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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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1.Introduction

Server manager is a console or tool which is used to configure and manage the server.

According to Microsoft Learn ,Server Manager is a management console in Windows Server that helps IT professionals provision and manage both local and remote Windows-based servers from their desktops, without requiring either physical access to servers, or the need to enable Remote Desktop protocol (rdP) connections to each server. Although Server Manager is available in Windows Server 2008 R2 and Windows Server 2008, Server Manager was updated in Windows Server 2012 to support remote, multi-server management, and help increase the number of servers an administrator can manage. (Server Manager, n.d.)

2.Objective

This project mainly aims to the basic processes of server management . Some basic activities like changing computer name , changing time zone, enabling ethernet ,checking for recent update and keep the computer updated , adding and removing user using management tool as well as windows PowerShell.

The objective of this project is to provide hands-on experience in basic server management tasks which aims to enhance practical skills in maintaining and troubleshooting servers , ensuring they remain up-to-date , secure and properly configured for accurate performance in real-world IT environments.

3.Required tools and software

3.1 Virtual Box



Figure 1 Oracle Virtual Box

Oracle VirtualBox, the world's most popular open source, cross-platform, virtualization software, enables developers to deliver code faster by running multiple operating systems on a single device. IT teams and solution providers use VirtualBox to reduce operational costs and shorten the time needed to securely deploy applications on-premises and to the cloud. (virtualbox, n.d.)

3.2 Windows Server 2022(desktop experience)



Figure 2 windows server 2022

Windows Server is a line of Microsoft operating systems (OSes) comprised of extremely powerful machines. Windows Server was first launched in April 2003. It's typically installed on heavy-use servers serving as a backbone for most IT companies, applications, and services. The server handles the administrative group-related activities on a network. It organizes, stores, sends, and receives files from devices connected to a network. (windows-server, n.d.)

4. Steps to replicate

To replicate the basic server management tasks effectively, follow these simple steps outlined below:

4.1.Opening Server Manager

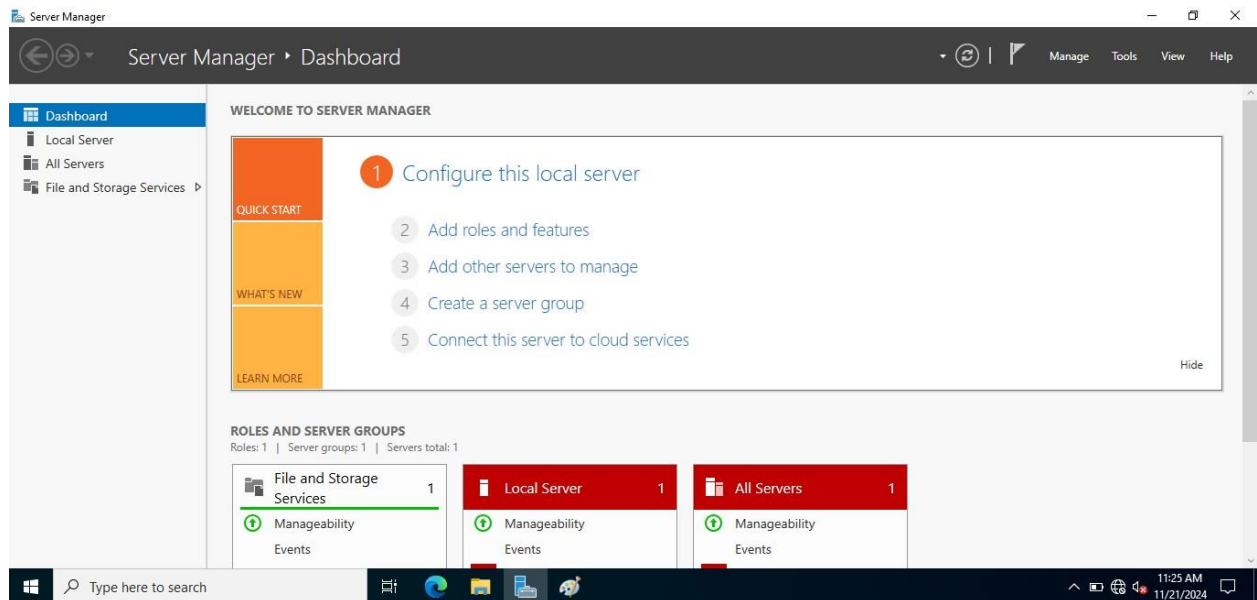


Figure 3 Opening server manager

4.2. Opening local server in server manager

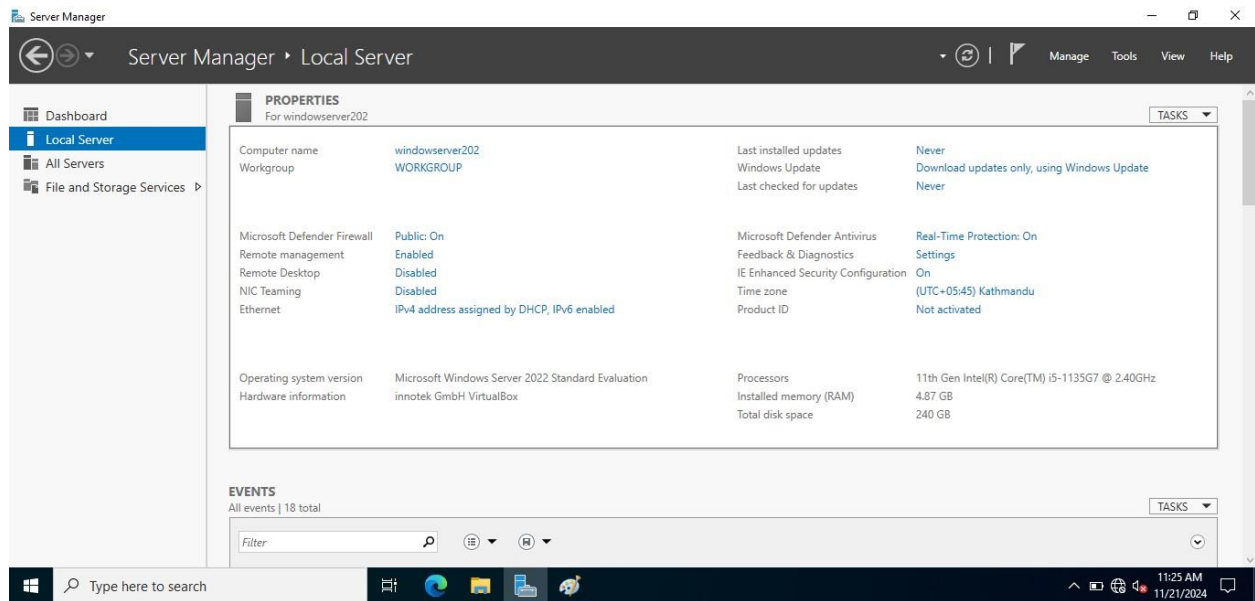


Figure 4 Opening local server

4.3. Changing computer name

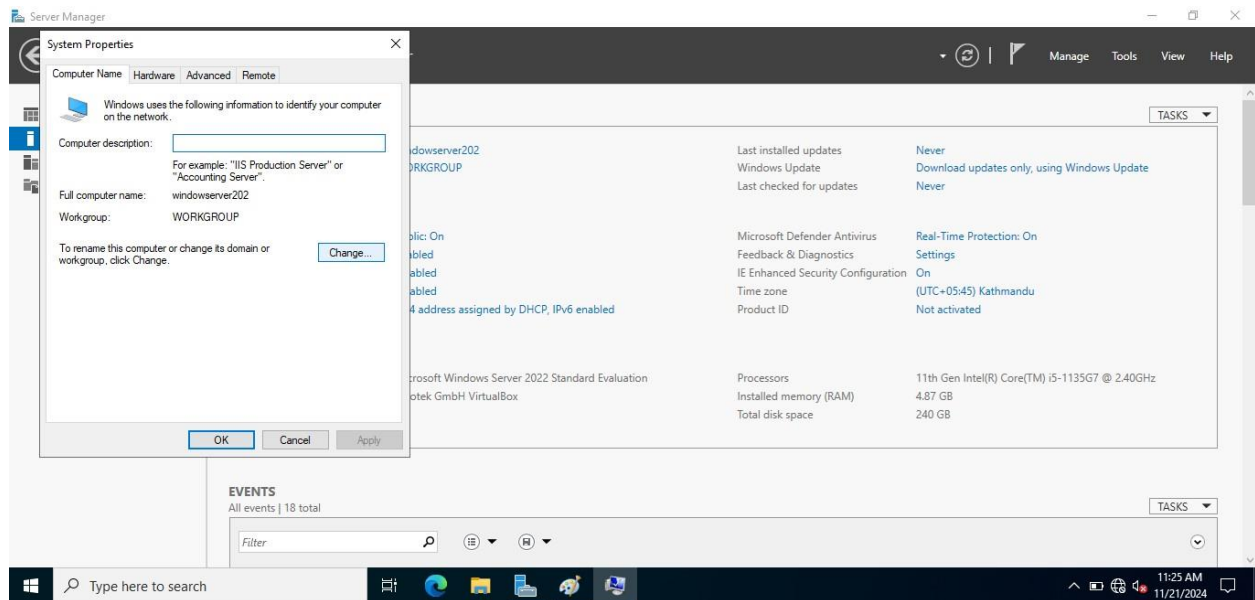


Figure 5 Changing computer name

4.4. Restarting computer to apply the changes

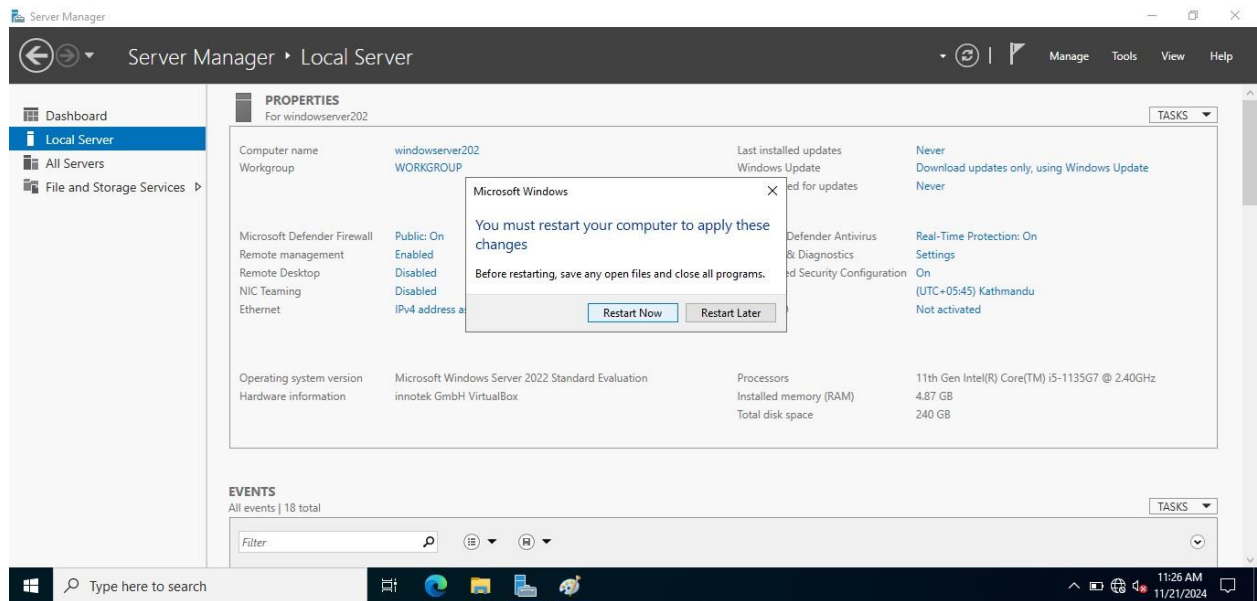


Figure 6 Restarting the computer to apply the changes.

4.5. Enabling remote desktop

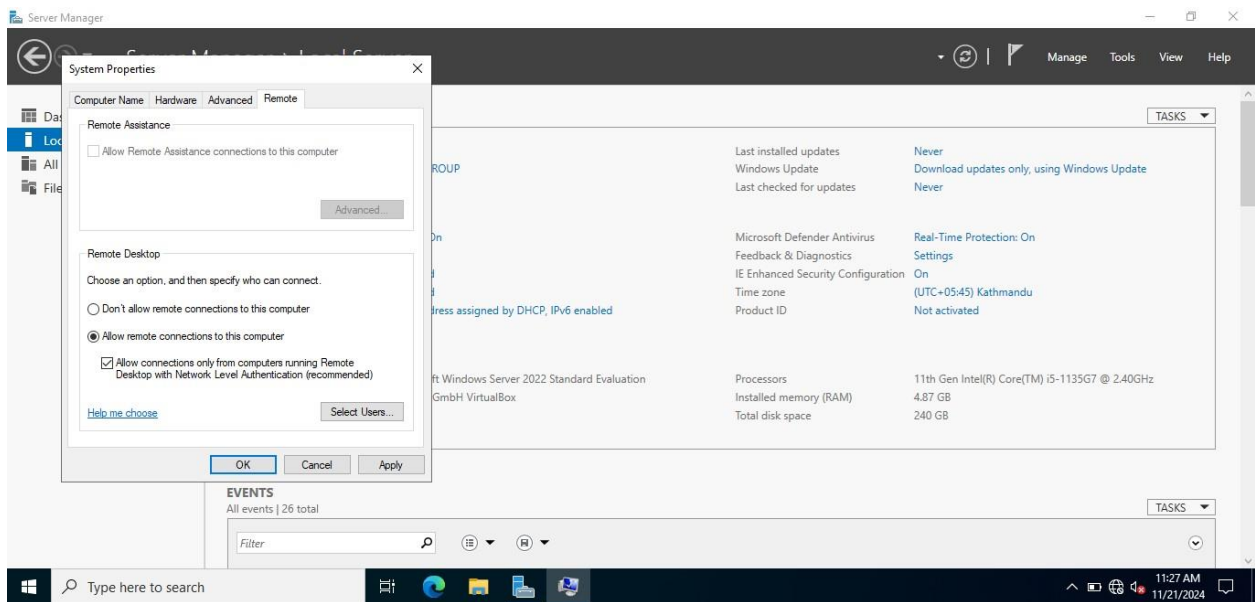


Figure 7 Enabling remote desktop

4.6.Opening ethernet to enable ipv4

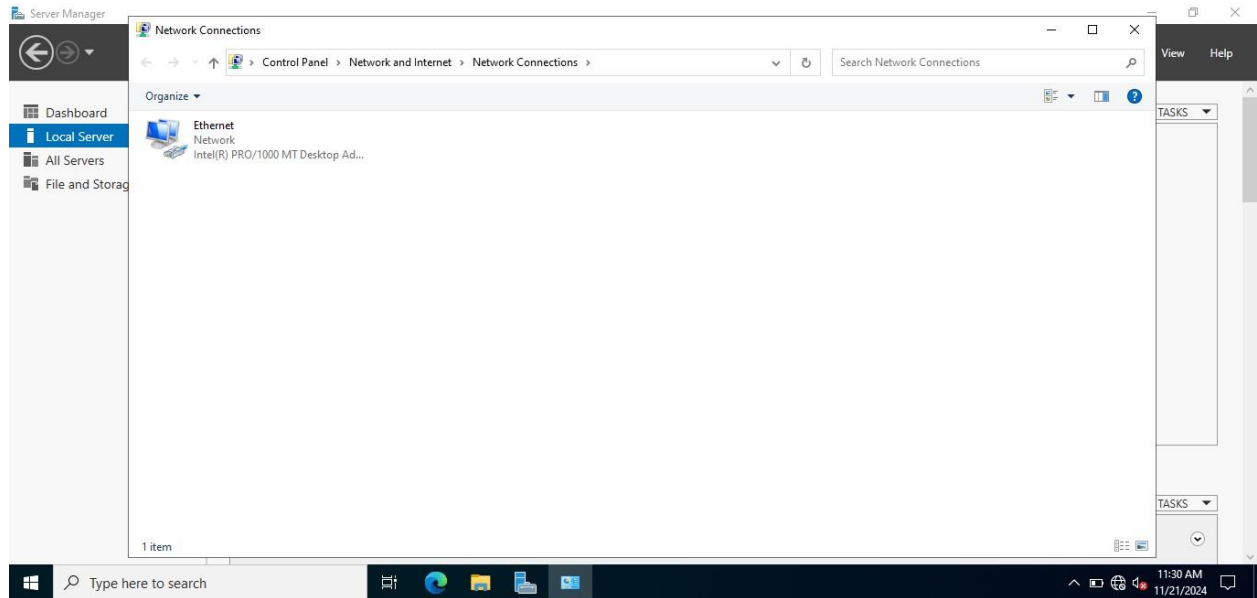


Figure 8 Opening Ethernet Section

4.7. Right clicking ethernet and clicking to properties

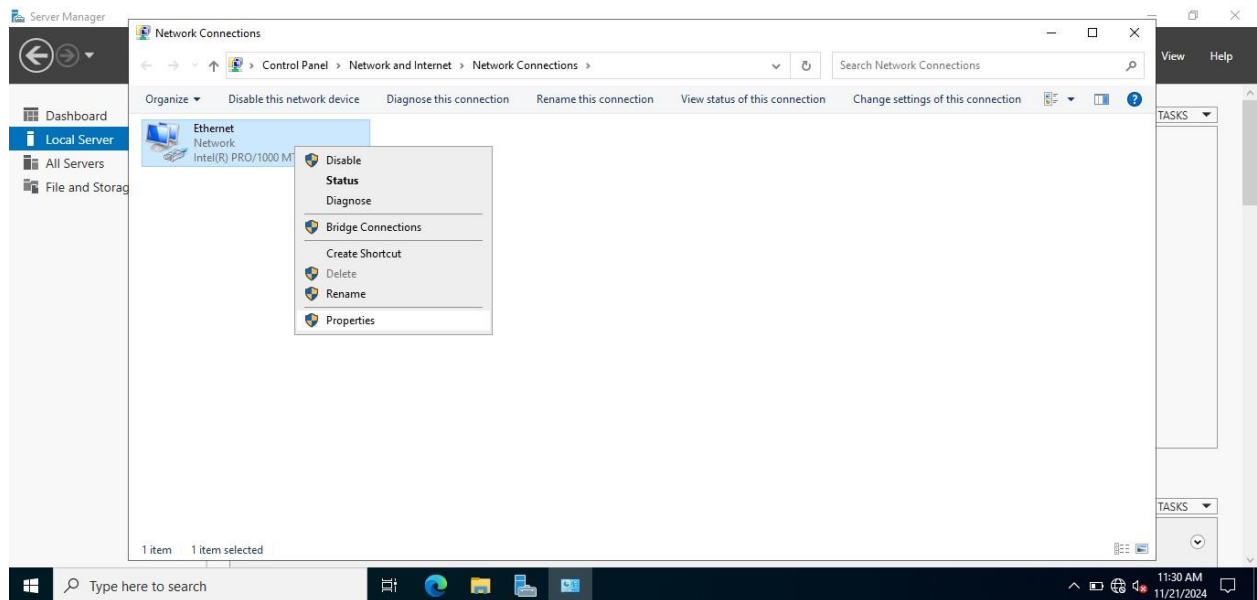


Figure 9 Changing Ethernet properties

4.8. Once another screen came , Double clicking on IP v4

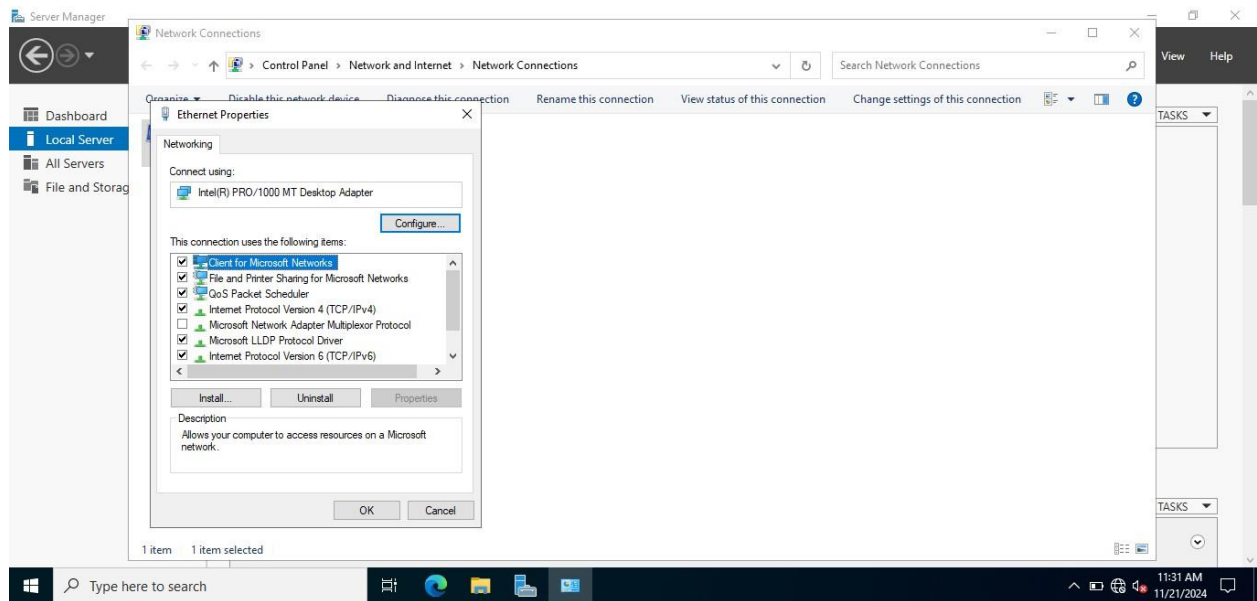


Figure 10 Working with IPv4

4.9. Getting ip address of the computer automatically using DHCP

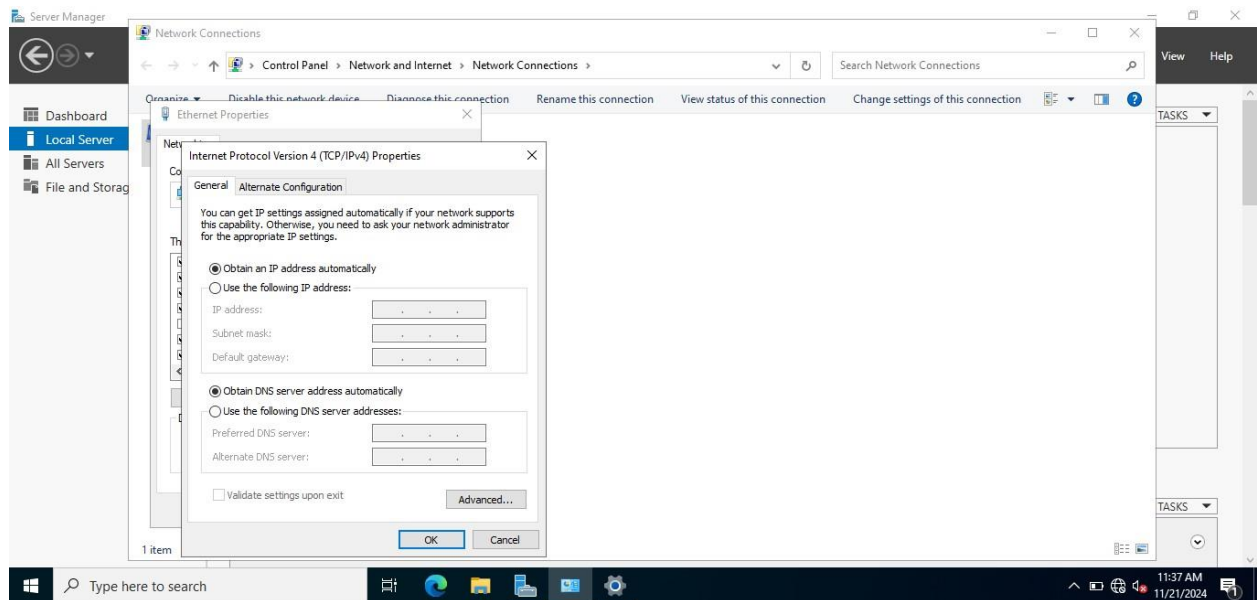


Figure 11 Getting IP address of the computer

4.10. Clicking the time zone text link and then clicking the button change the time zone

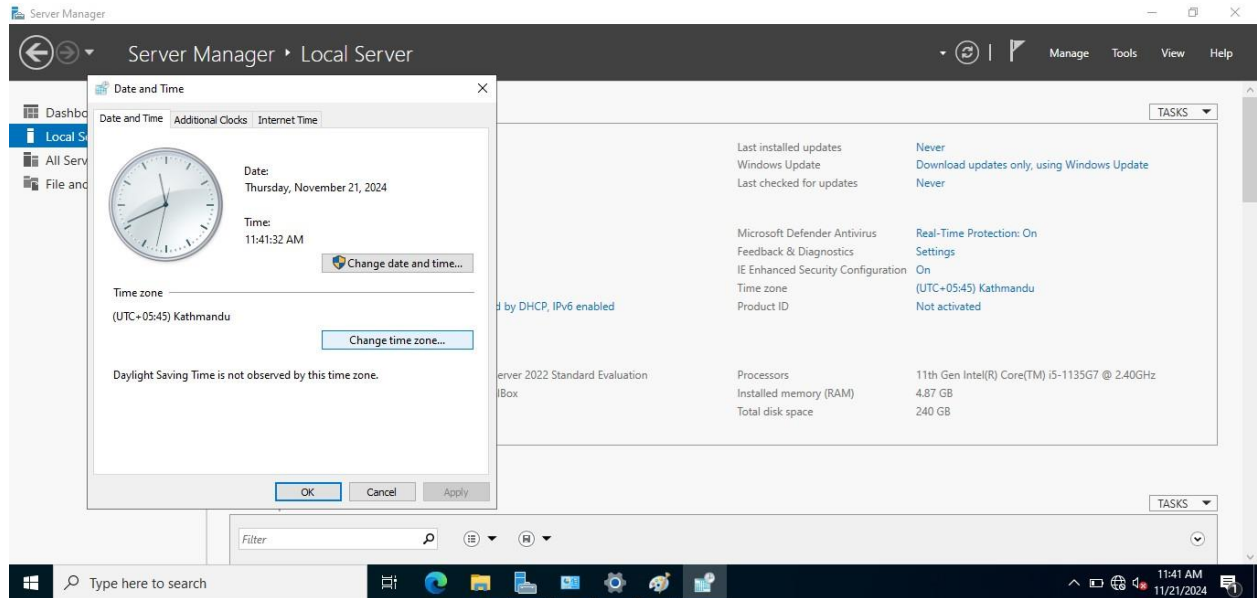


Figure 12 Opening date and time section

4.11. selecting Kathmandu time zone.

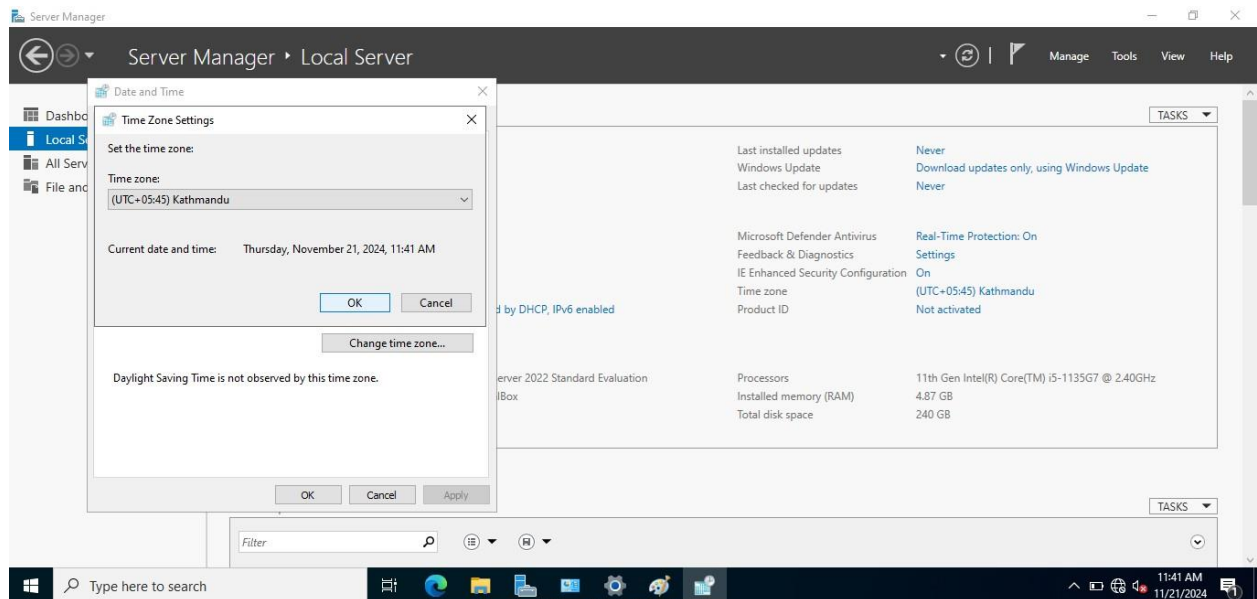


Figure 13 Selecting time zone

4.12. Turning off the enhanced security configuration which is On by default

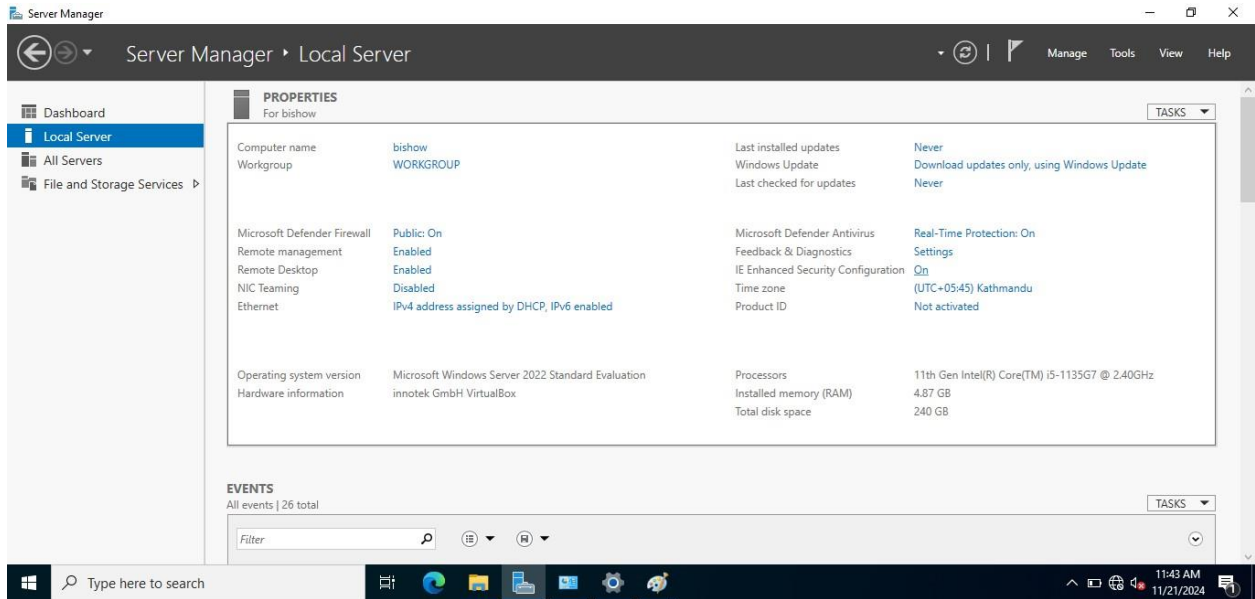


Figure 14 Default status of Enhanced Security Configuration

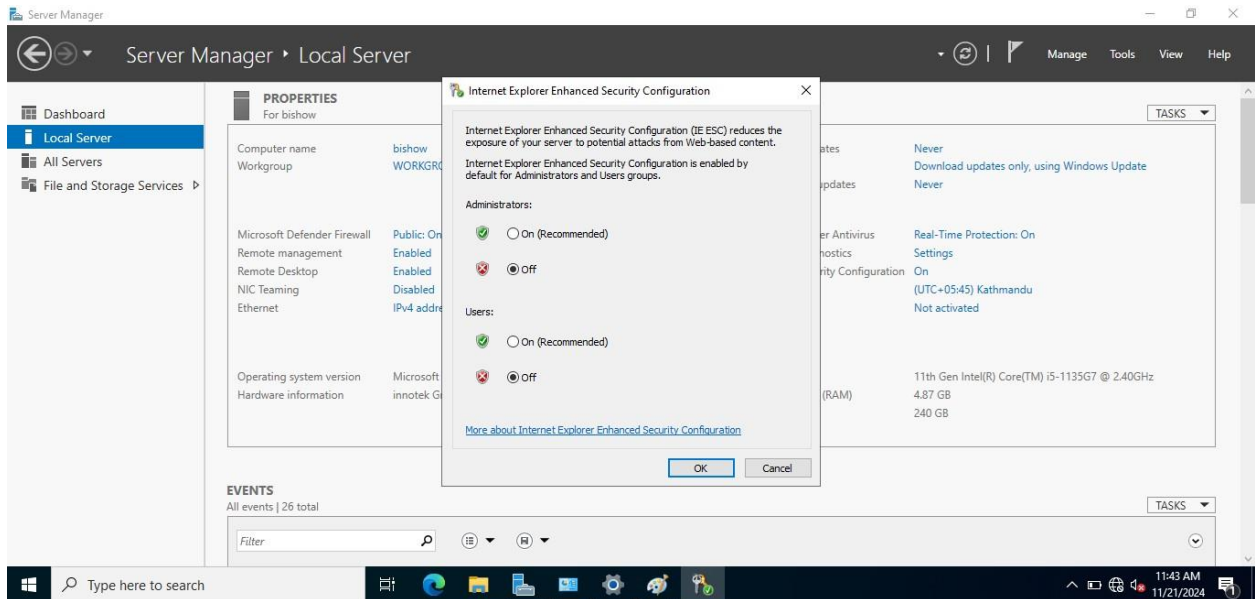


Figure 15 Turning off the Enhanced Security Configuration

4.13. Clicking the check for updates button to check any possible windows update .

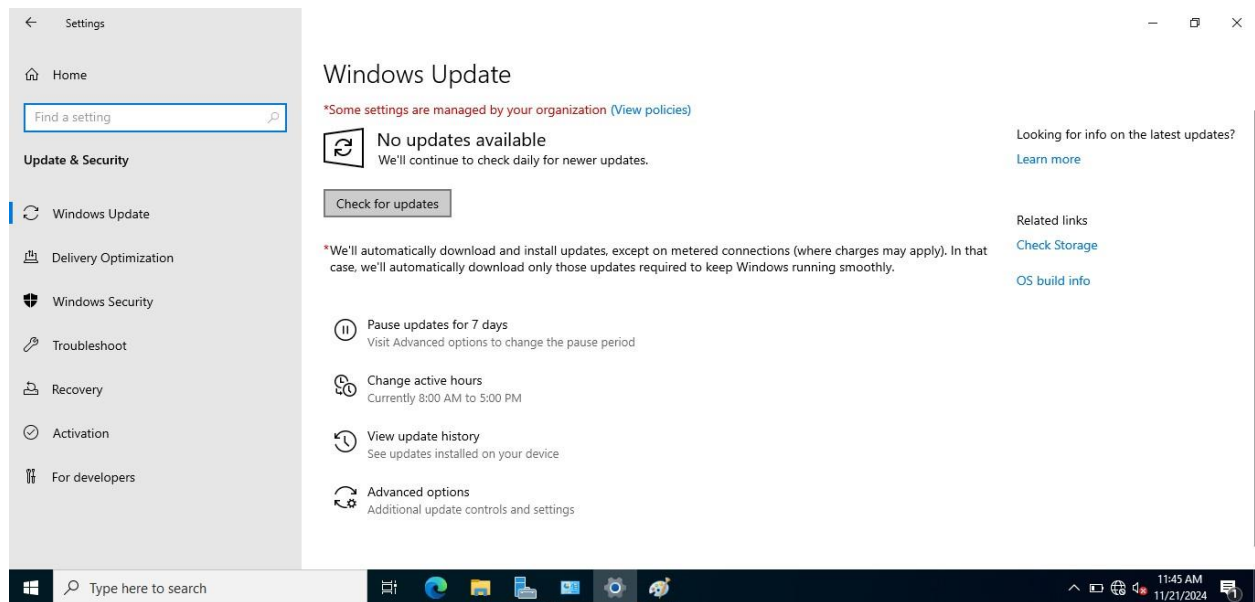


Figure 16 Checking for Update

Since , there's no internet available in this pc so it gives error to the update checking.

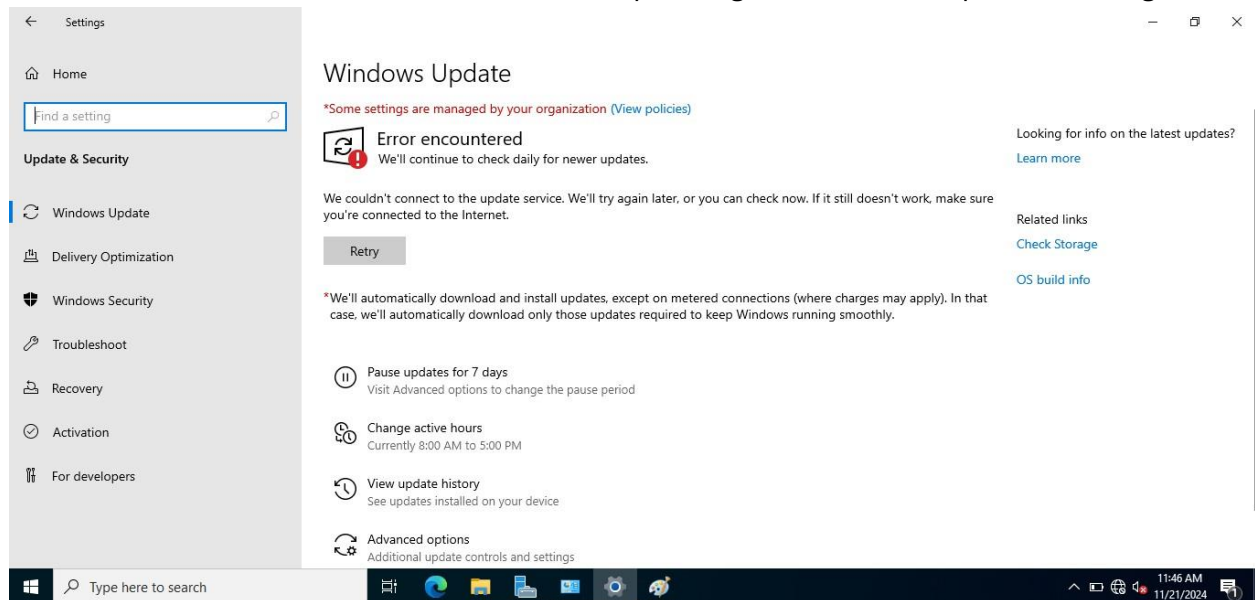


Figure 17 Error while updating

4.14. Clicking on tools button on top right and then clicking on computer management button

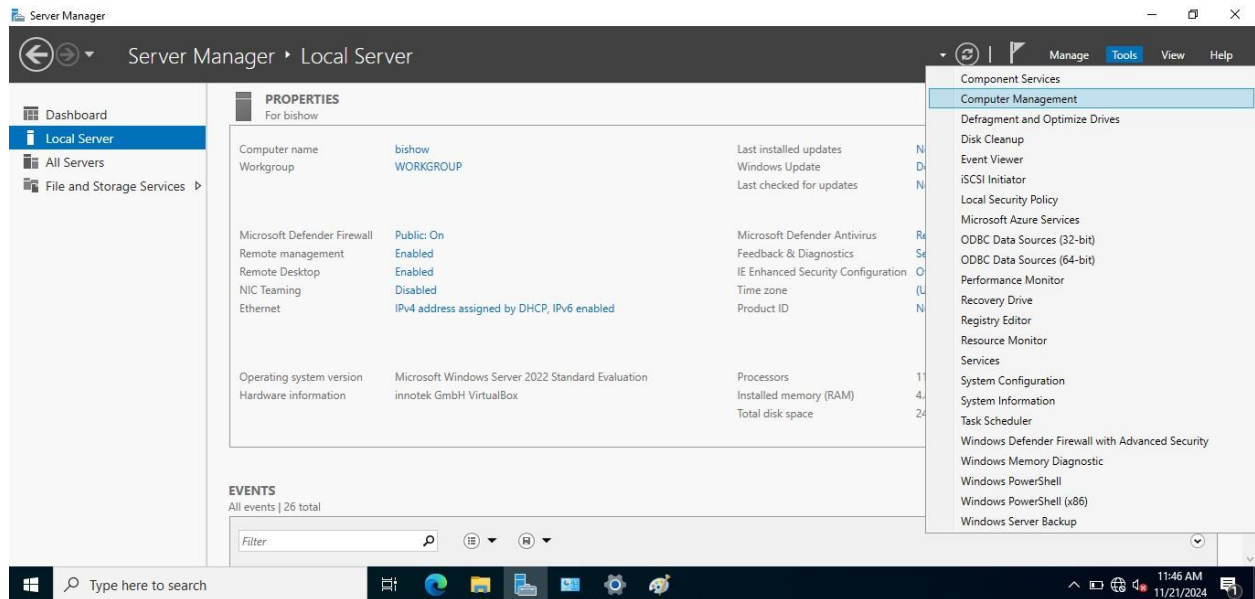


Figure 18 Using Computer Management Tool

4.15. Selecting local users and groups in the left side of the screen and right clicking on user to create a new user using UI.

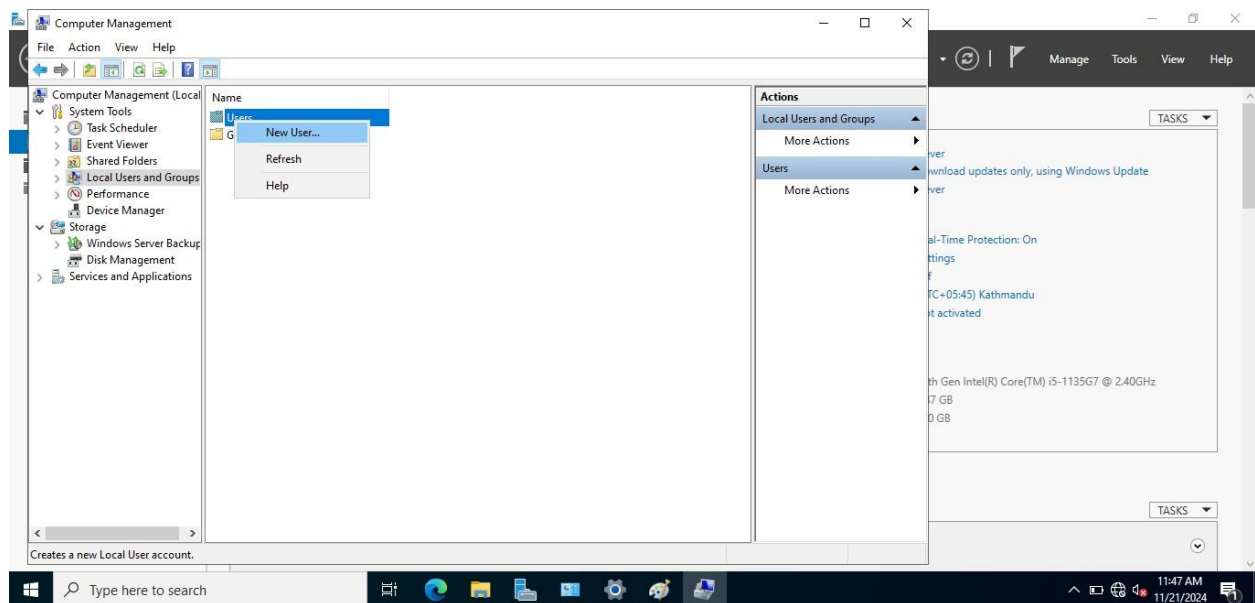


Figure 19 Creating New User

4.16. Filling up details of the new user and clicking the create button

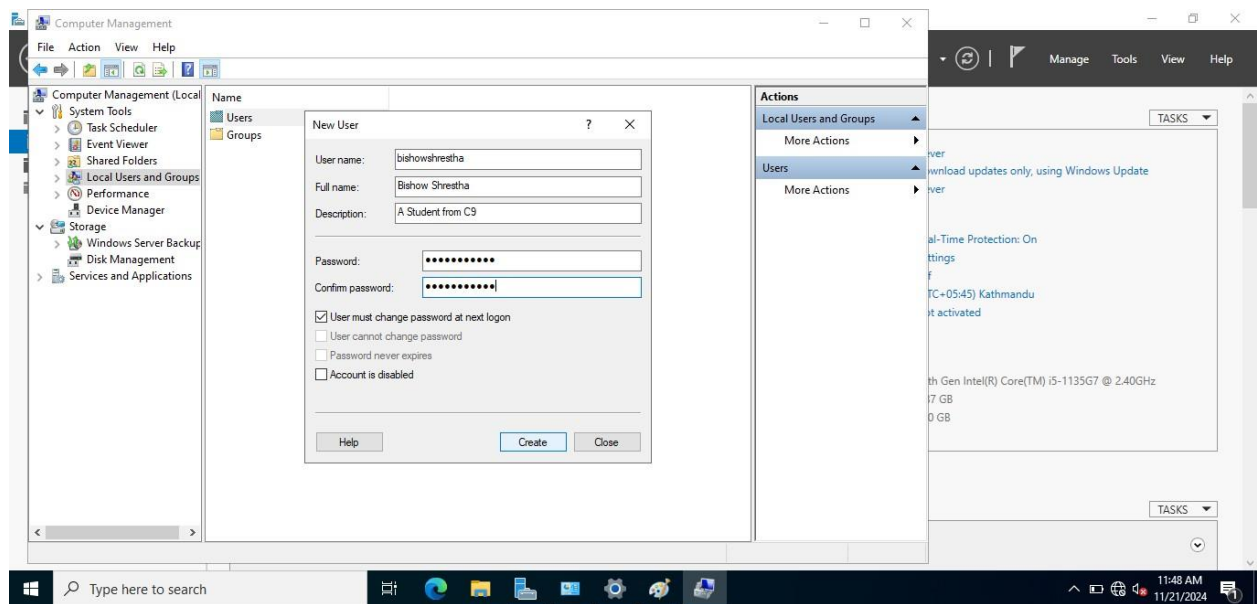


Figure 20 Filling details of user

4.17. Opening Windows PowerShell as a windows administrator.

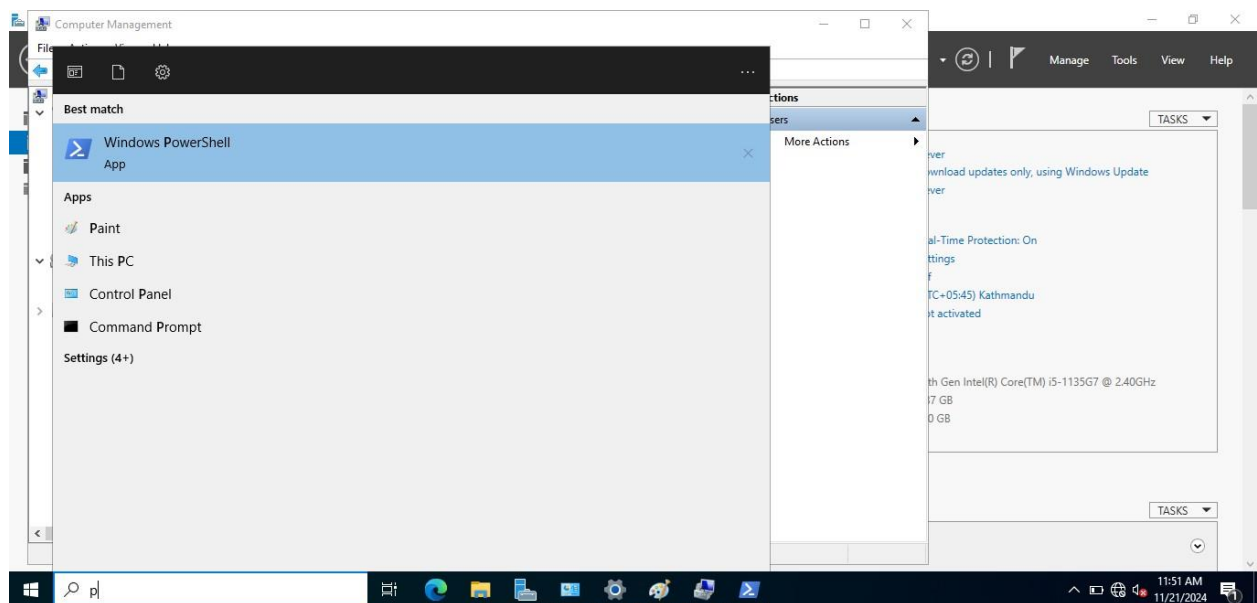


Figure 21 Opening Windows Powershell

4.18. Using get-localuser command to see the current users in the pc through powershell.

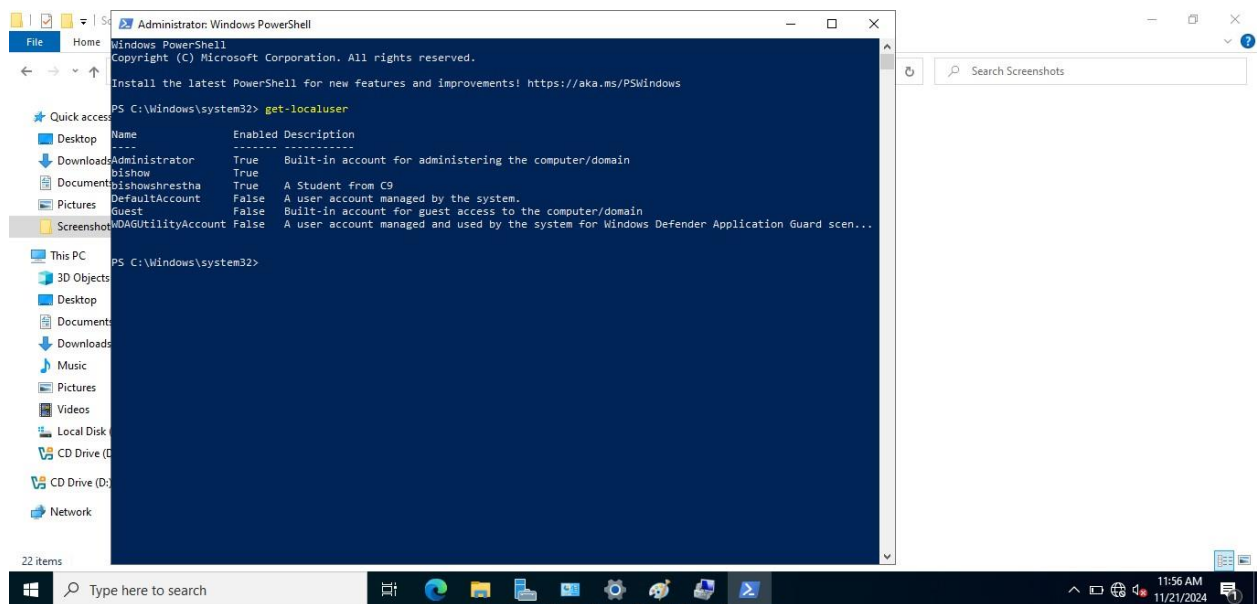


Figure 22 Fetching user accessed to the server using Powershell command

4.19. Adding new user using powershell command

Command = `new-localuser -name "username" -description ".....descriptions....." -nopassword` (to skip the password)

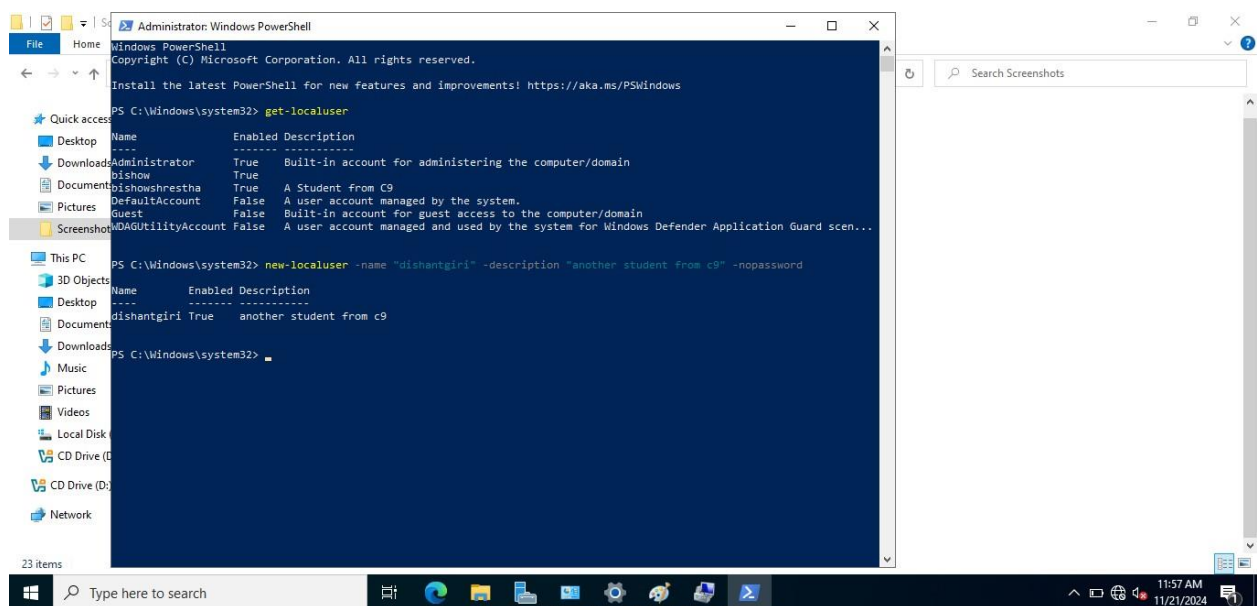
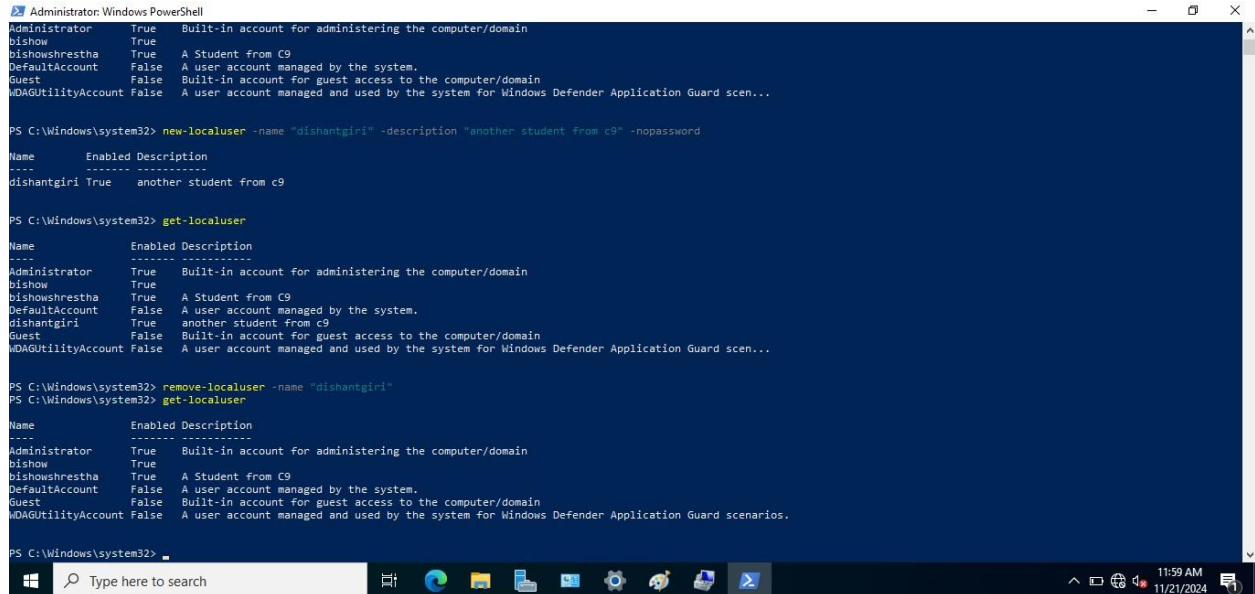


Figure 23 Adding new user using powershell

4.20. Removing local user using powershell command

Command = `remove-localuser -name "username"`



The screenshot shows an Administrator Windows PowerShell session. It starts with a list of system accounts. Then, a new local user named 'dishantgiri' is created with the description 'another student from c9' and no password. The user is then listed using the `get-localuser` command. Finally, the user is removed using the `remove-localuser -name "dishantgiri"` command, and the updated list of users is shown, confirming the user's removal.

```
Administrator: Windows PowerShell

Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scen...

PS C:\Windows\system32> new-localuser -name "dishantgiri" -description "another student from c9" -nopassword

Name      Enabled Description
----      -
dishantgiri True    another student from c9

PS C:\Windows\system32> get-localuser

Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
dishantgiri True    another student from c9
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scen...

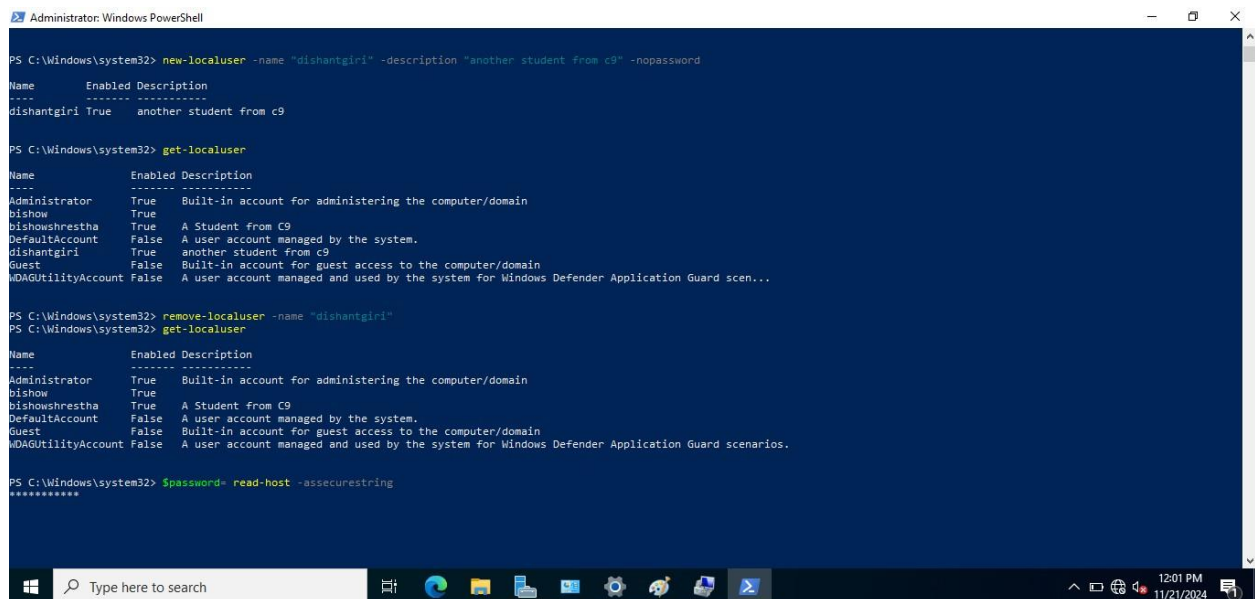
PS C:\Windows\system32> remove-localuser -name "dishantgiri"
PS C:\Windows\system32> get-localuser

Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Windows\system32>
```

Figure 24 Removing user using powershell command

4.21. Creating a password named variable with a string value stored in it.



The screenshot shows an Administrator Windows PowerShell session. It starts with the same list of system accounts as Figure 24. Then, a new local user named 'dishantgiri' is created. The user is listed using `get-localuser`. Then, the user is removed using `remove-localuser -name "dishantgiri"`. Finally, a variable named `$password` is created and assigned a value using the `read-host -assecurestring` command. The prompt for the password is visible.

```
Administrator: Windows PowerShell

Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scen...

PS C:\Windows\system32> new-localuser -name "dishantgiri" -description "another student from c9" -nopassword

Name      Enabled Description
----      -
dishantgiri True    another student from c9

PS C:\Windows\system32> get-localuser

Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
dishantgiri True    another student from c9
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Windows\system32> remove-localuser -name "dishantgiri"
PS C:\Windows\system32> get-localuser

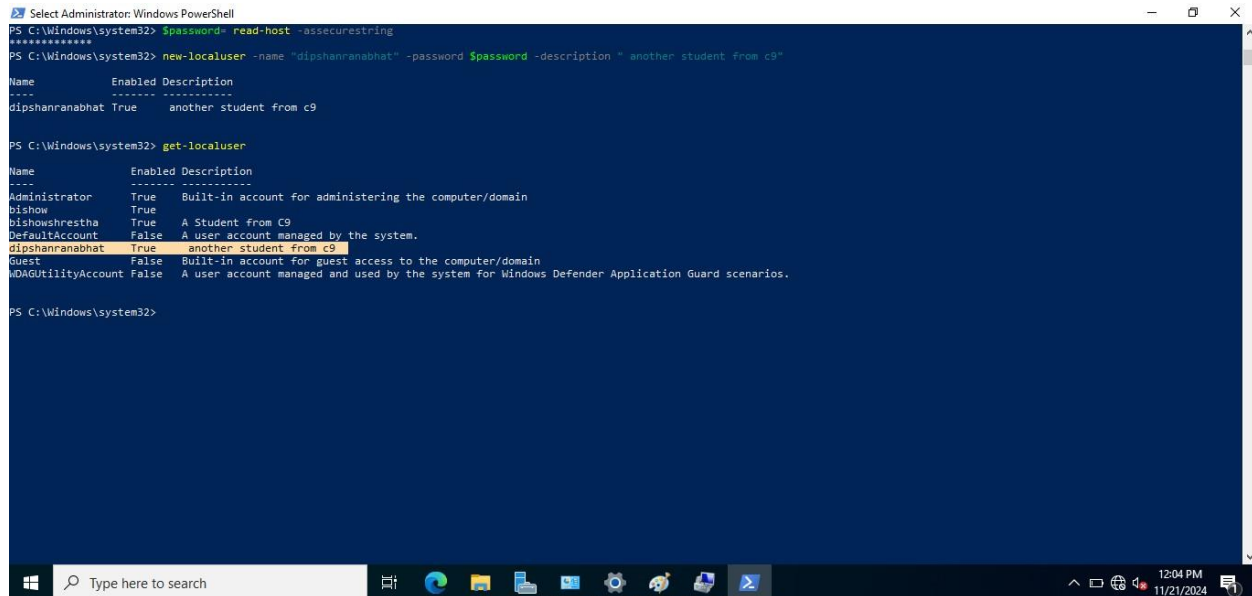
Name      Enabled Description
----      -
Administrator True    Built-in account for administering the computer/domain
bishow    True    A Student from C9
bishowshrestha True    A user account managed by the system.
DefaultAccount False   Built-in account for guest access to the computer/domain
Guest     False   Built-in account for guest access to the computer/domain
WDAGUtilityAccount False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Windows\system32> $password = read-host -assecurestring
*****

PS C:\Windows\system32>
```

Figure 25 Creating a variable and storing value in it

4.22. Adding new local user using the password named variable as its actual password .



```
Select Administrator: Windows PowerShell
PS C:\Windows\system32> $password = read-host -assecurestring
*****
PS C:\Windows\system32> new-localuser -name "dipshanranabhat" -password $password -description "another student from c9"

Name           Enabled Description
-----
dipshanranabhat True      another student from c9

PS C:\Windows\system32> get-localuser

Name           Enabled Description
-----
Administrator  True      Built-in account for administering the computer/domain
bishow         True      A Student from C9
bishowshrestha True      A Student from C9
DefaultAccount False     A user account managed by the system.
dipshanranabhat True      another student from c9
Guest          False     Built-in account for guest access to the computer/domain
WDAGUtilityAccount False     A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Windows\system32>
```

Figure 26 Using the value stored in variable as the password of a new user

5.Conclusion

In summary, learning these basic server management tasks through virtualization is a valuable step toward becoming more confident and efficient in system administration. Using tools like management consoles and PowerShell makes it easier to keep servers secure, updated, and running smoothly, which is essential in real-world scenarios.

References

Server Manager. (n.d.). Retrieved from Microsoft Learn: <https://learn.microsoft.com/en-us/windows-server/administration/server-manager/server-manager>

virtualbox. (n.d.). Retrieved from oracle.com: <https://www.oracle.com/virtualization/virtualbox/>

windows-server. (n.d.). Retrieved from solarwinds.com: <https://www.solarwinds.com/resources/it-glossary/windows-server>