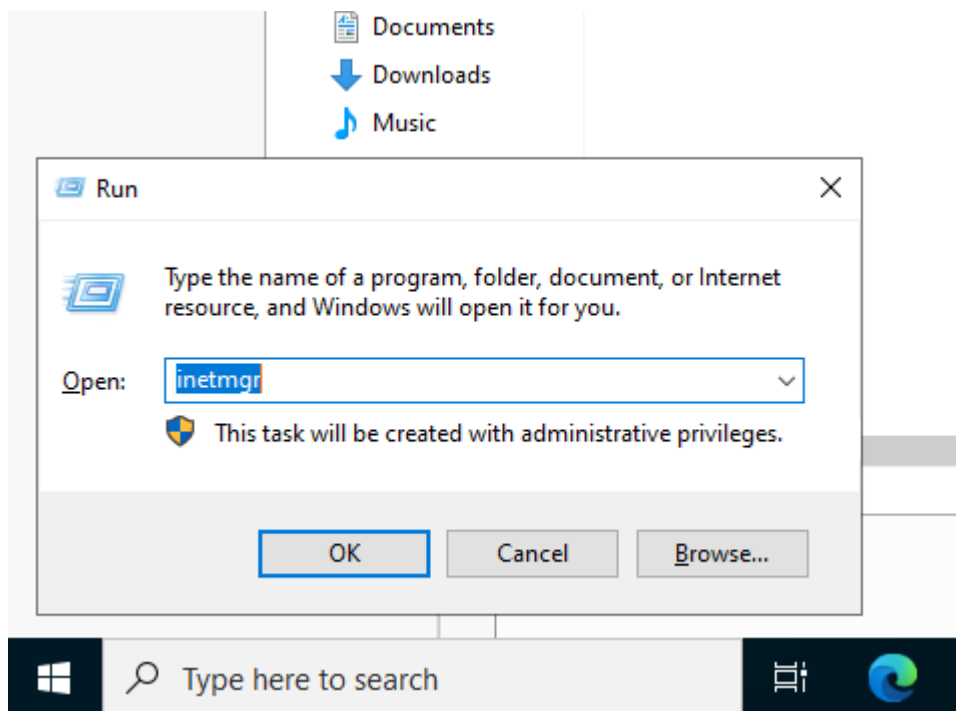


Figure 6 Opening IIS using run.

As we can see a new IIS manager dashboard opened and at the left-hand side of the IIS dashboard, we can see a Start Page and the name of our server we just have to click server name and it will show a list of options.

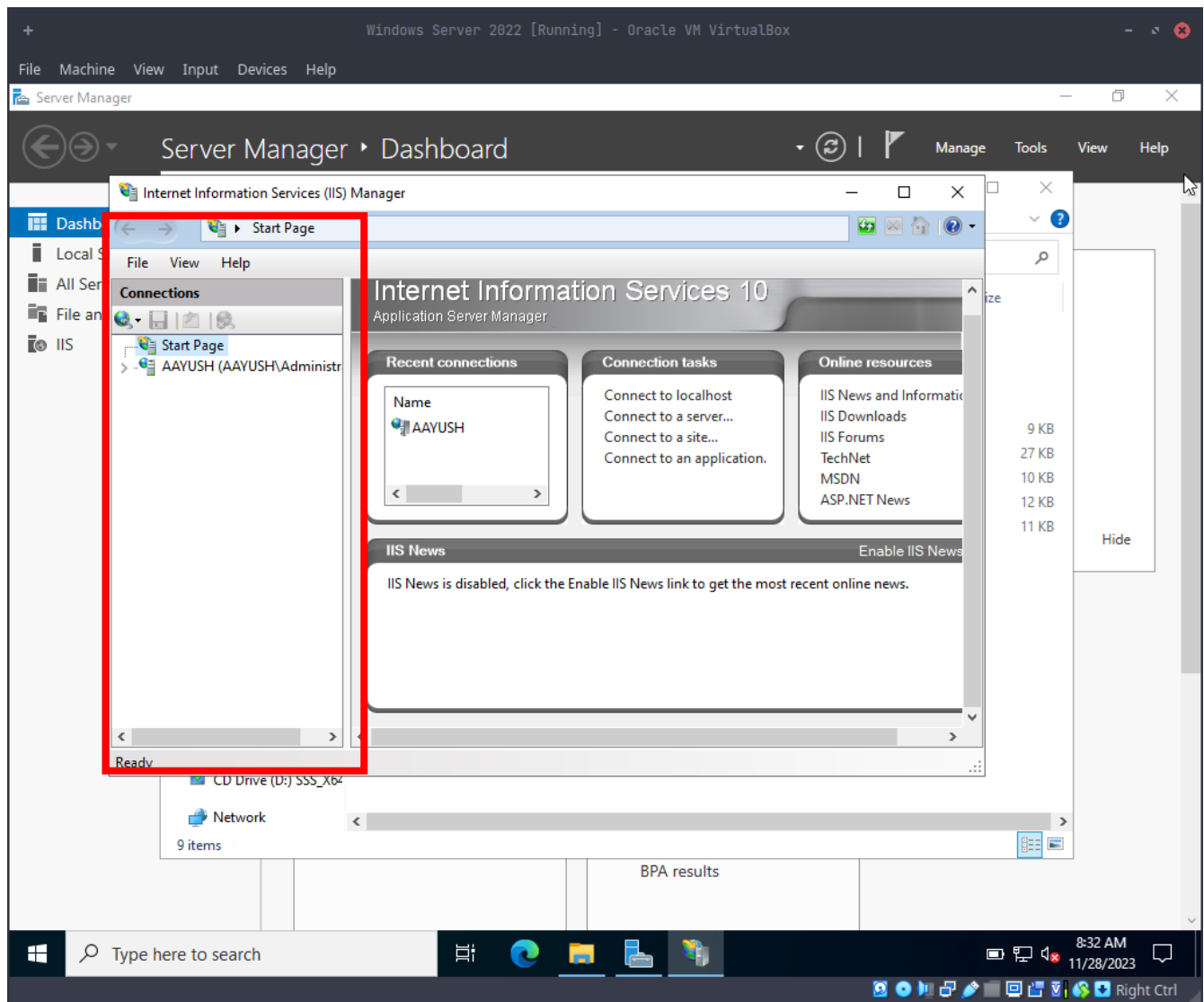


Figure 7 IIS manager

After clicking the icon with our server's name, we can clearly see that there are a new option which were previously hidden inside the dropdown icon we need to right click on the sites icon which will again show another options.

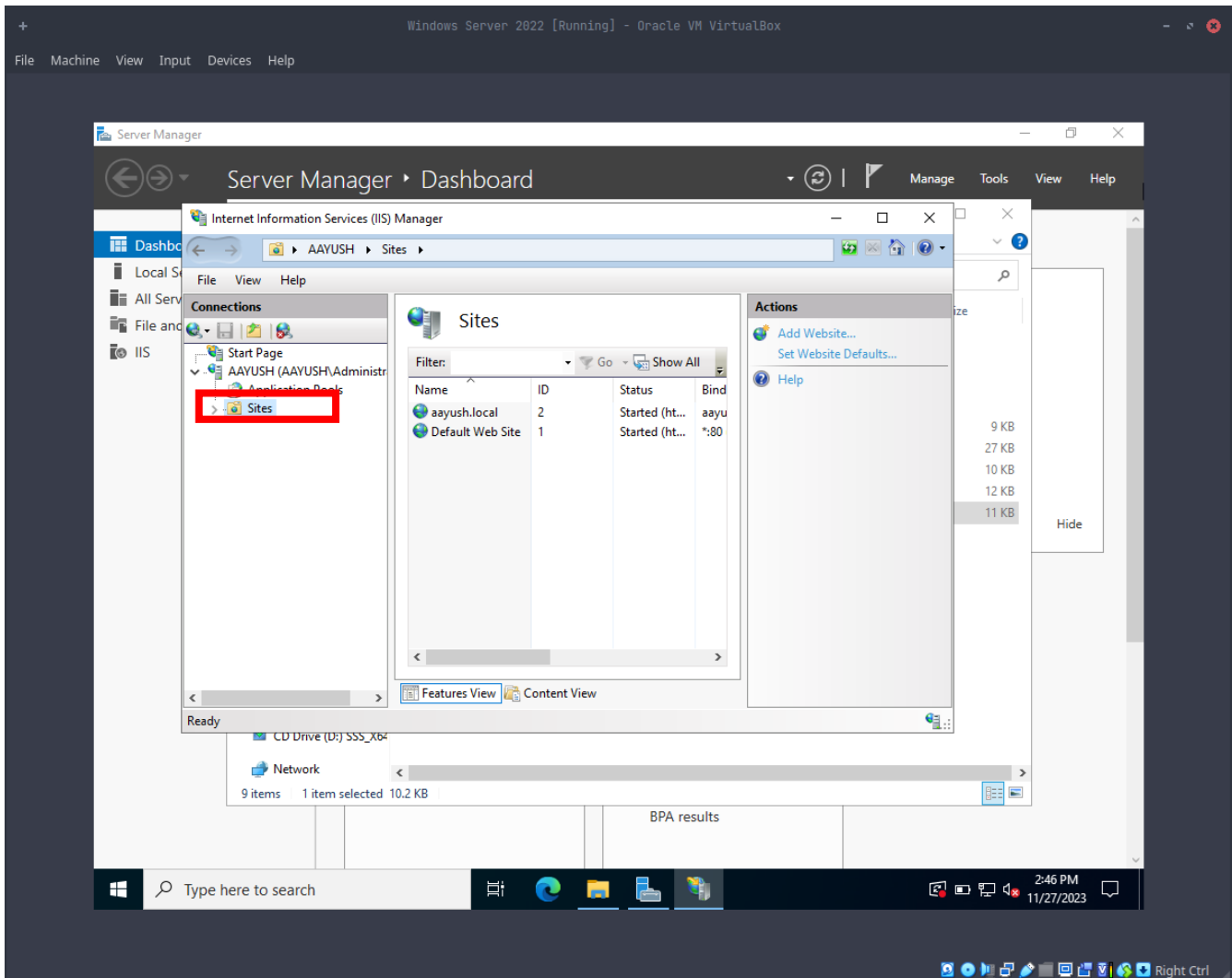


Figure 8 Additional Sites options

Now click on the add website icon and a new window will appear.

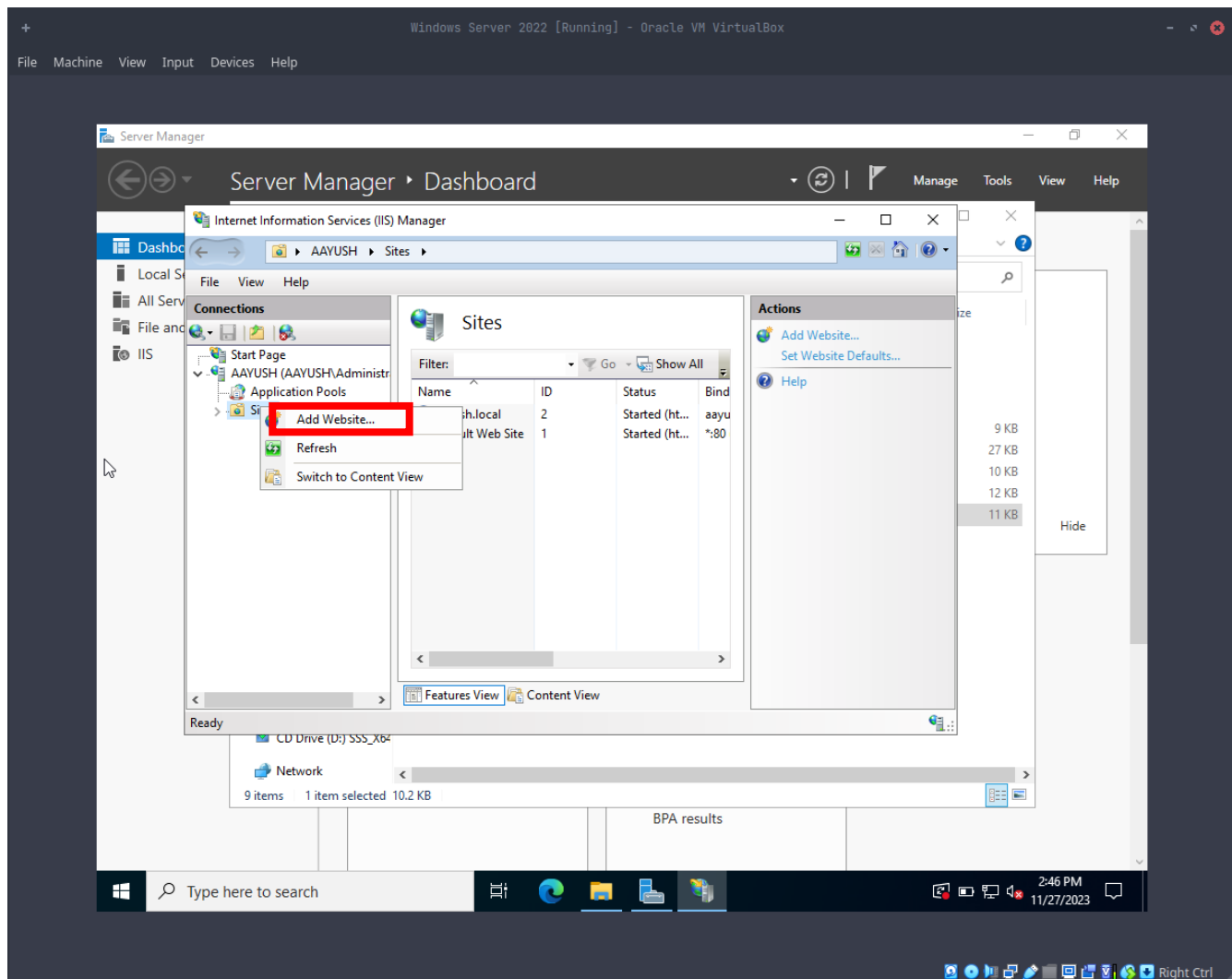


Figure 9 Add web site icon.

Now we need to fill in the following:

Site name: Add a site name of your choice.

Physical path: The path to your website's index.html

Type: http

IP address: the actual ip address of your windows server

Port: 80 default port for http

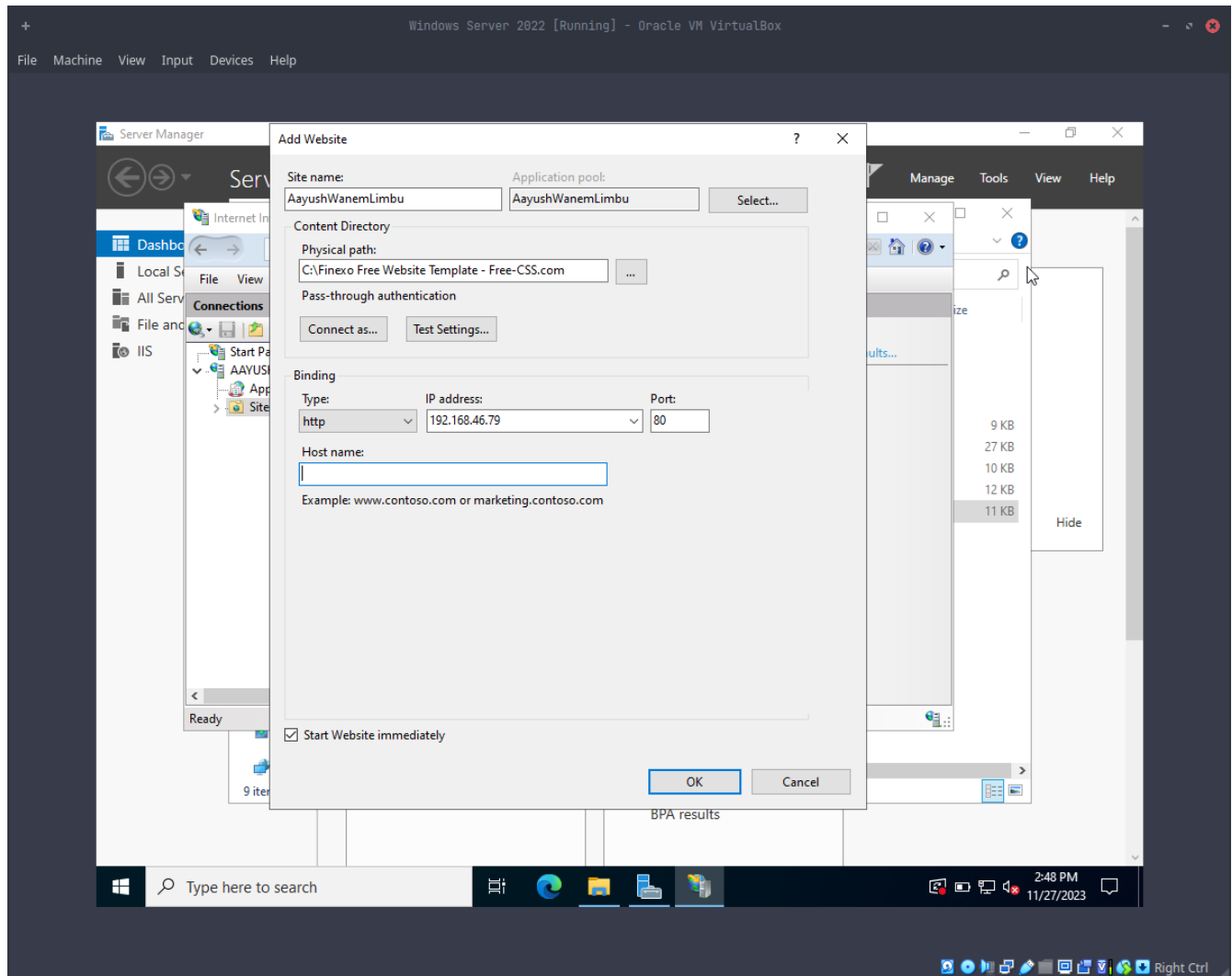


Figure 10 Putting values.

Here we can see that the new site has been added successfully.

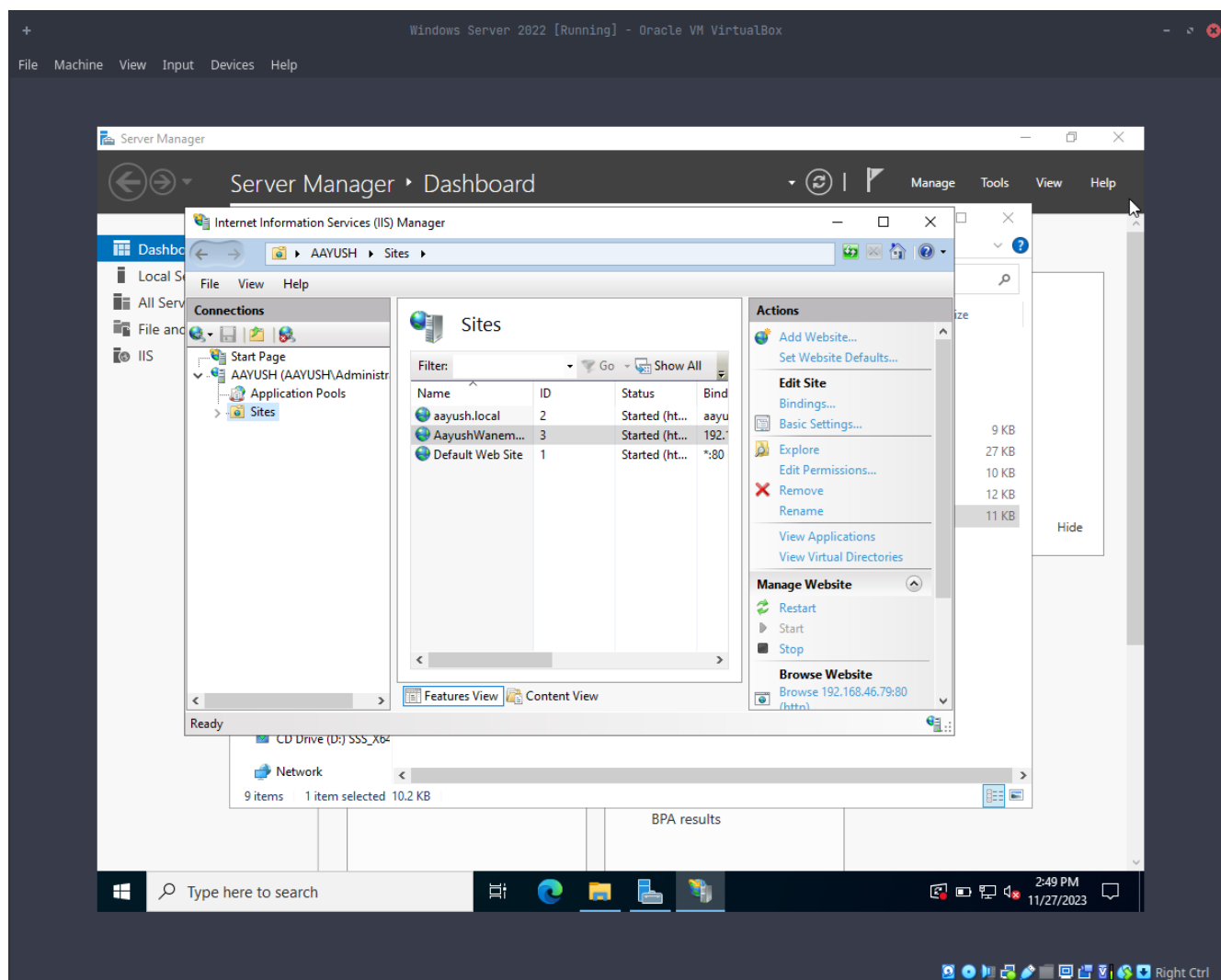


Figure 11 Showing Results in IIS manager.

Verifying in our windows server 2022 using the ip address of our local machine.

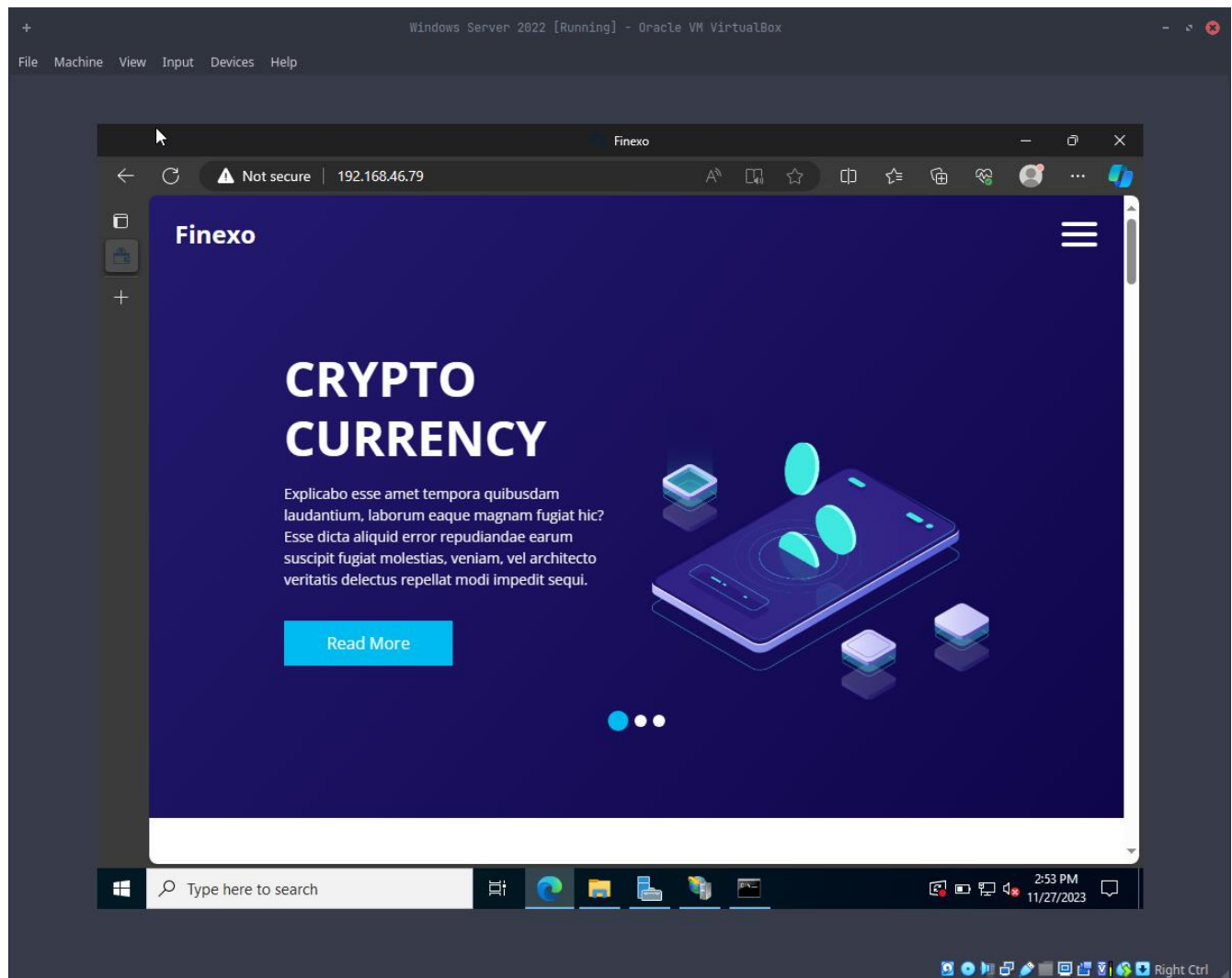


Figure 12 Result in Windows Server 2022

Now on our host operating system we will also check to verify that our website is being hosted across our local network from our windows server.

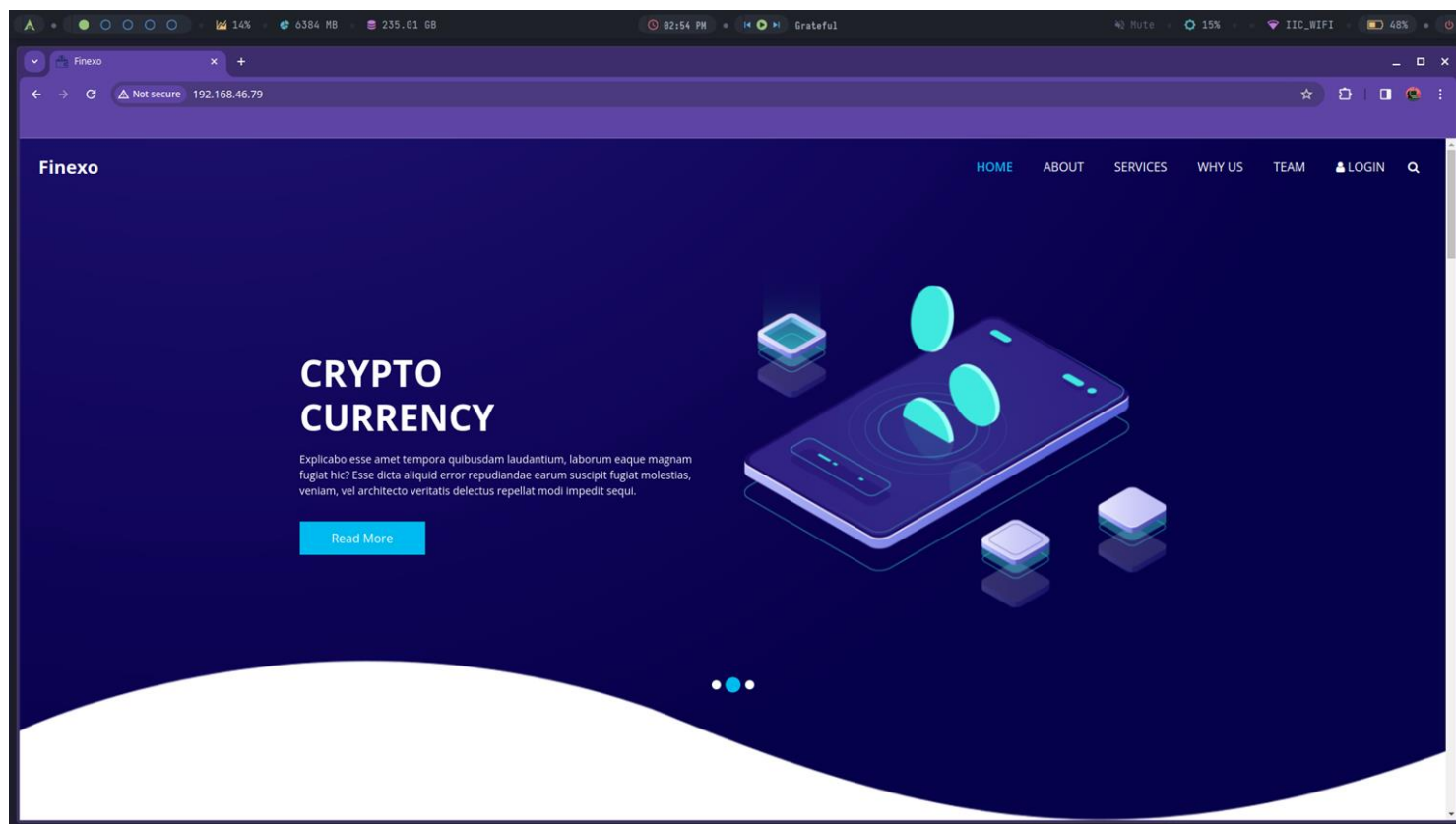


Figure 13 Viewing Website in Host Machine

We can see that the website has been hosted successfully and anyone within the network can view this website using the ip address of our windows server 2022.

1.6 Virtual box extension downloading and installation.

Our next step is to check the version number and install the right extension for our respective version. To check our version number of our virtual box at virtual main menu select the help option and a new window will appear select the about virtual box option.

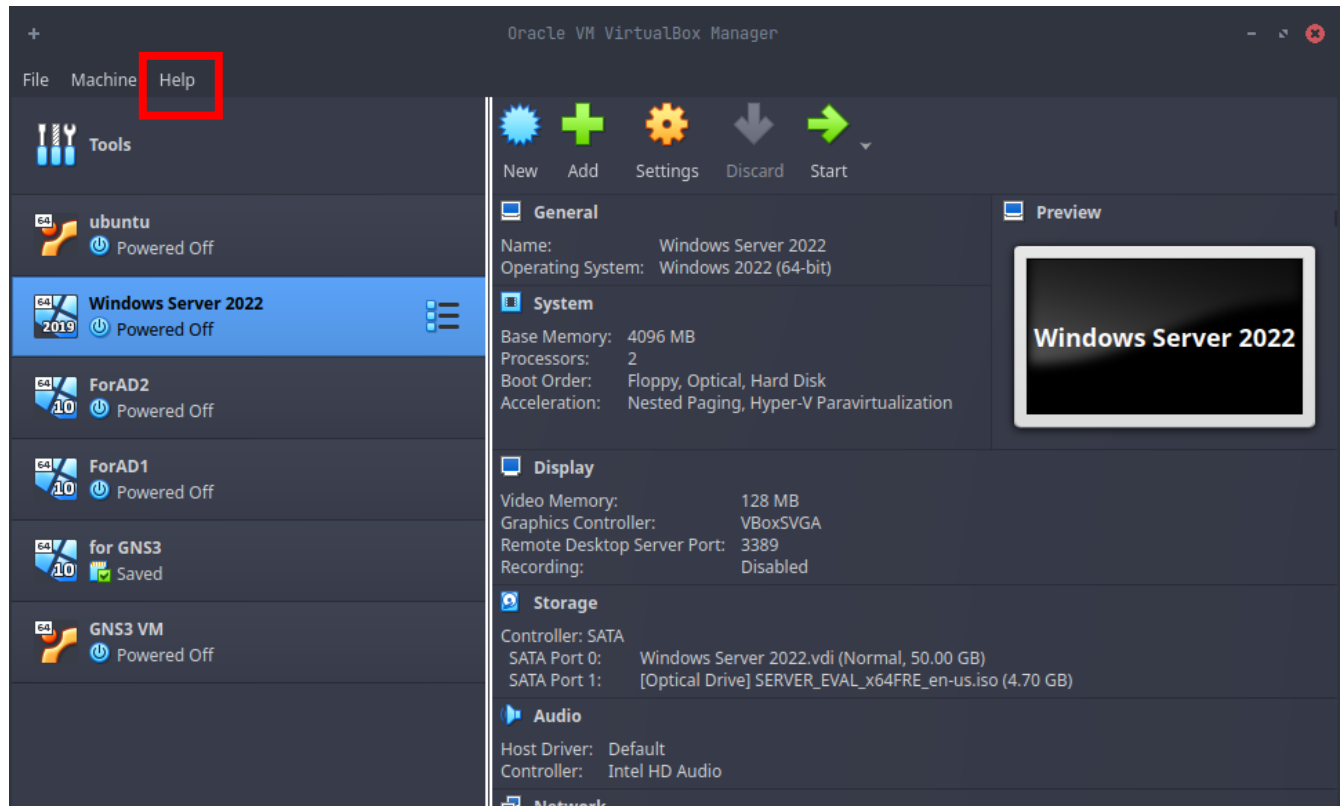


Figure 14 Virtual Box main menu

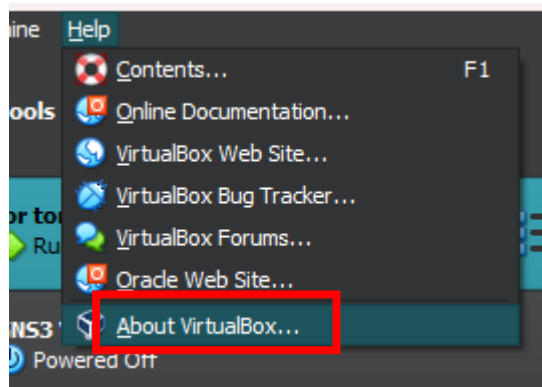


Figure 15 Virtual Box help menu

Now a new window will appear which shows the virtual box version number.



Figure 16 Virtual Box version

Now after the version number has been known we need to download the extension for our respective version of our virtual box to do that we need to:

- 1) open google chrome or any web browser and go to the virtualbox.org website.
- 2) Scroll down and find the appropriate version of extension and download it.
- 3) Select the directory or location u want to download the extension on and press save.

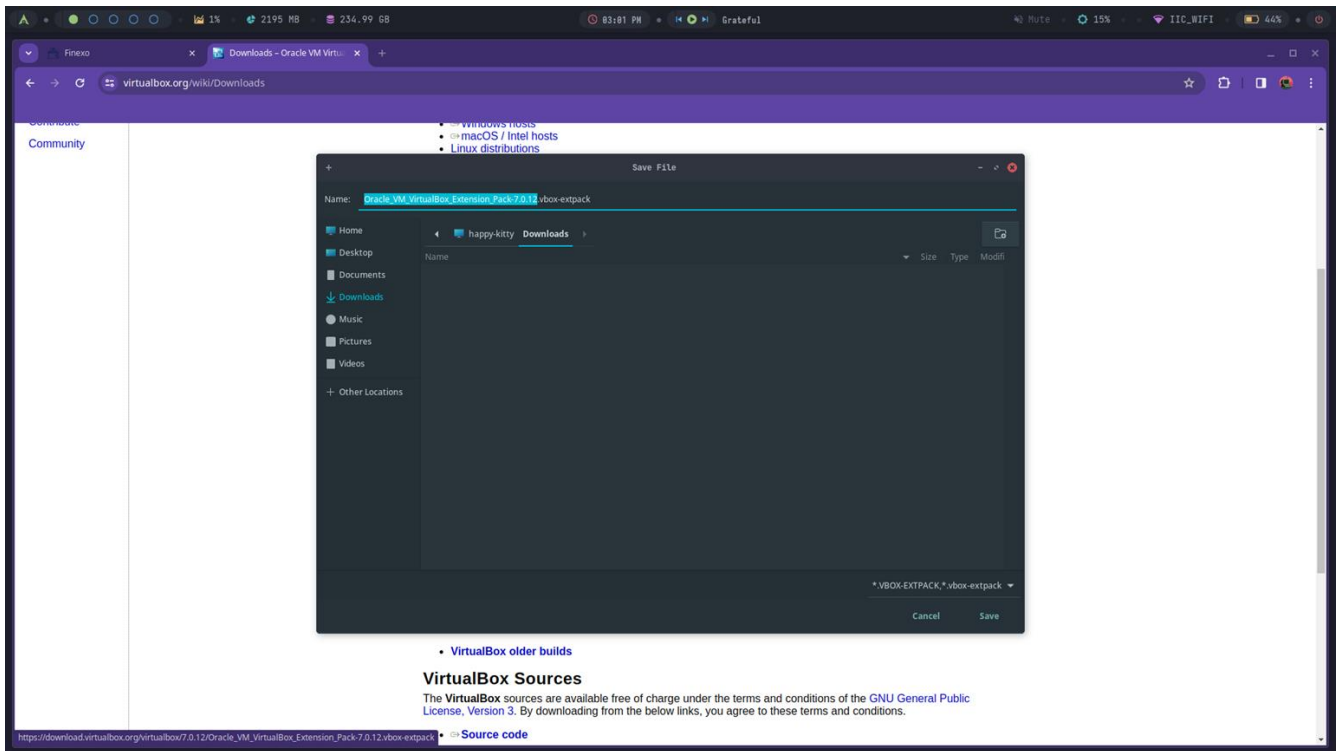


Figure 17 Saving Virtual Box extension.

Now to add the downloaded extension to virtual box we need to open the virtual box manager and under tools select the extension and click install.

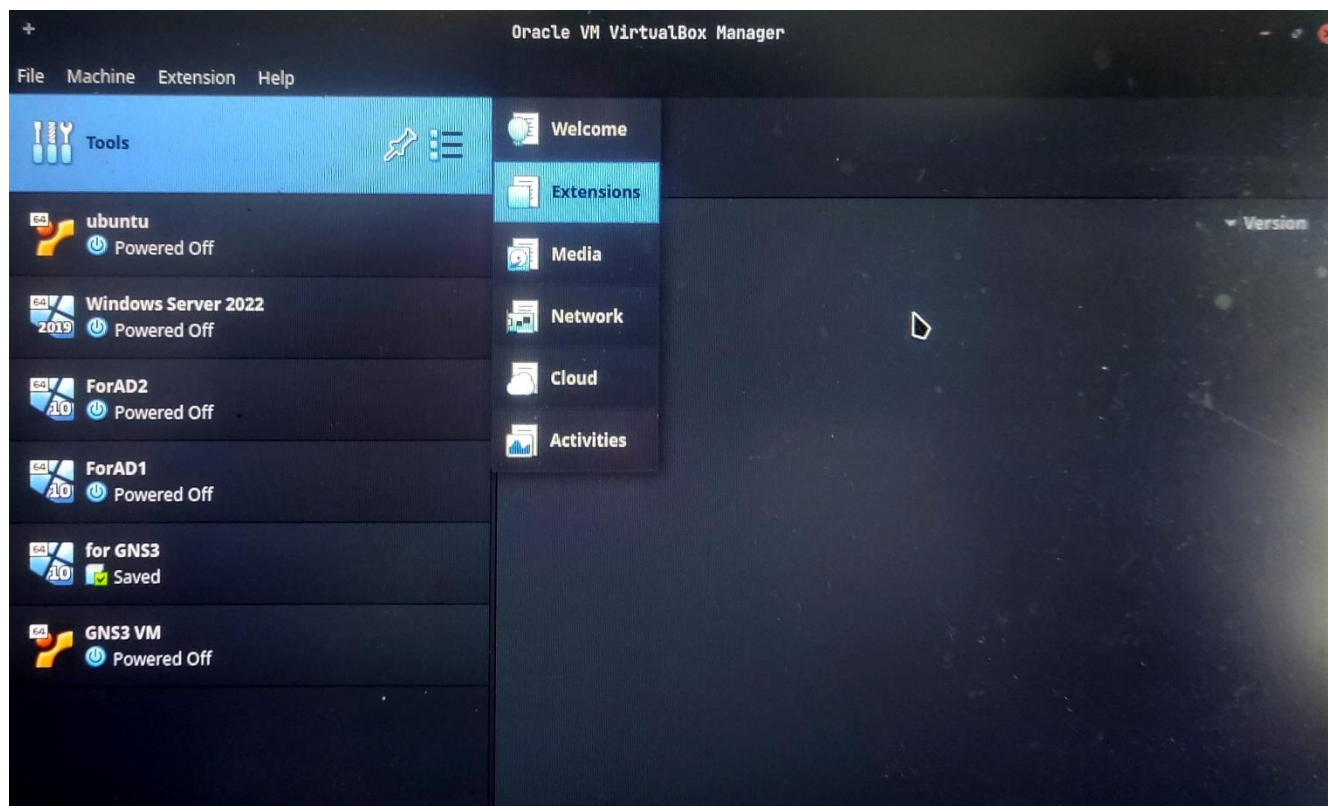


Figure 18 Adding Extension

After that a new window will appear now, we need to select the downloaded extension and click open.

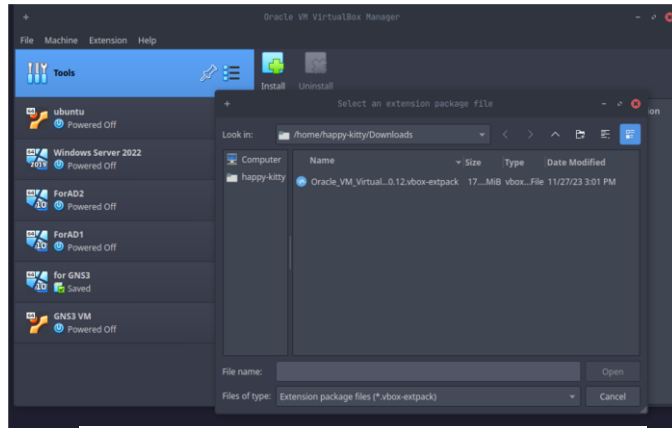


Figure 19 Selecting the downloaded extension.

The confirmation prompt will appear after we click open, we need to click on the Install option to install the extension on our system.

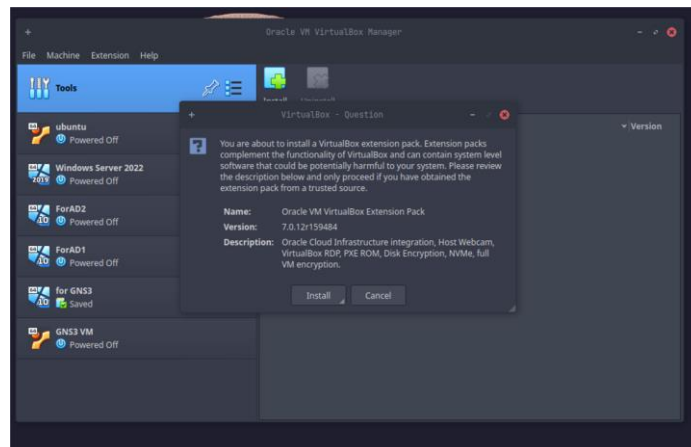


Figure 20 Confirmation on Installation of extension.

After some time, the extension will be installed and on the virtual box we can see the installed extension.

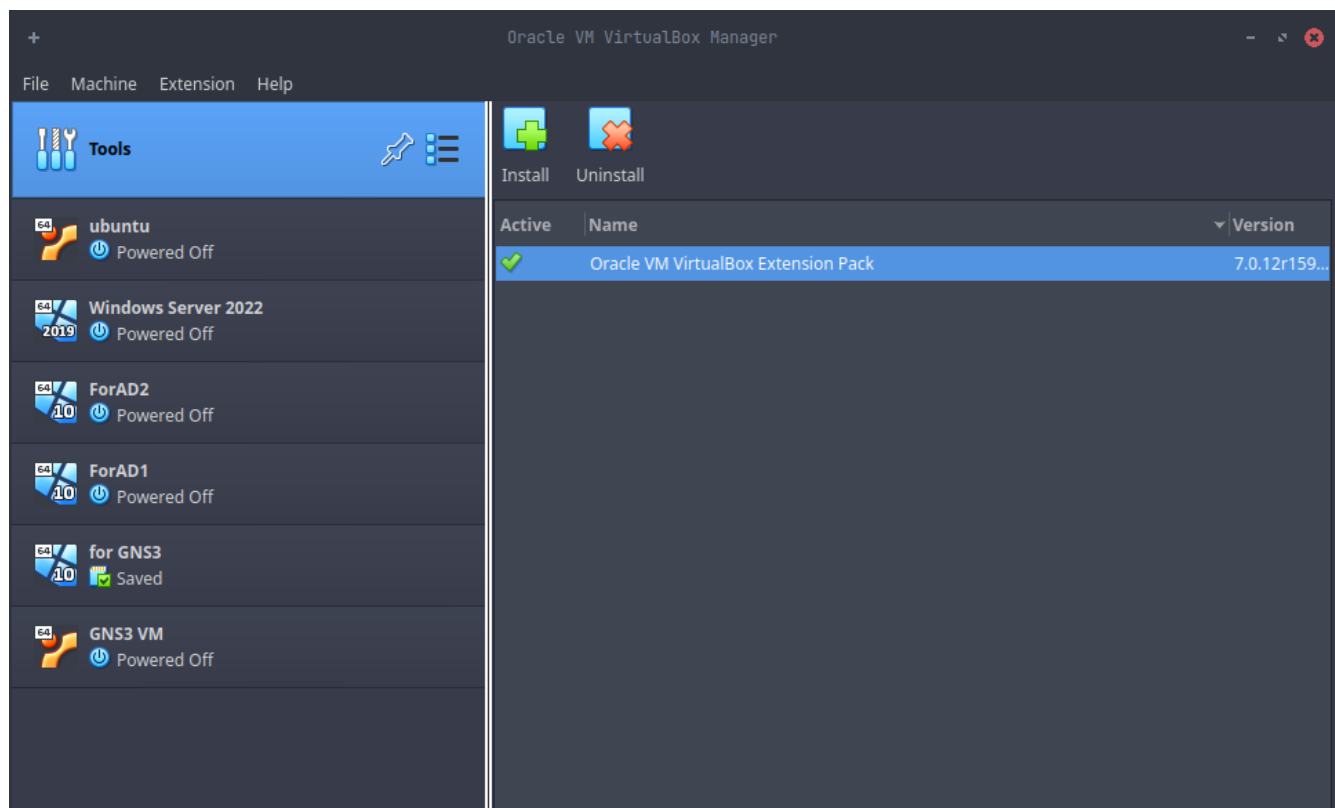


Figure 21 Extension Install Success.

Now we need to open the display settings of our windows server 2022, under display go to the Remote Display and tick the Enable Server option and click ok.

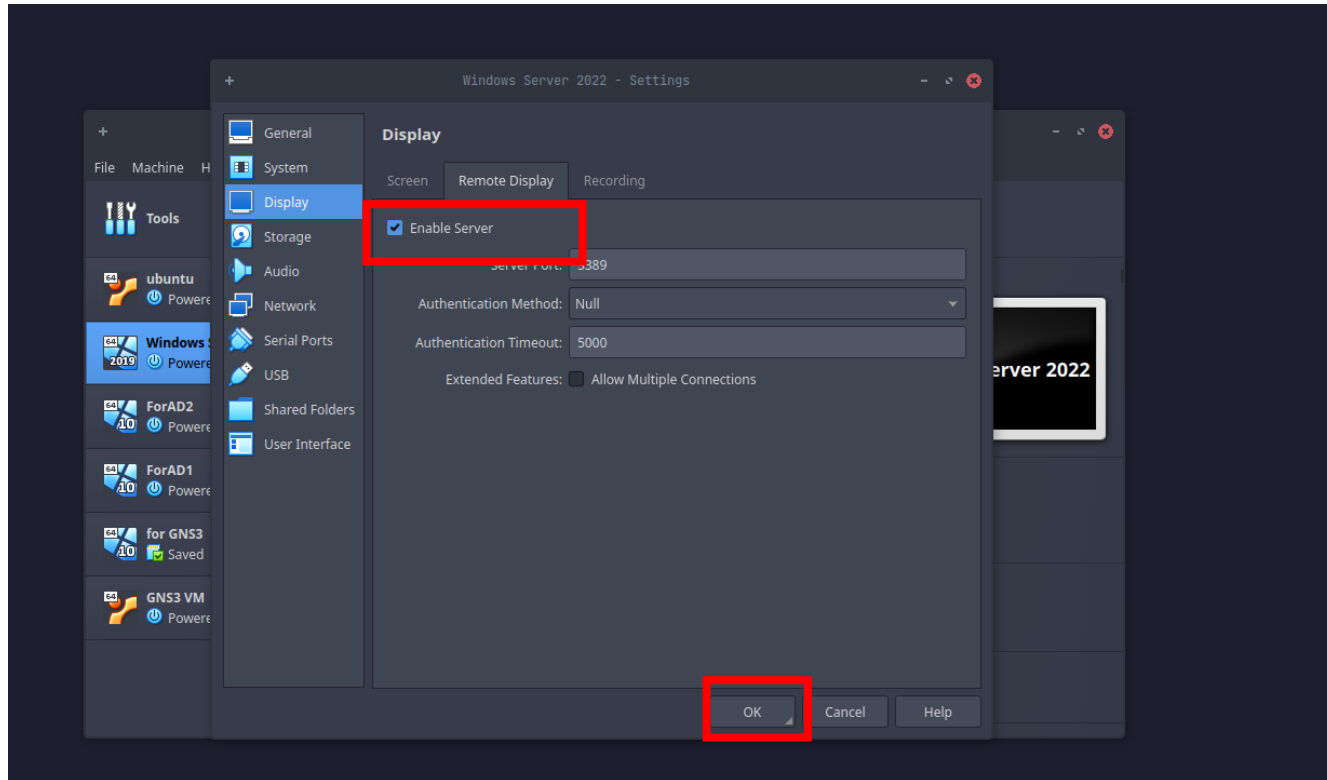


Figure 22 Enabling Remote Display

After the remote display has been enabled, we need to start our windows server and check the ip address of our server for remote desktop protocol. To check the ip address press the windows key and type cmd, command will open, and we need to type ipconfig and hit enter, this will show the ip address of the windows server.

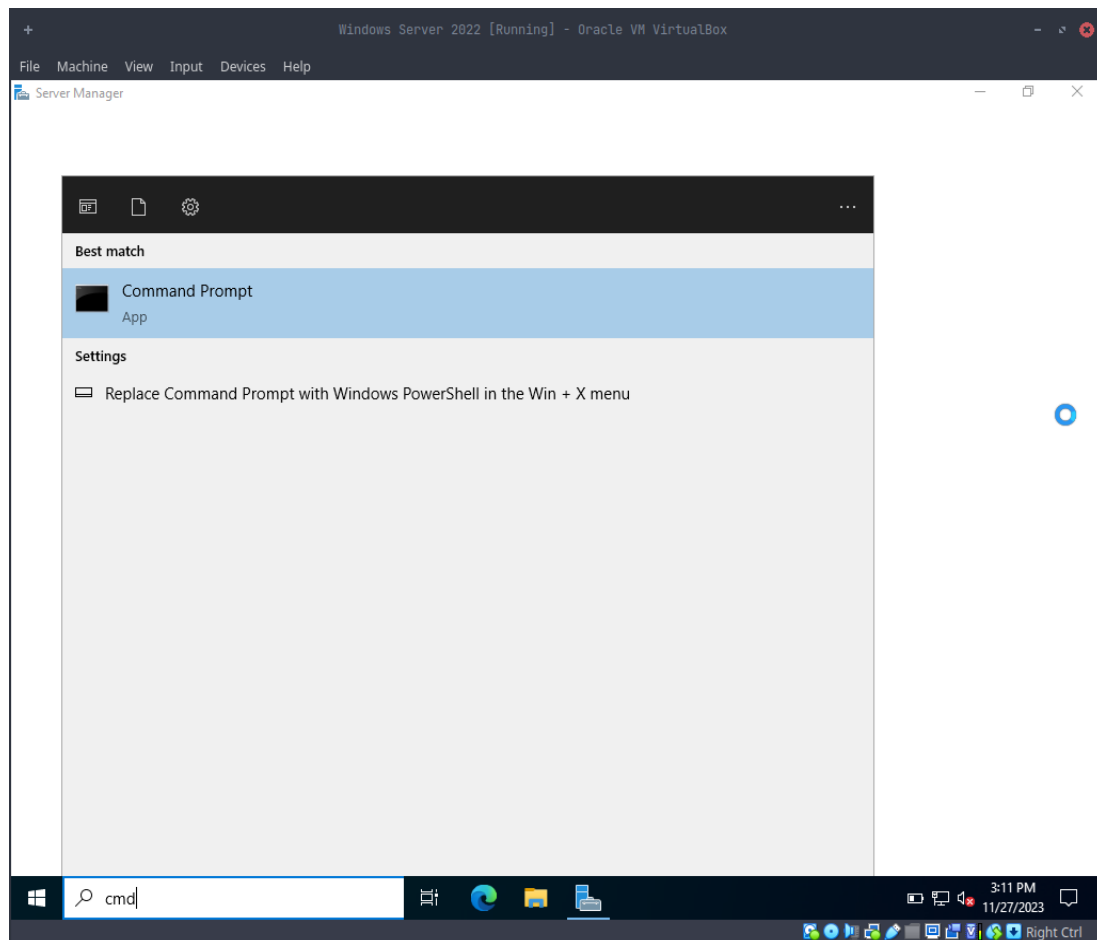


Figure 23 Opening CMD

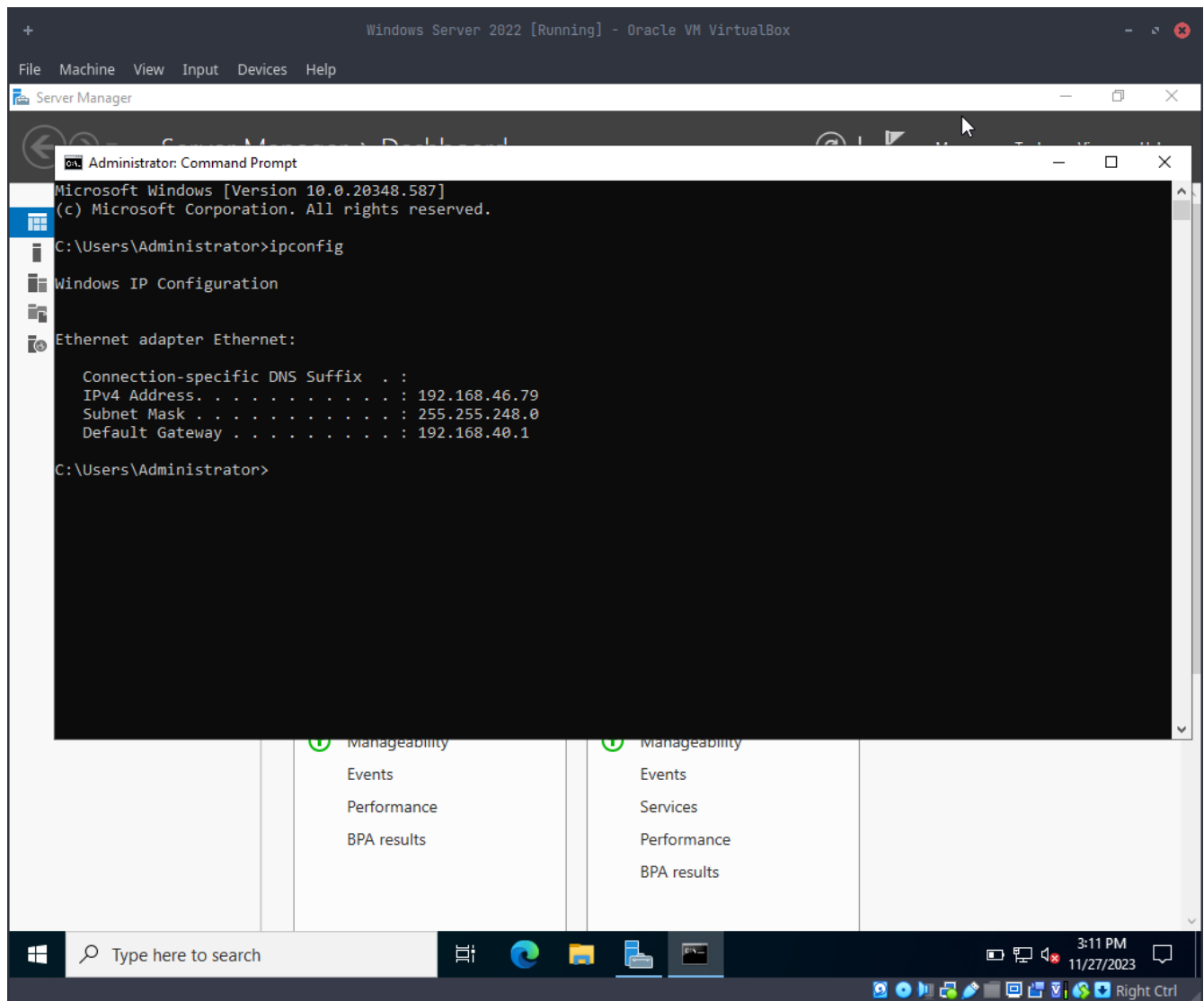


Figure 24 Checking Server's IP

1.7 RDP to the server using windows and Linux host machines.

For a window pc to RDP to the windows server we can use the preinstalled remote desktop connection app, we need to launch the app on our windows pc.

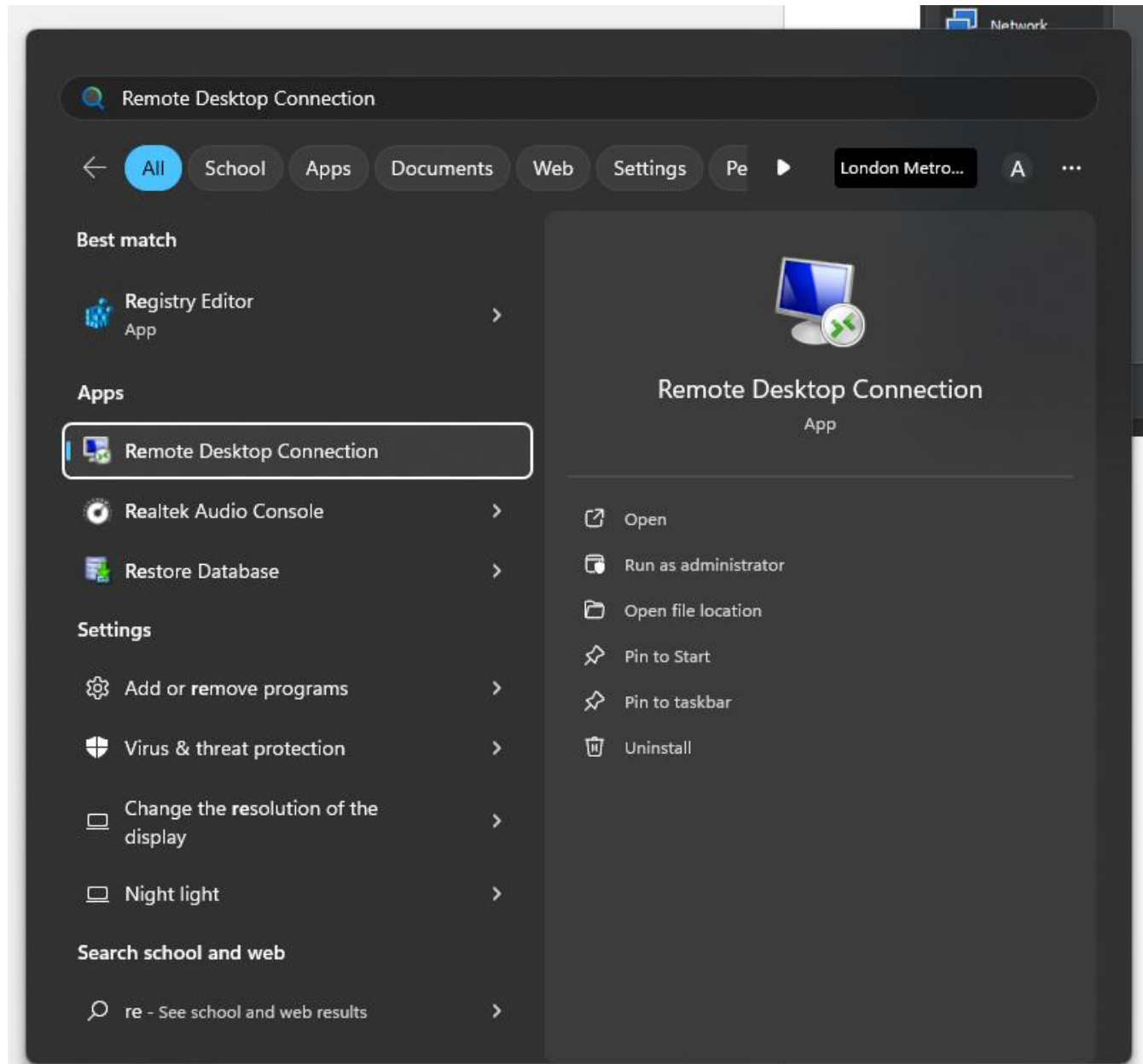


Figure 25 Opening Remote Desktop

A new window will open, and we need to enter the IP address of our server.

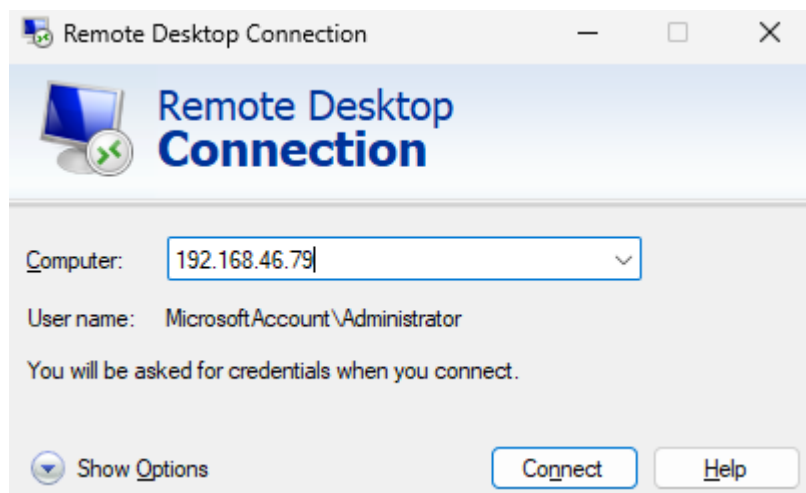


Figure 26 Entering Server's IP

Now we need to enter the username and password and password of the server and press enter and click ok.

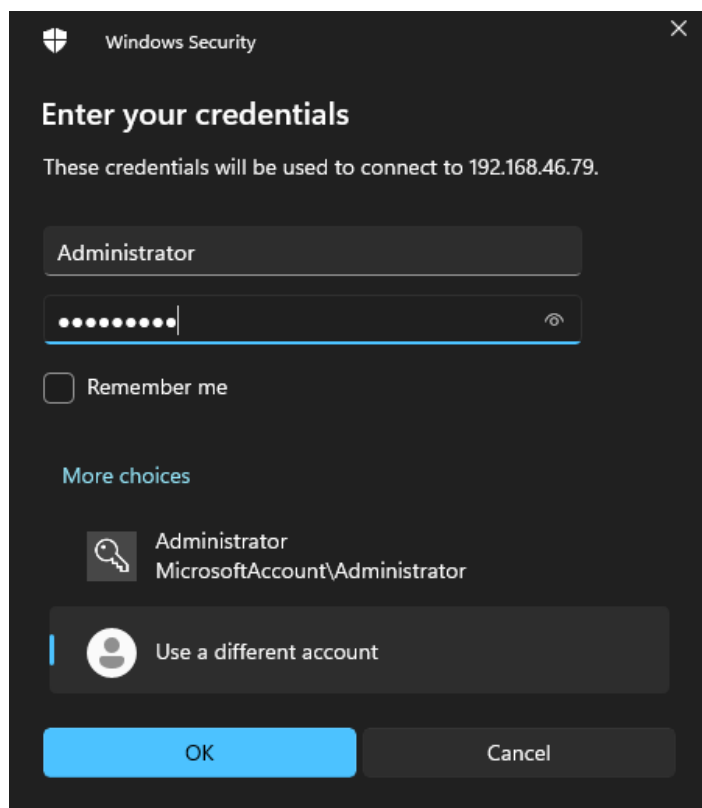


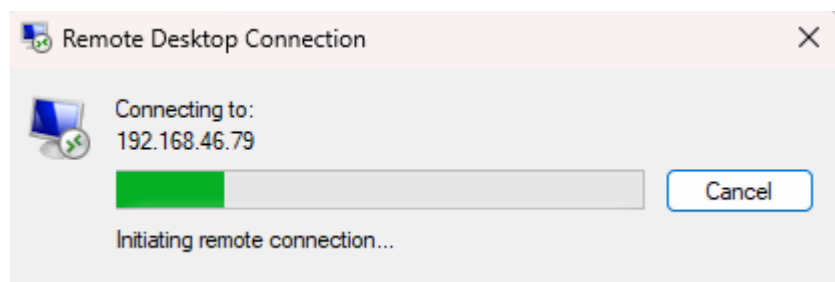
Figure 27 Entering the Username and Password

Now click yes.

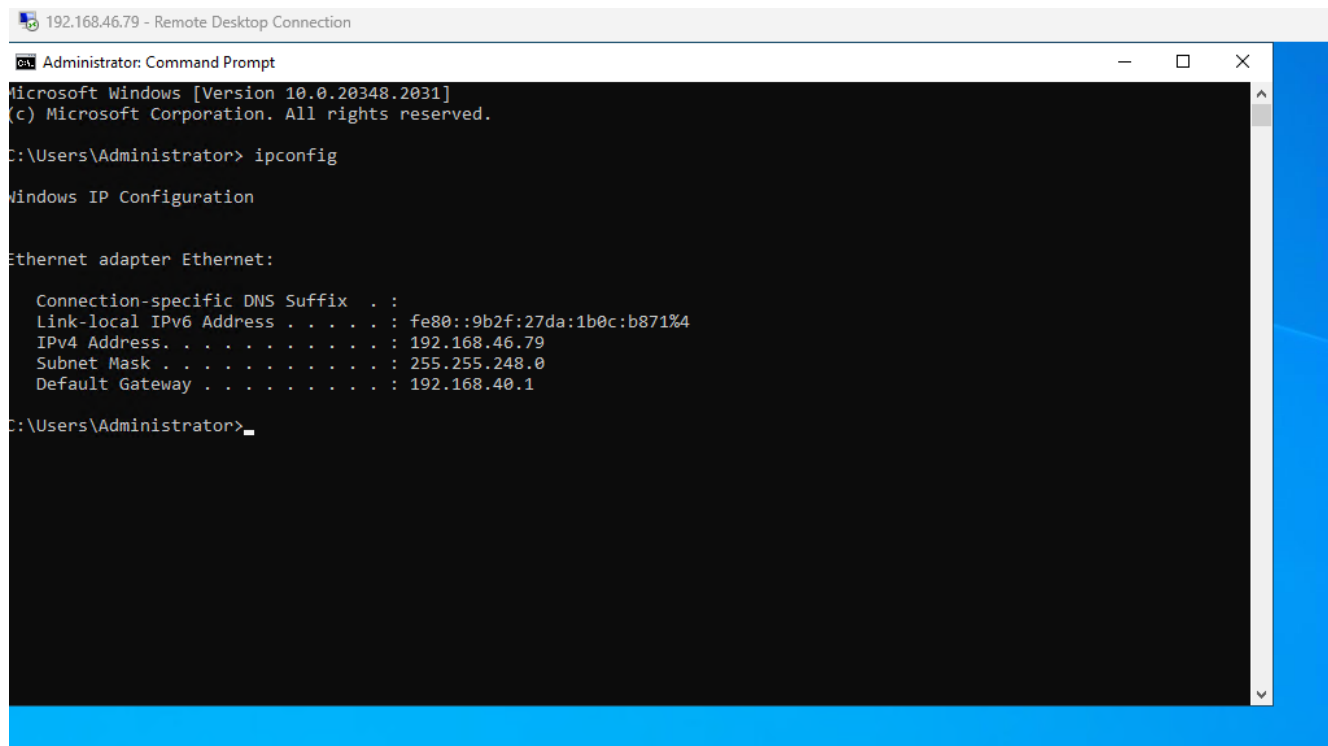


Figure 28 RDP confirmation

Now it will try to connect to the server and after 1-2 seconds the connection will be established.



Now we can see that the connection was successful, and we can RDP into the windows server using our host device.



```
192.168.46.79 - Remote Desktop Connection
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.2031]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator> ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::9b2f:27da:1b0c:b871%4
    IPv4 Address. . . . . : 192.168.46.79
    Subnet Mask . . . . . : 255.255.248.0
    Default Gateway . . . . . : 192.168.40.1

C:\Users\Administrator>
```

Figure 29 RDP successful.

1.8 Conclusion:

In summary, this workshop guided us through hosting a static website on Windows Server 2022 and accessing it from different devices within the same network. We configured VirtualBox settings, set up Internet Information Services (IIS), and verified website accessibility.

Additionally, we learned how to enable remote desktop on Windows Server 2022 using the VirtualBox Extension Pack. The step-by-step process involved downloading the pack, configuring settings, and establishing a remote desktop connection from the host OS.

This workshop provided practical insights into hosting websites and managing servers remotely, offering a valuable skill set for IT scenarios.