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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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PERFORMING TASKS IN WINDOWS SERVER 2022's SERVER MANAGER TOOL AND POWERSHELL ENVIRONMENT

1. STEPS

1.1. Step 1: Opening Server Manager

On our system, Windows Server 2022 was initially run inside of the Hyper-V manager after it has been launched. Once the windows had started to load, a window where the user must enter their password appeared. The Windows home screen then appeared, and the server management dashboard was shown.

Server Manager is a tool that comes inbuilt with the Windows Server. This helps to manage the server easily using the GUI of the Manager.

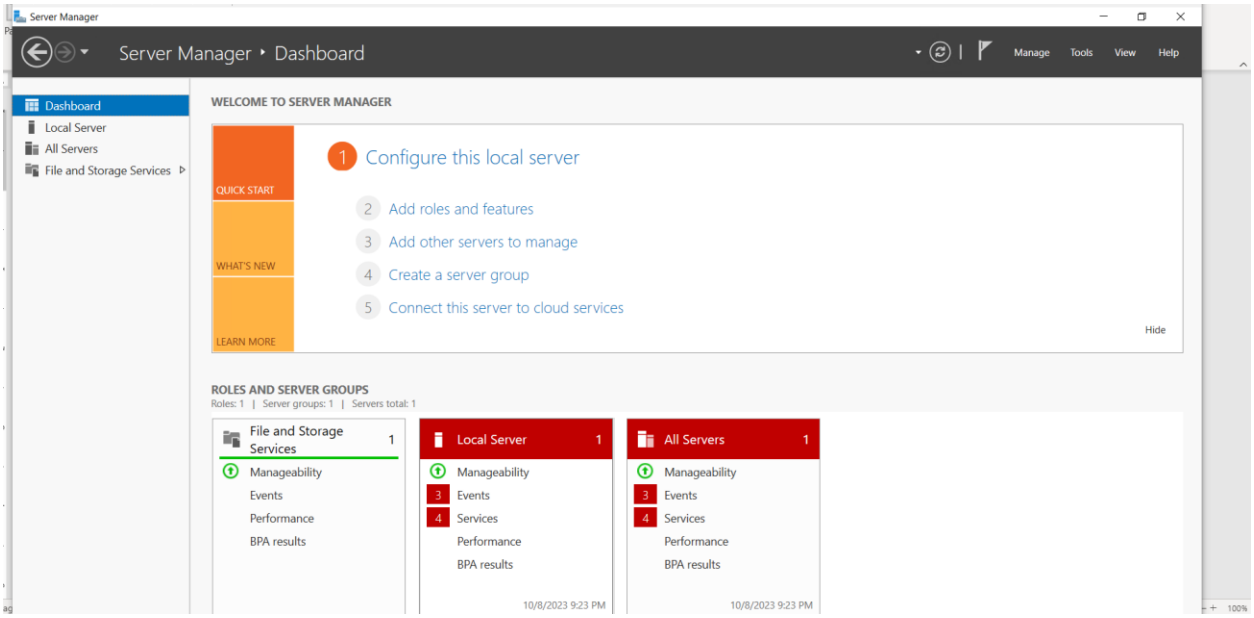

Figure 1: Server Manager Dashboard Interface

1.2. Step 2: Changing Server's Name

The local server option was selected from the screen's upper left side once the server manager dashboard had appeared. The screen then showed the local server interface. Then, we looked through the menus on the screen of the local server interface. Then the menu named "Computer name" was clicked which opened a new window to configure the Server name.

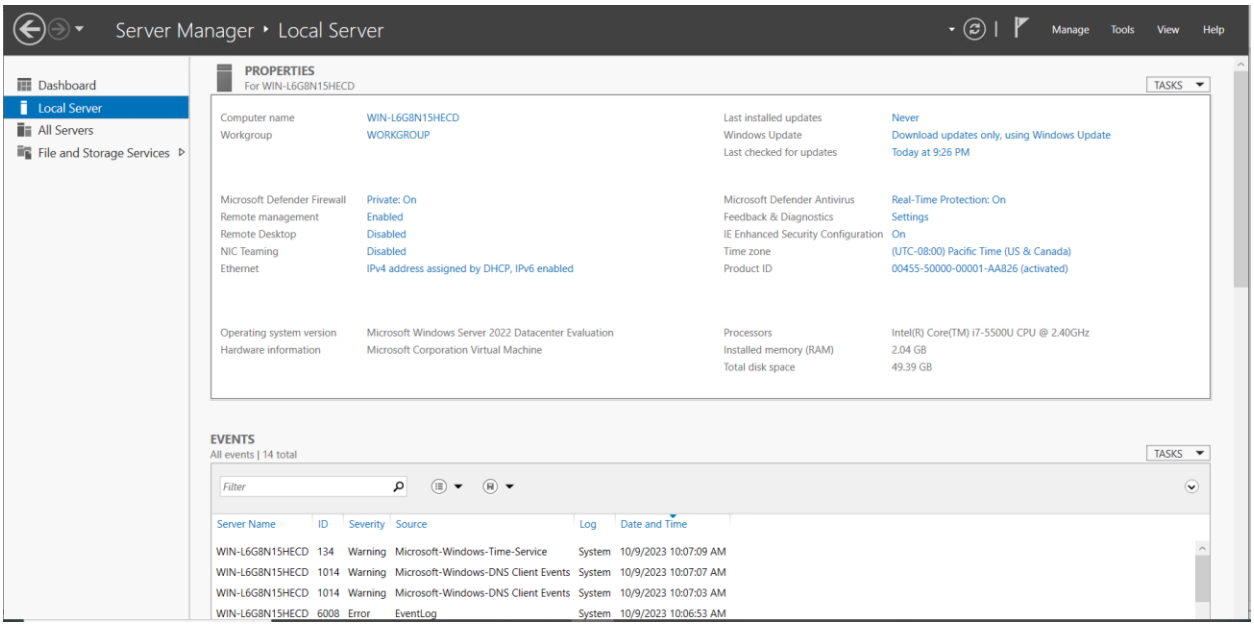

Figure 2: Local Server Interface

Then, after selecting it from the menu, computer's name was changed to one that more appropriately reflected our preferences. The "ok" button was then clicked.

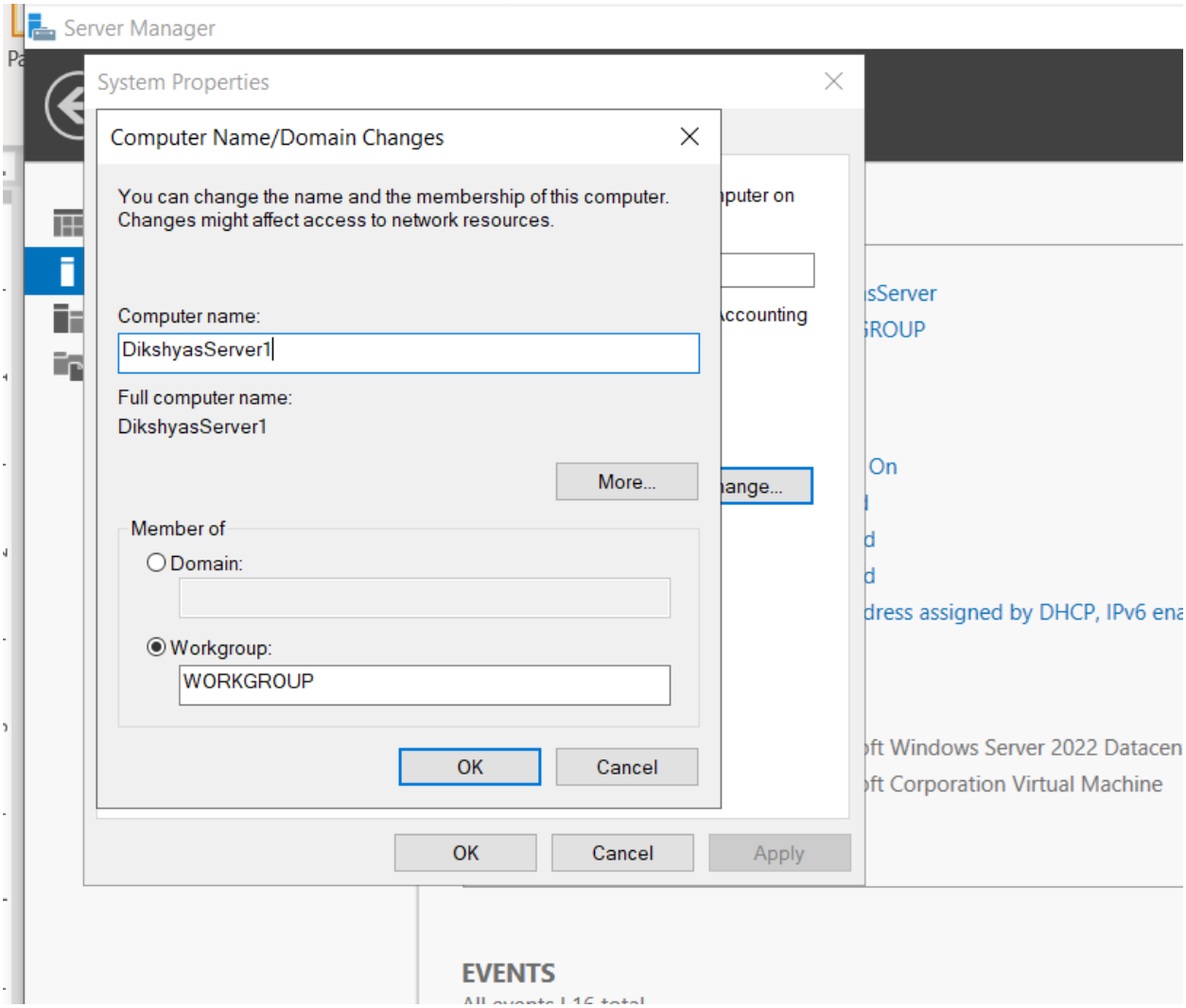

Figure 3: Changing Computer's name

After pressing “OK” button, a new window appeared requesting a restart to change the name.

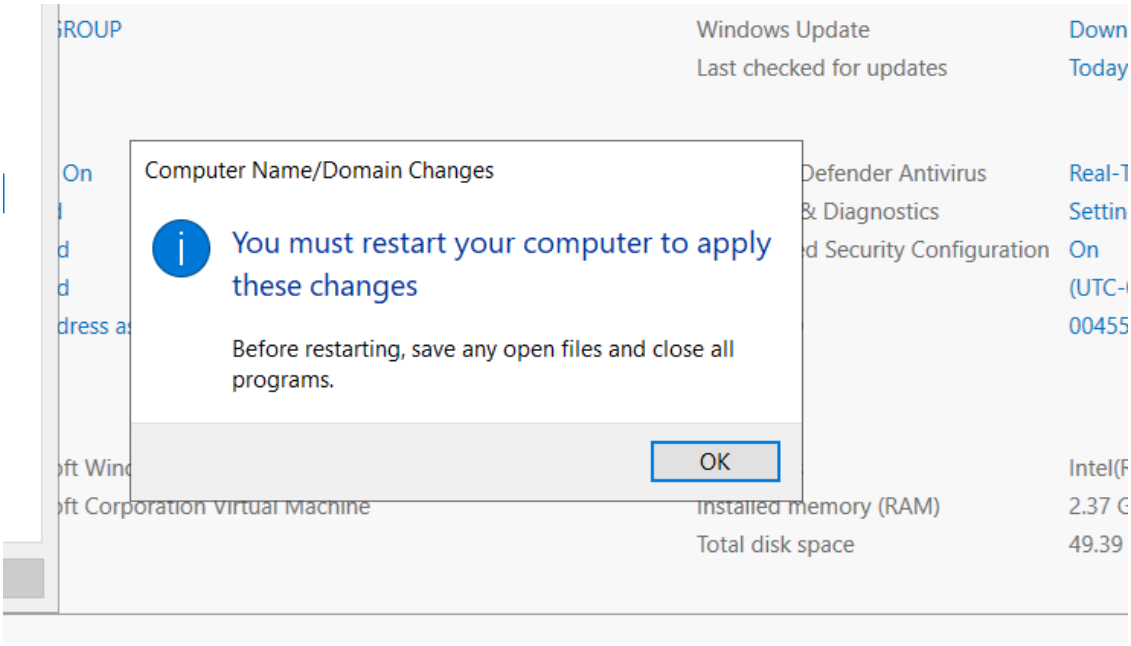

Figure 4:pop-up window showing restart options.

1.3. Step 3: Enabling Remote Desktop

Remote Desktop Service enables access to the server's GUI and functionalities via a remote connection.

Once more it was directed to the local server interface after restarting the Windows server.

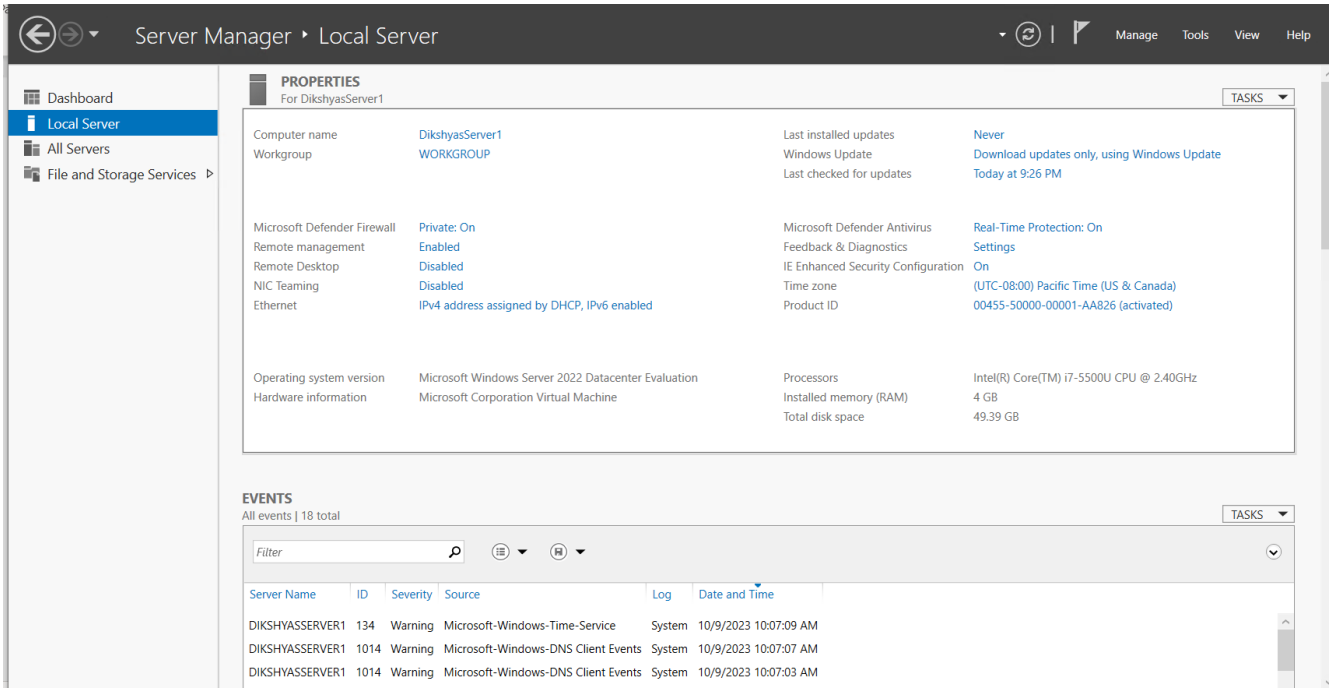

Figure 5: Local Server Interface

From the local server interface, the remote desktop option was selected. Then a pop-up window indicating the activation of the remote desktop firewall exception appeared. After that, "ok" button was pressed.

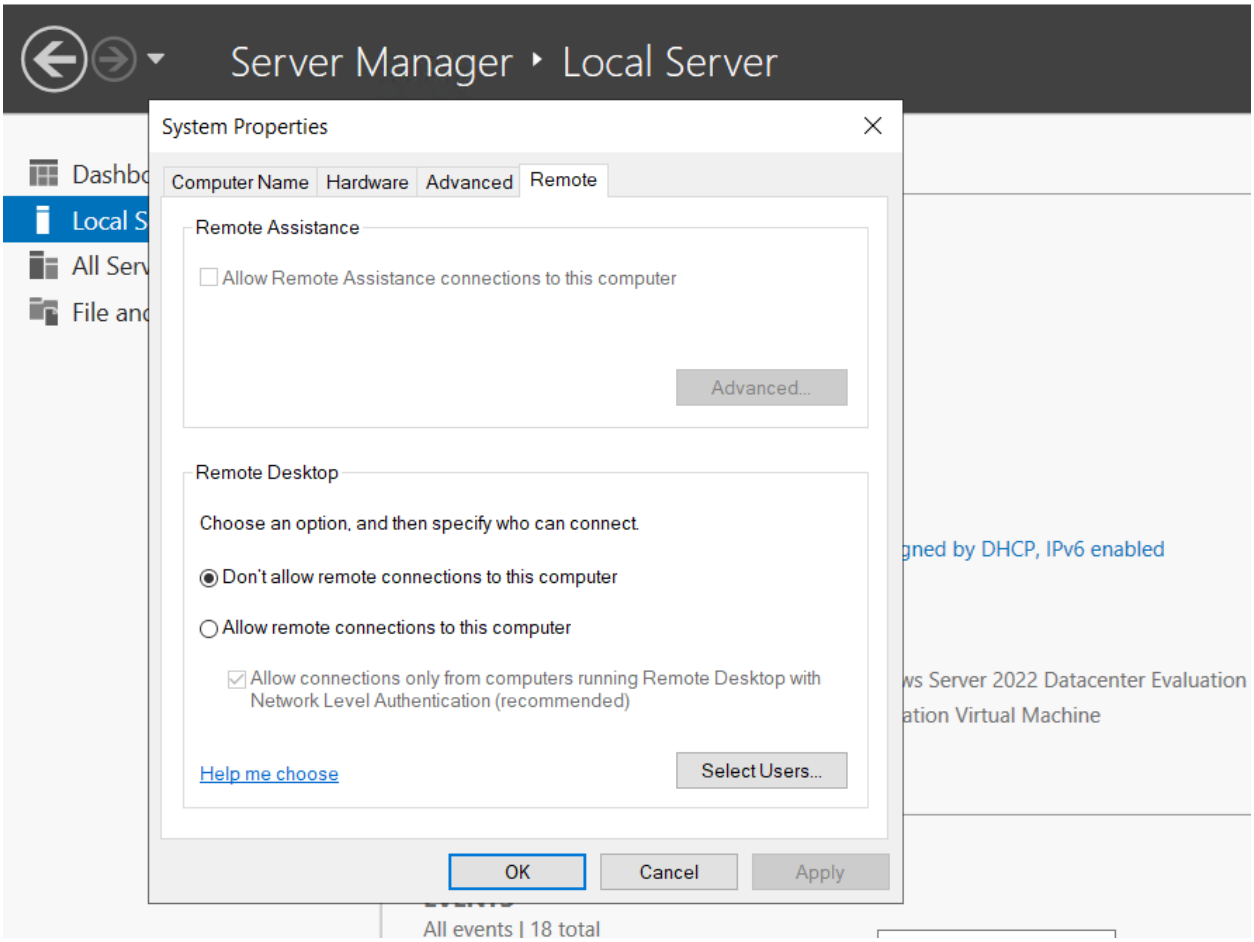

Figure 6: Remote Desktop Window

Next, the option to allow remote connections to this machine from the list of choices was chosen and the "ok" button was pressed. Our remote desktop feature was thereafter available.

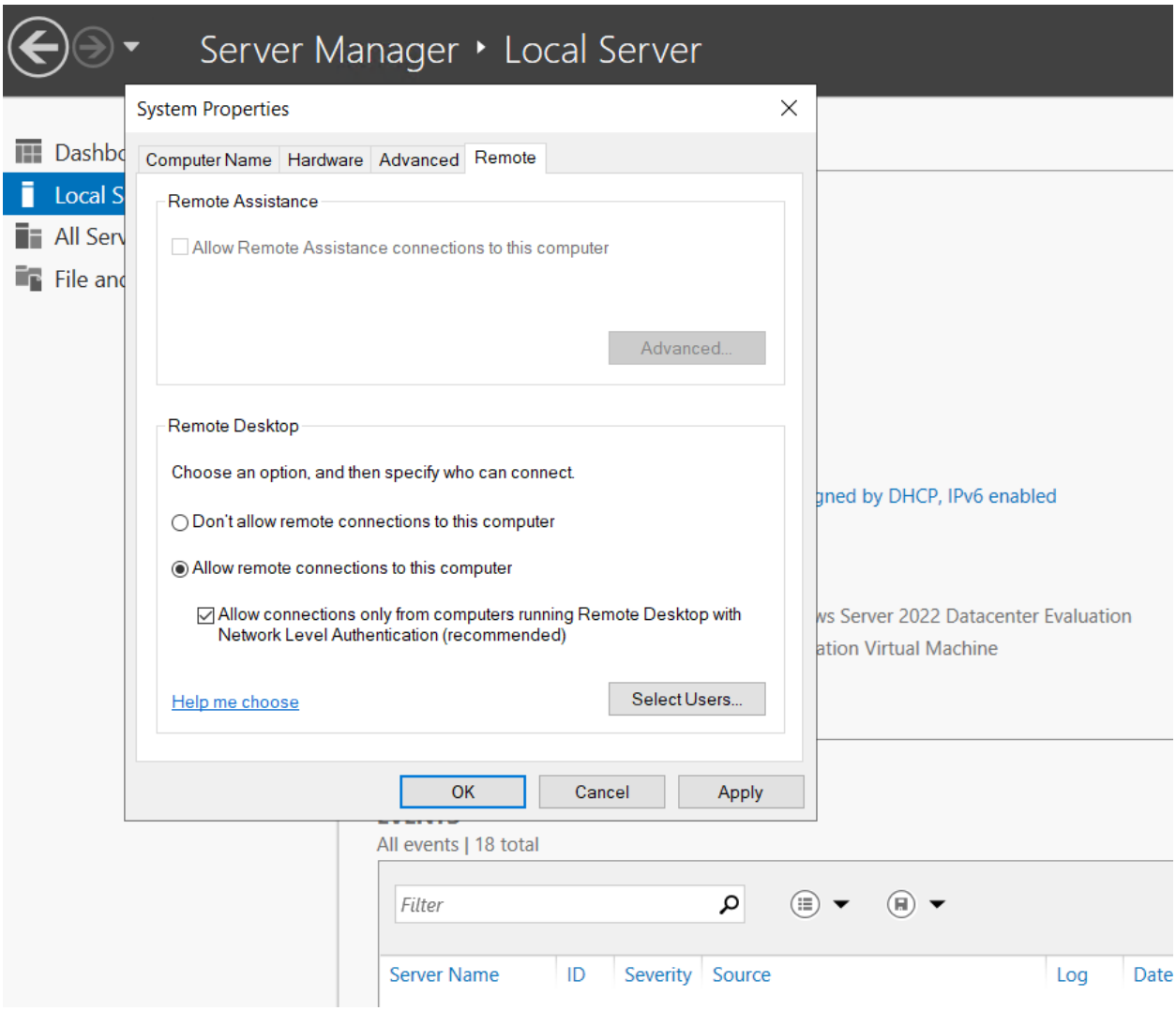

Figure 7: Making remote desktop feature available.

When the Allow button was pressed, a firewall warning was appeared. The remote desktop service was activated when "OK" button was clicked.

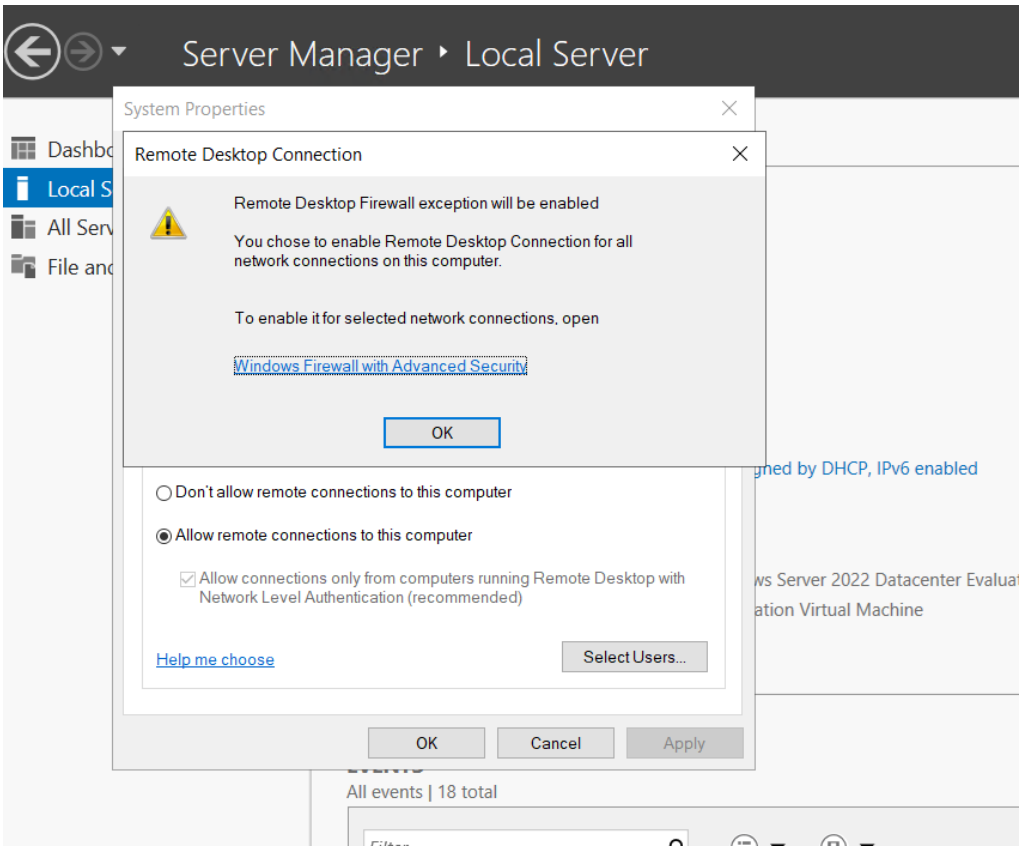

Figure 8:Firewall Warning

From here, “OK” button pressed again to close the remote desktop settings window.

1.4. Step 4: Setting Up Static IP Address

When the remote desktop connection had been approved, local server interface was opened again and Ethernet option on the left side of the screen was selected.

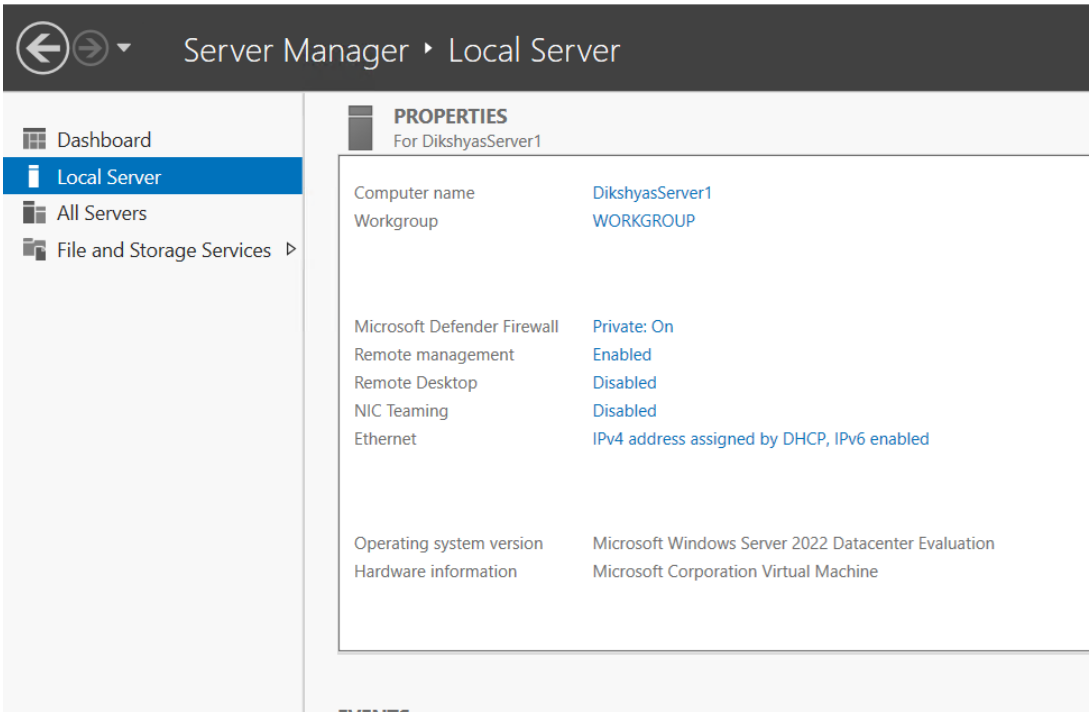

Figure 9:Local Server Interface

An additional panel with ethernet settings then appeared.

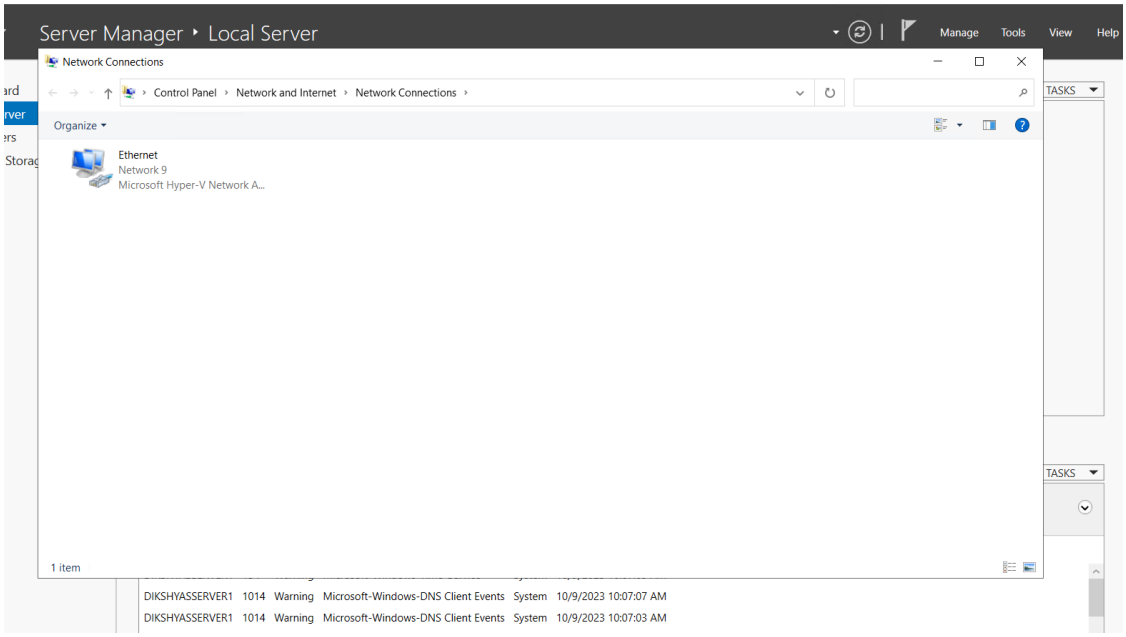

Figure 10: Ethernet Interface

Next, the available options to select the properties option from the context menu was selected, when right clicked on the ethernet option.

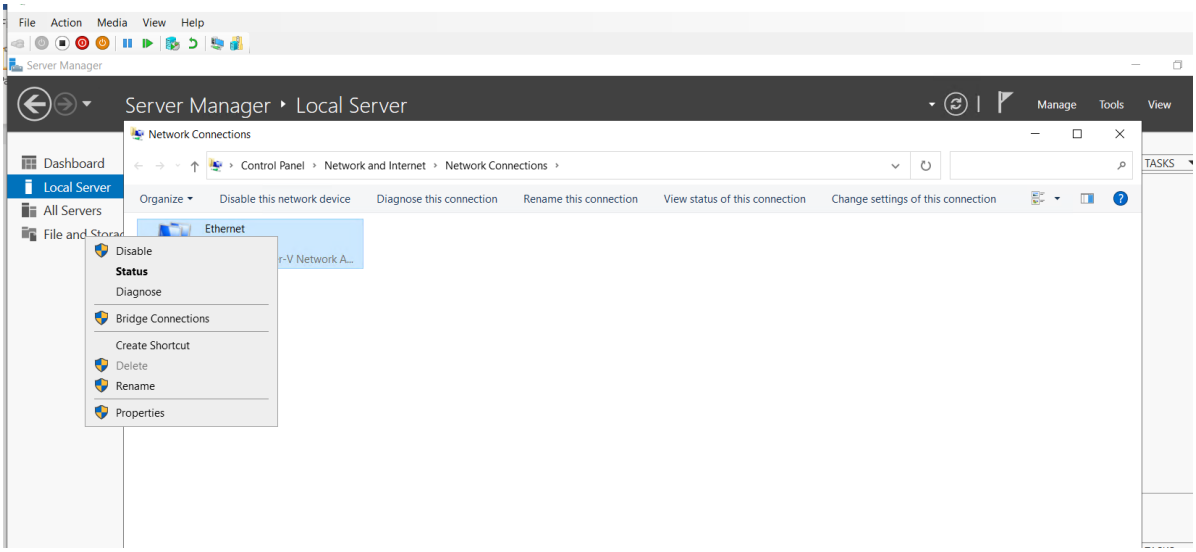

Figure 11:Exploring menu on clicking Ethernet.

A popup with several options of network adapters connected to the server was appeared after selecting the ethernet properties. Then, from the choices shown, Internet Protocol Version 4 (TCP/IPv4) was chosen.

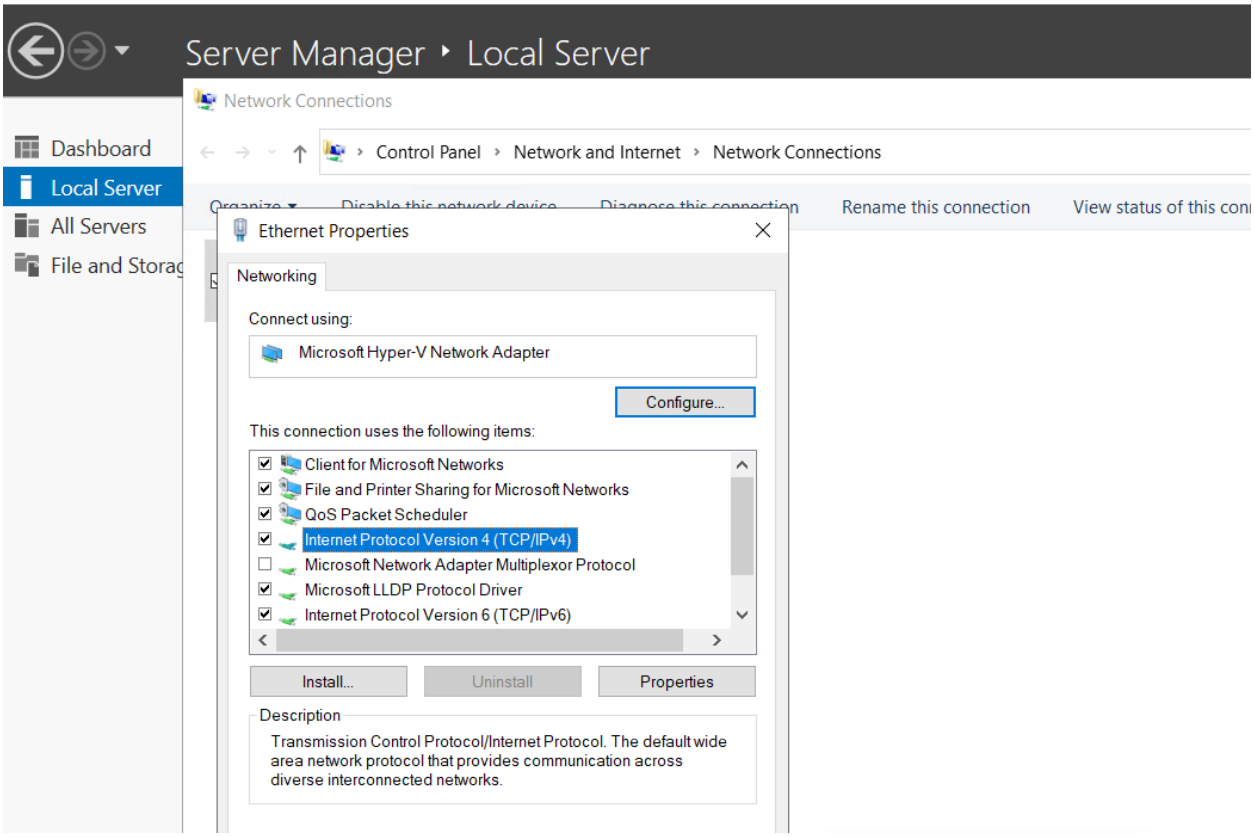

Figure 12:List of Network Adapters

The IPv4 properties window then opened. Then the option that reads "Use the following IP address and DNS address" was selected. Then the IP address, default gateway, preferred DNS server, and backup DNS server was manually specified.

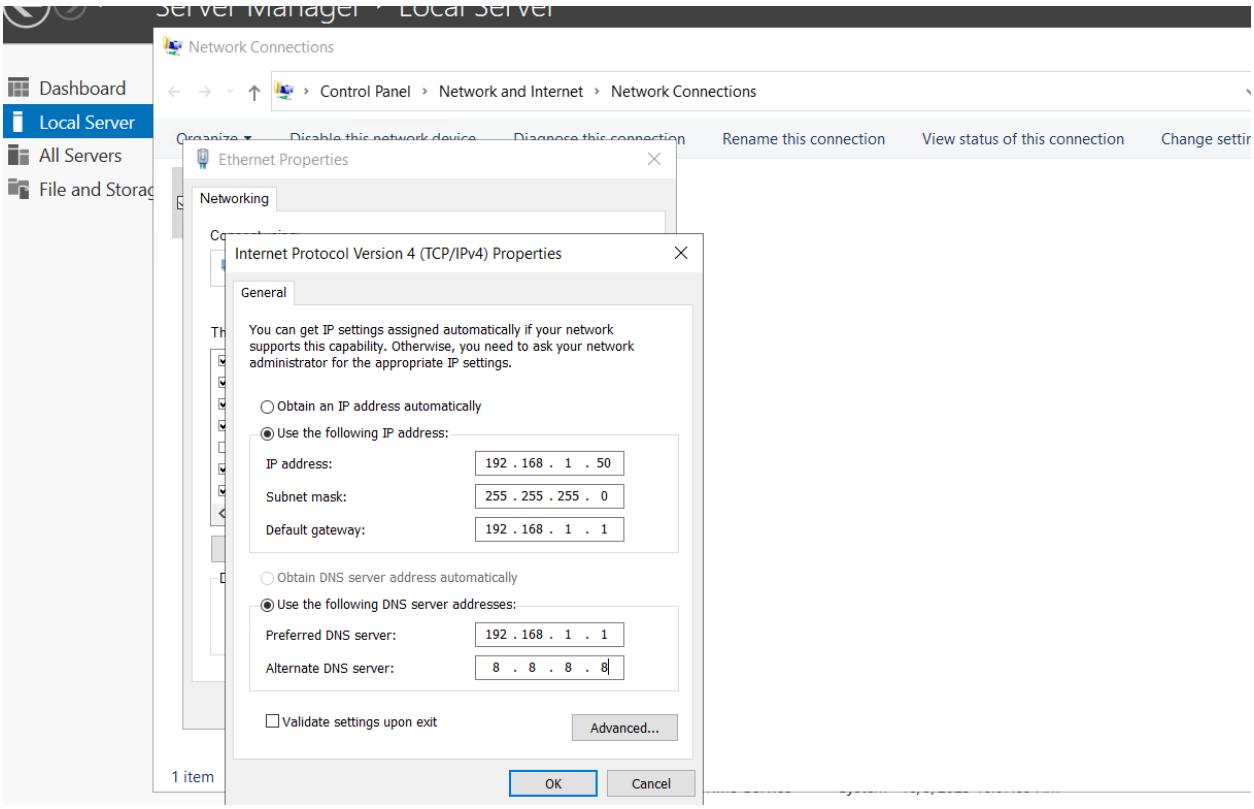

Figure 13:Specfying IP address, default gateway, subnet, and DNS

Following that, the "OK" button was clicked to configure Static IP successfully.

1.5. Step 5: Changing the Time Zone

Returning to the Local Server window, next the Date and Time option was selected from the list of choices on the window's right side. Then a new window appeared with the ability to modify the date, time, and language. Next, "Change Time Zone" button was selected.

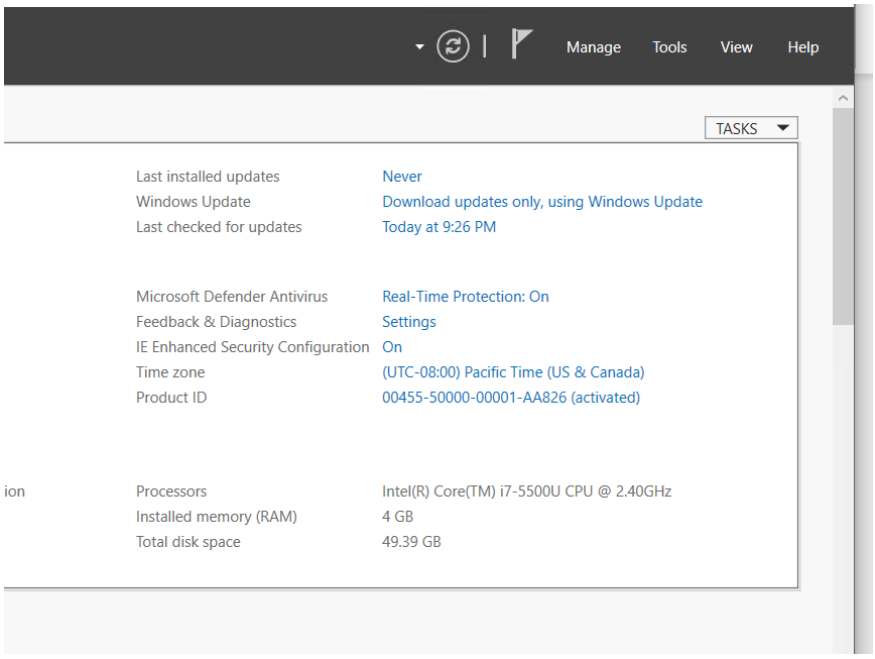

Figure 14:Local Server Interface

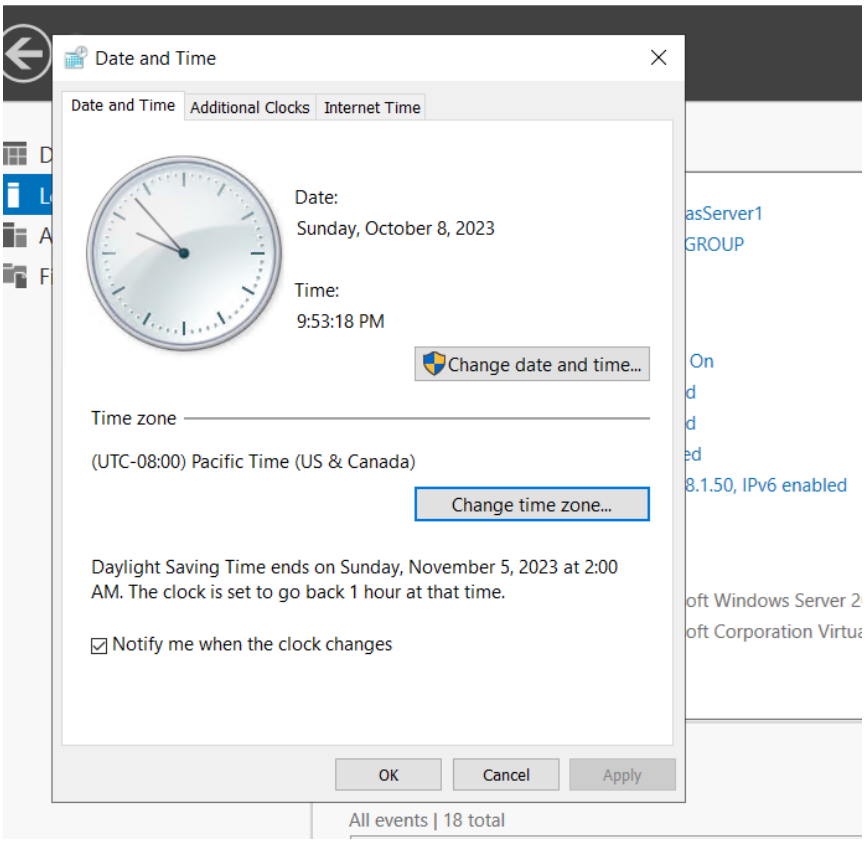

Figure 15:Date and Time Interface

After selecting “change time zone” option, there appeared various time zones of different countries. Then, time zone of Kathmandu was selected.

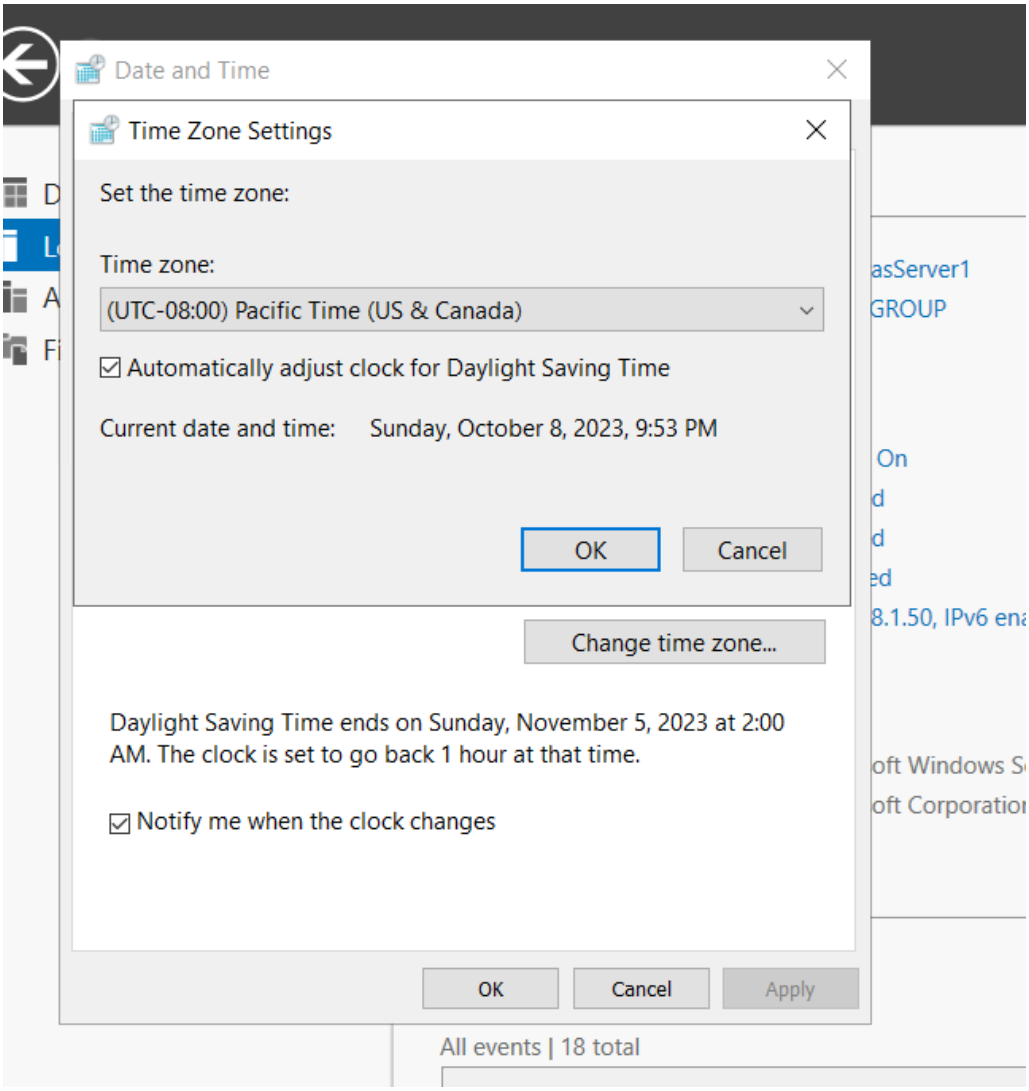

Figure 16:Changing time and zone

Finally, “OK” button was pressed.

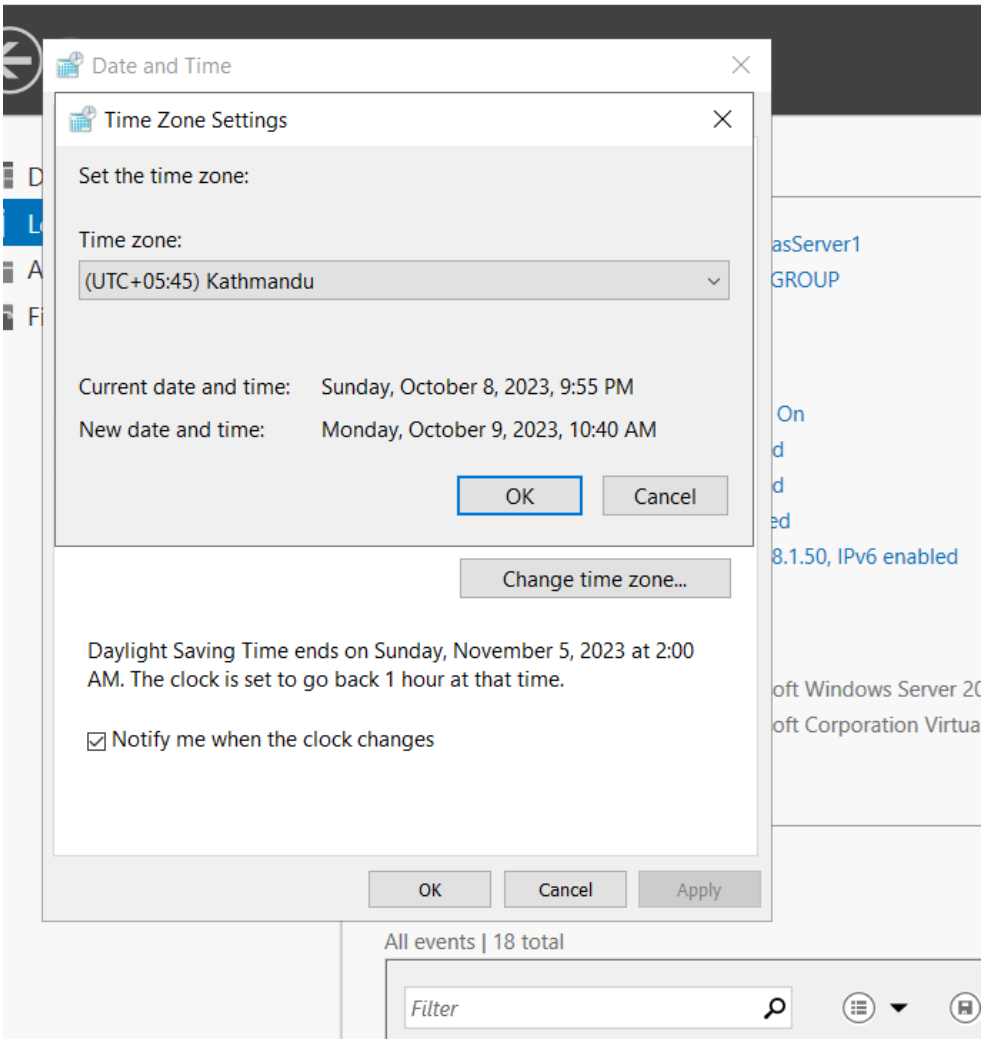

Figure 17:Updated Time zone

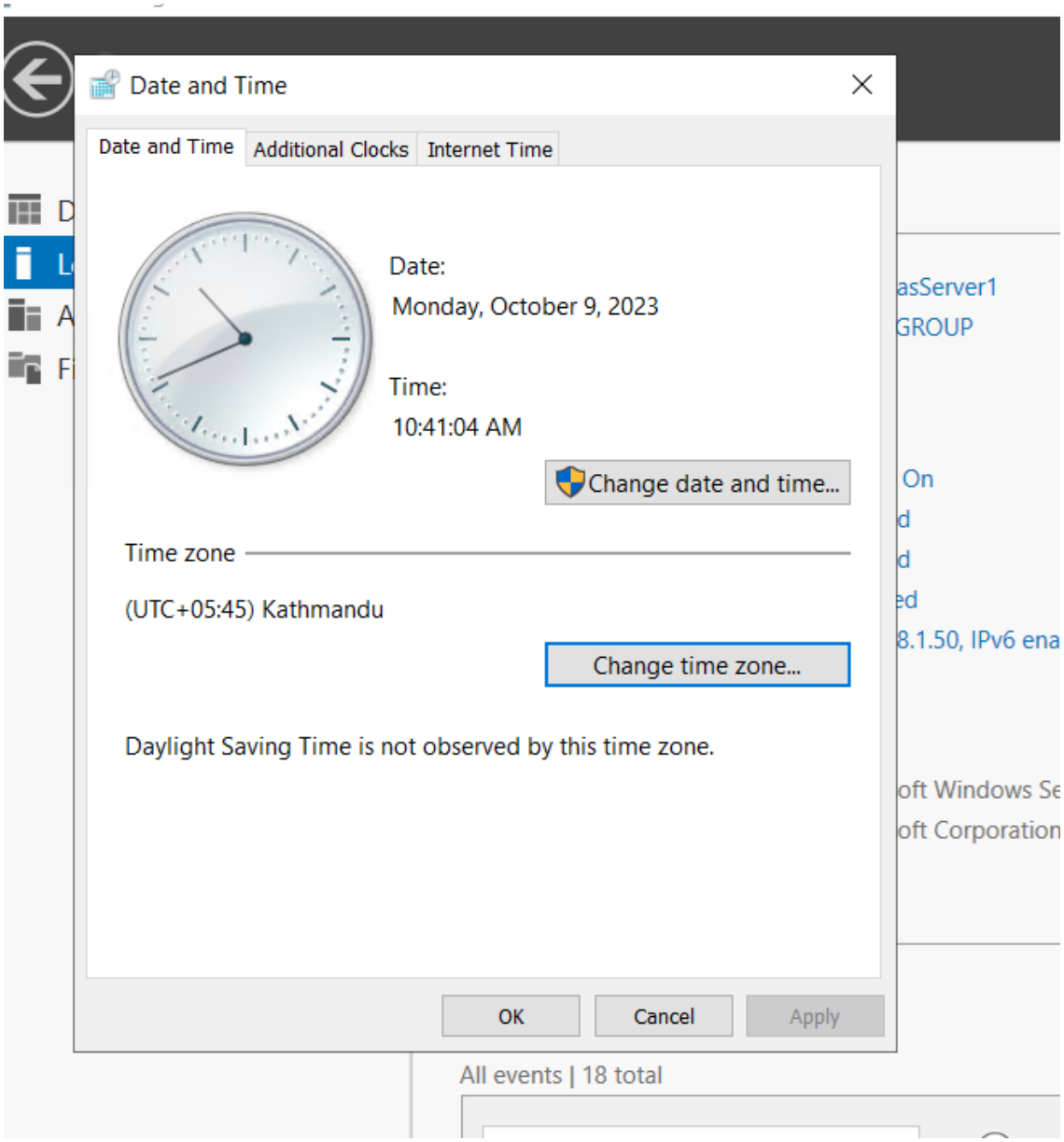

Figure 18:Updated date and time interface

1.6. Step 6: Turning off IE enhanced security and checking for updates.

The local server window was launched once again following the selection of the preferred time zone and the window's upper right side was selected to set the IE Enhanced Security Configuration.

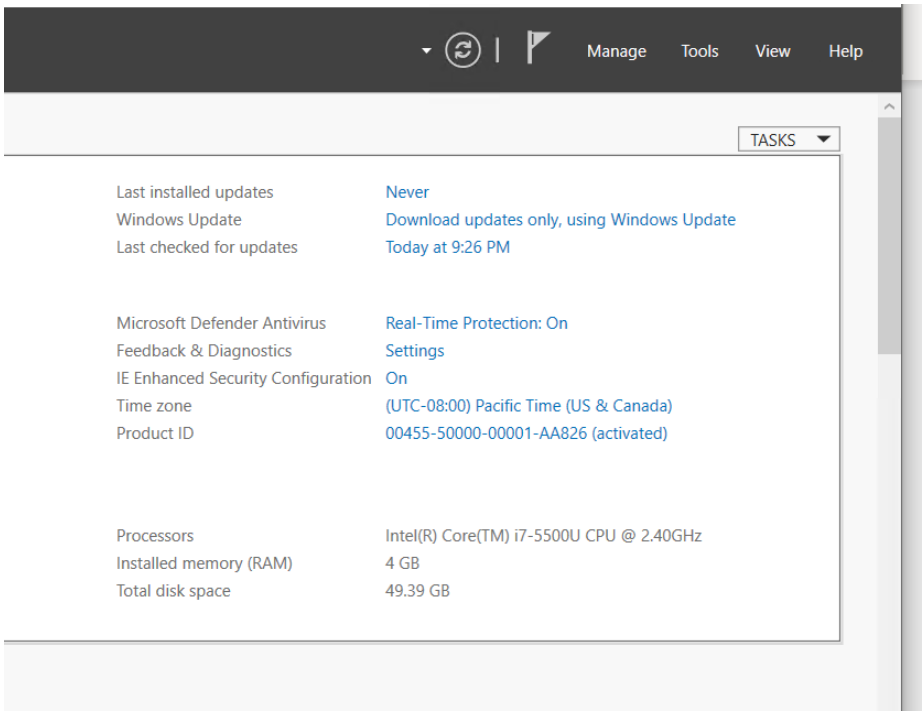

Figure 19:Local Server Interface

On selecting the Internet Explorer Enhanced Security Configuration, a new window opened. Security settings were activated by default. Then, the security configuration settings for both Administrators and Users were disabled by switching to off that were visible on the window.

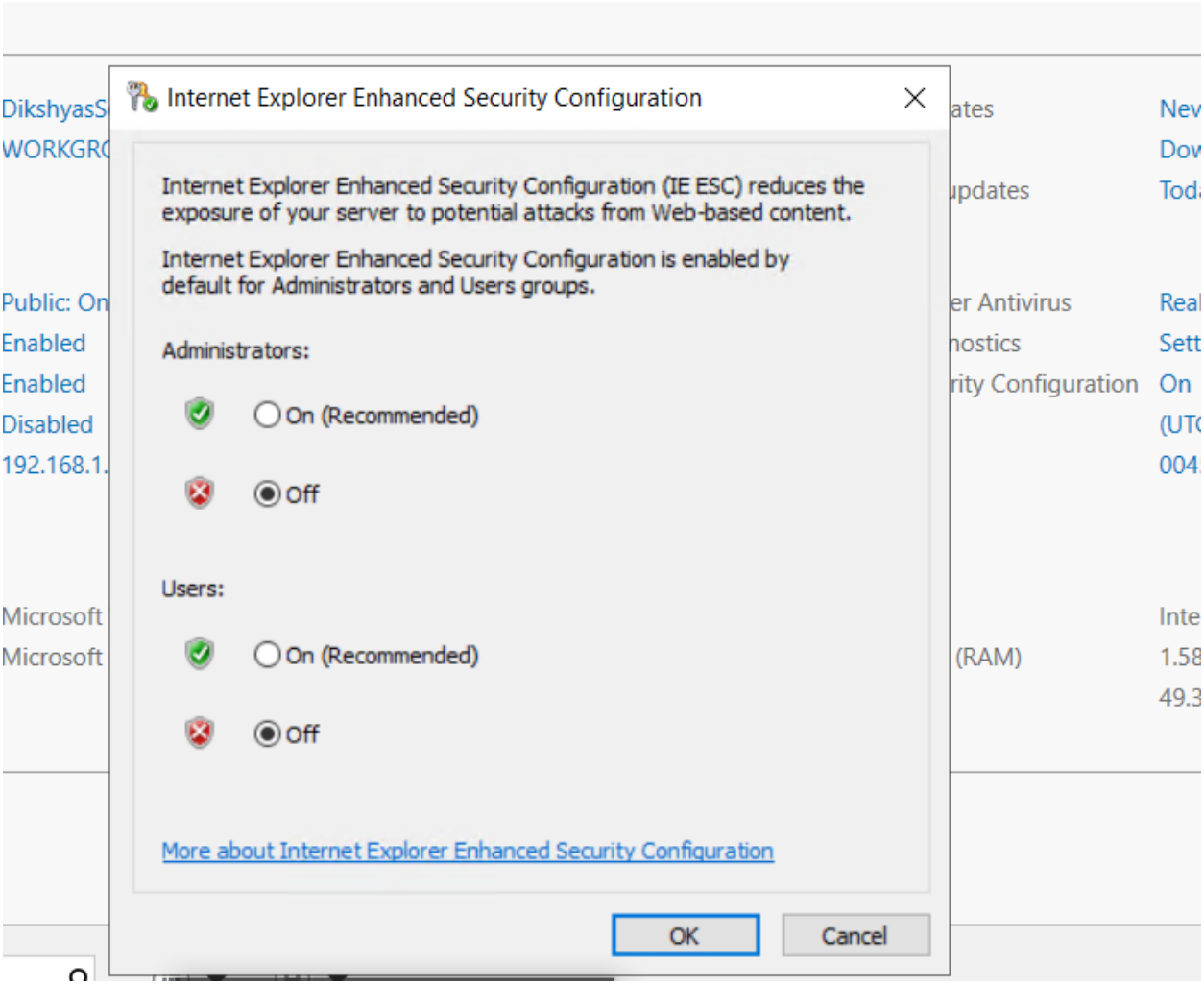

Figure 20: Internet Explorer Enhanced Security Configurations

Following that, “Ok” Button was pressed.

Next, windows update option was selected from the menu.

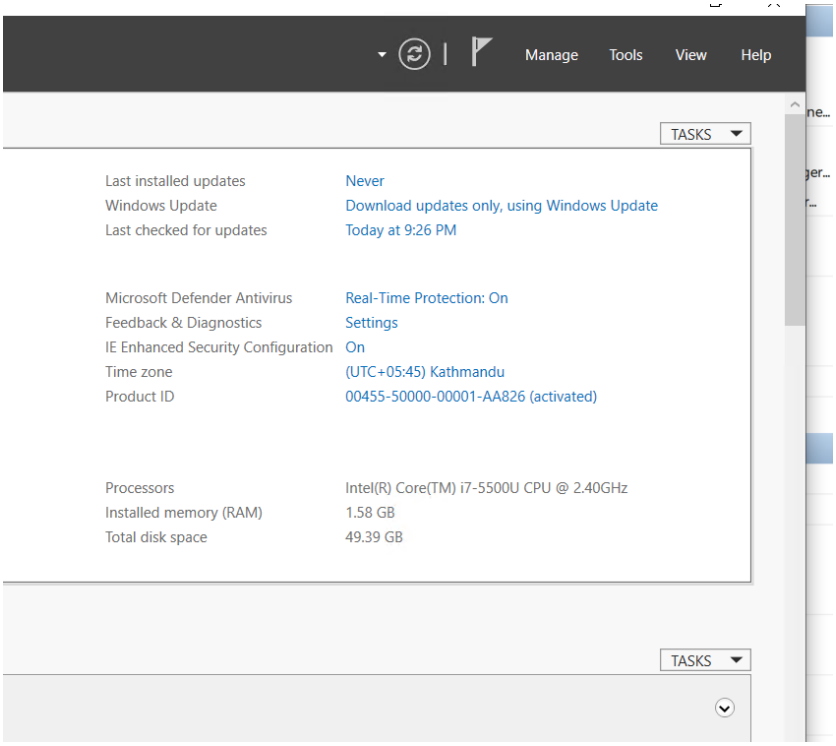

Figure 21:Local Server Interface

The earlier step led to show the update status where new updated are installed automatically.

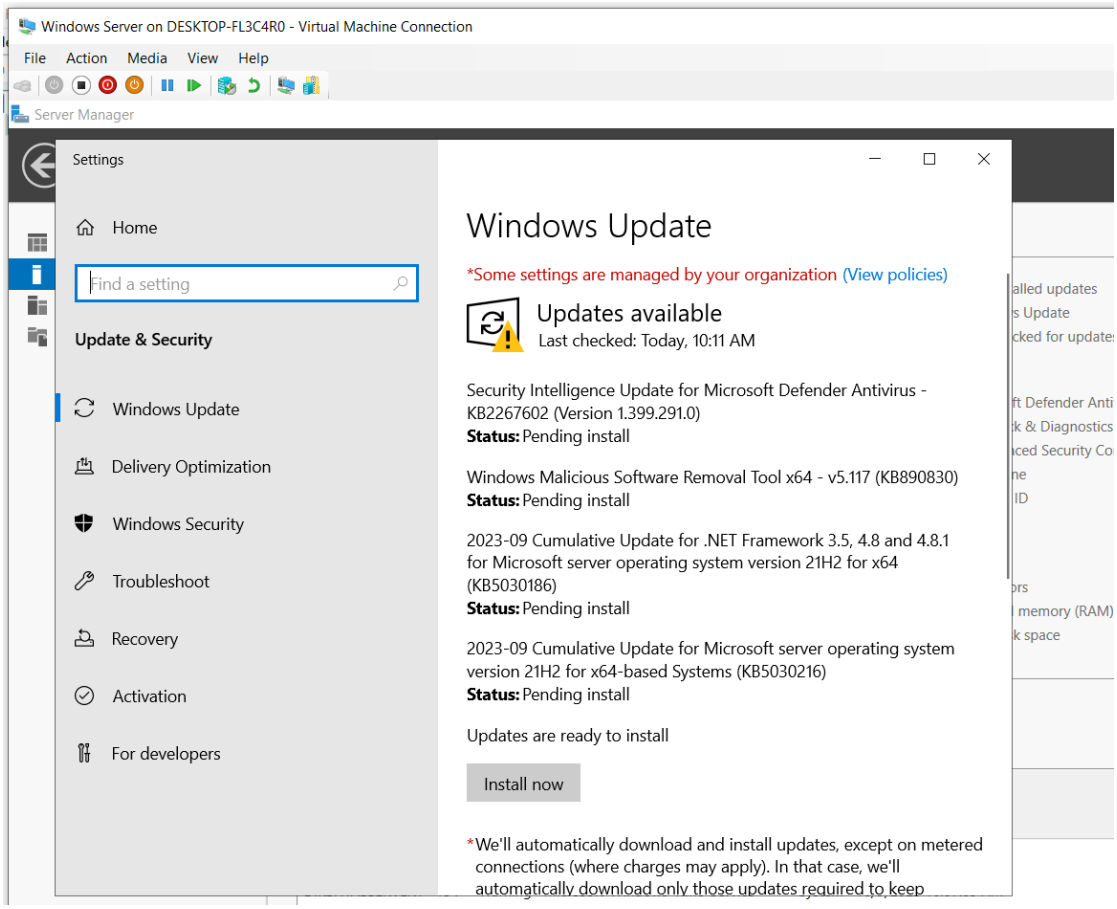

Figure 22: Windows Update Interface

1.7. Step 7: Adding User Using GUI

From the toolbar at the top right of Server Manager, Tools was pressed.

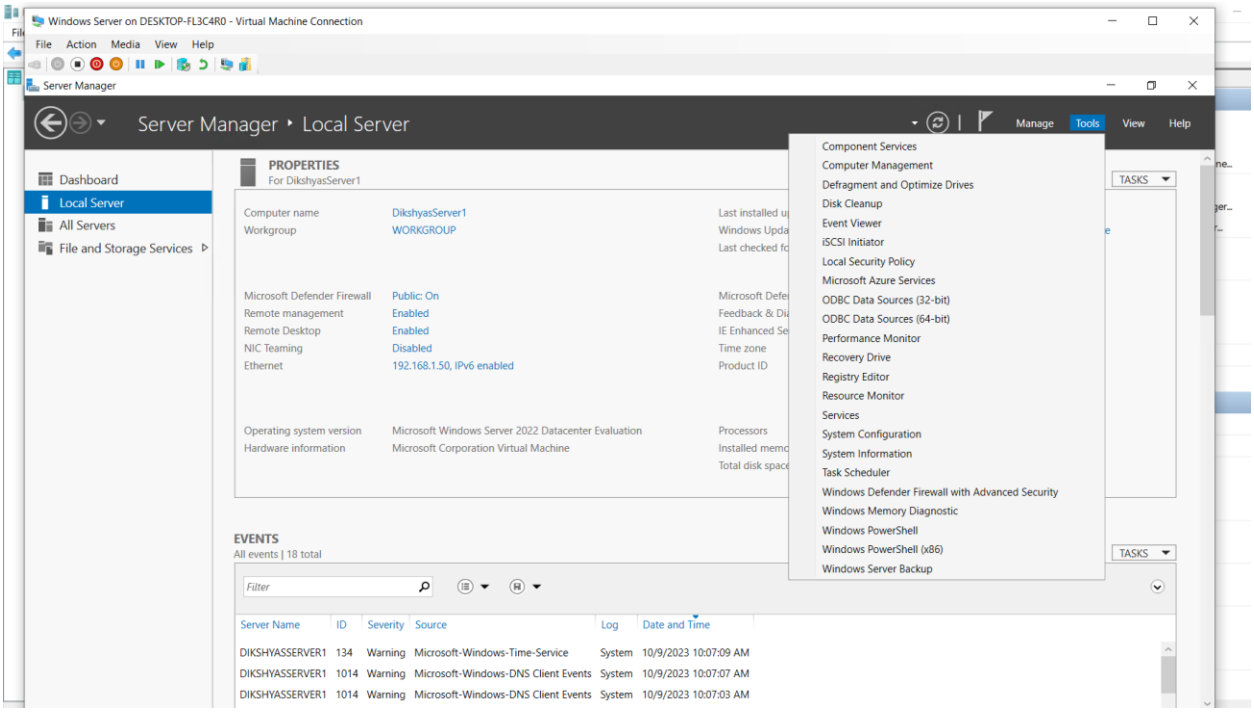

Figure 23:Local Server Interface

Following that, computer management option was selected from the list of options.

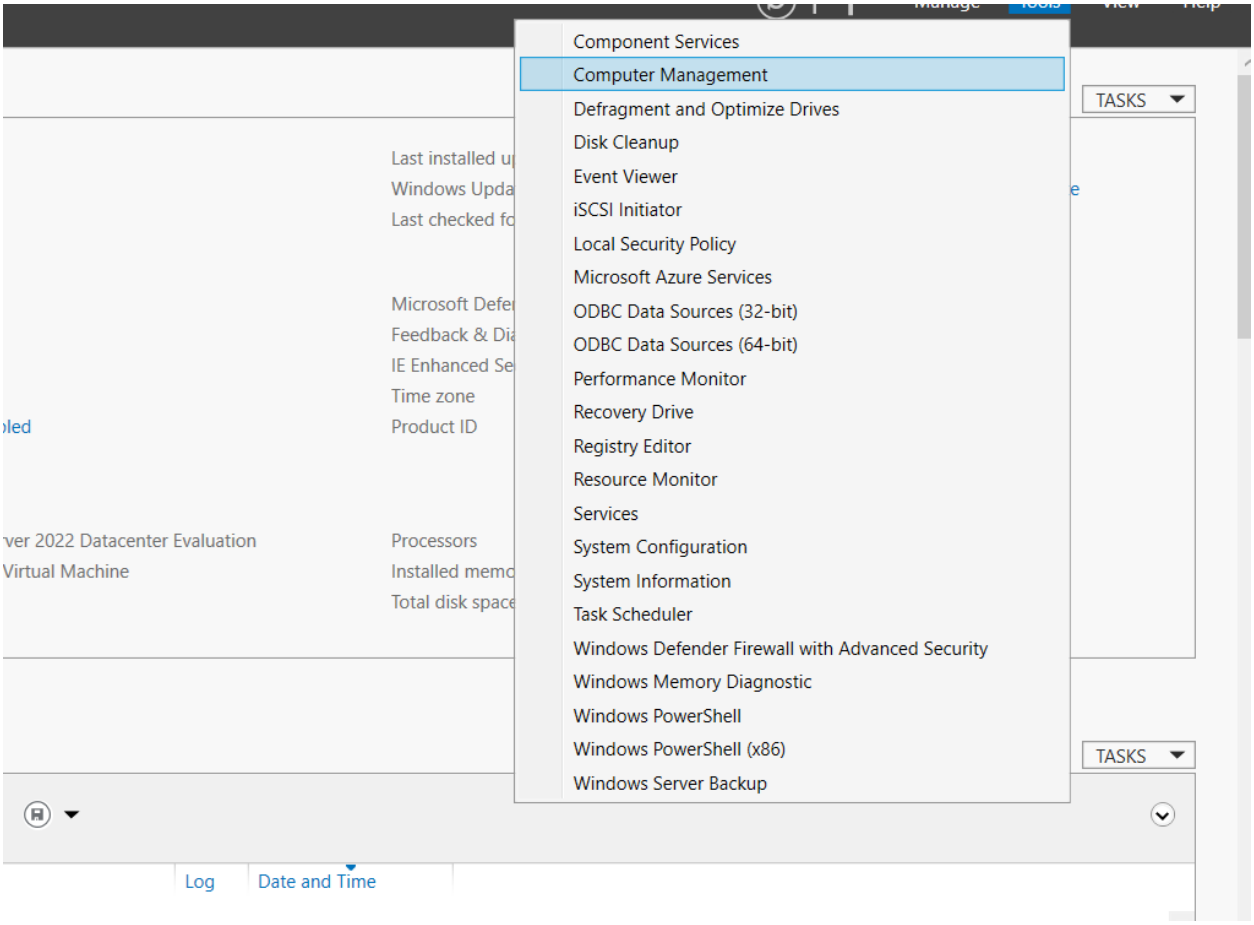

Figure 24: Selecting Computer Management option from tools menu.

Local Users and Groups form the list at the left was selected.

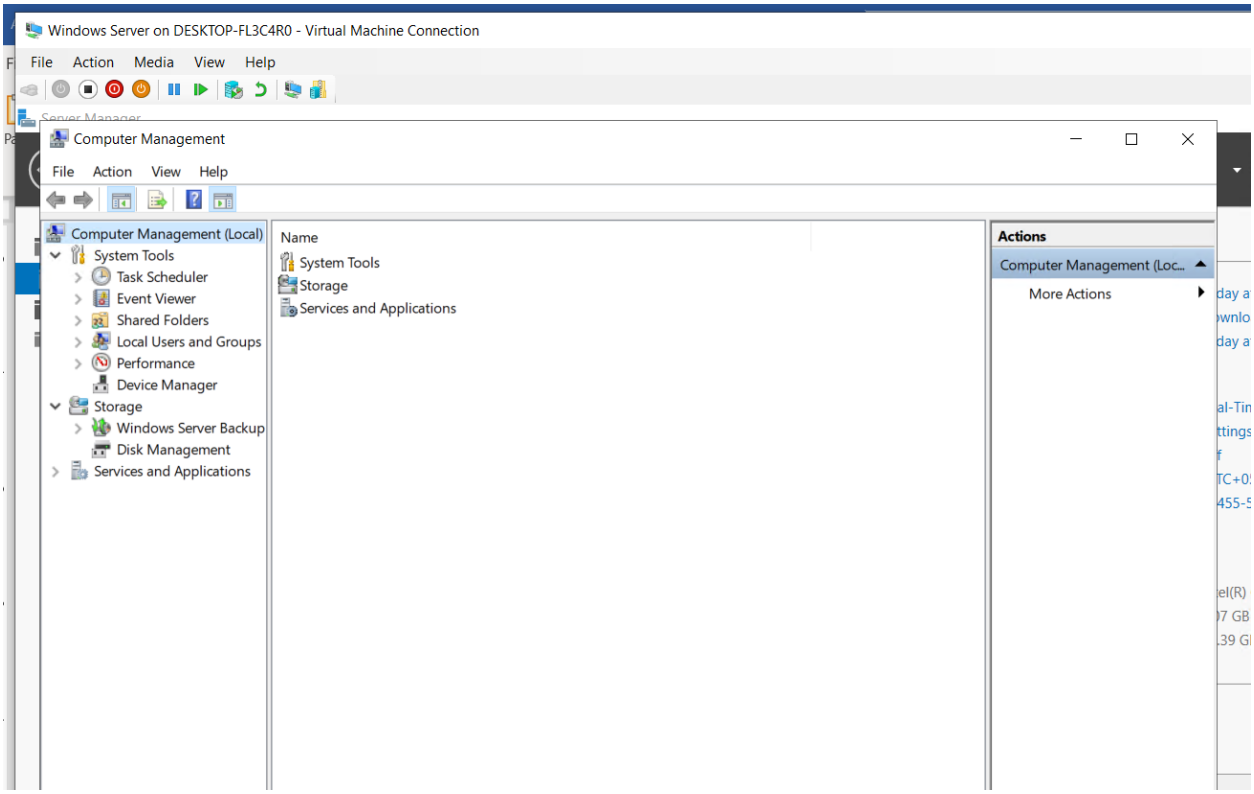

Figure 25: Computer Management Interface

Then, Users options was selected pressing New User from the menu.

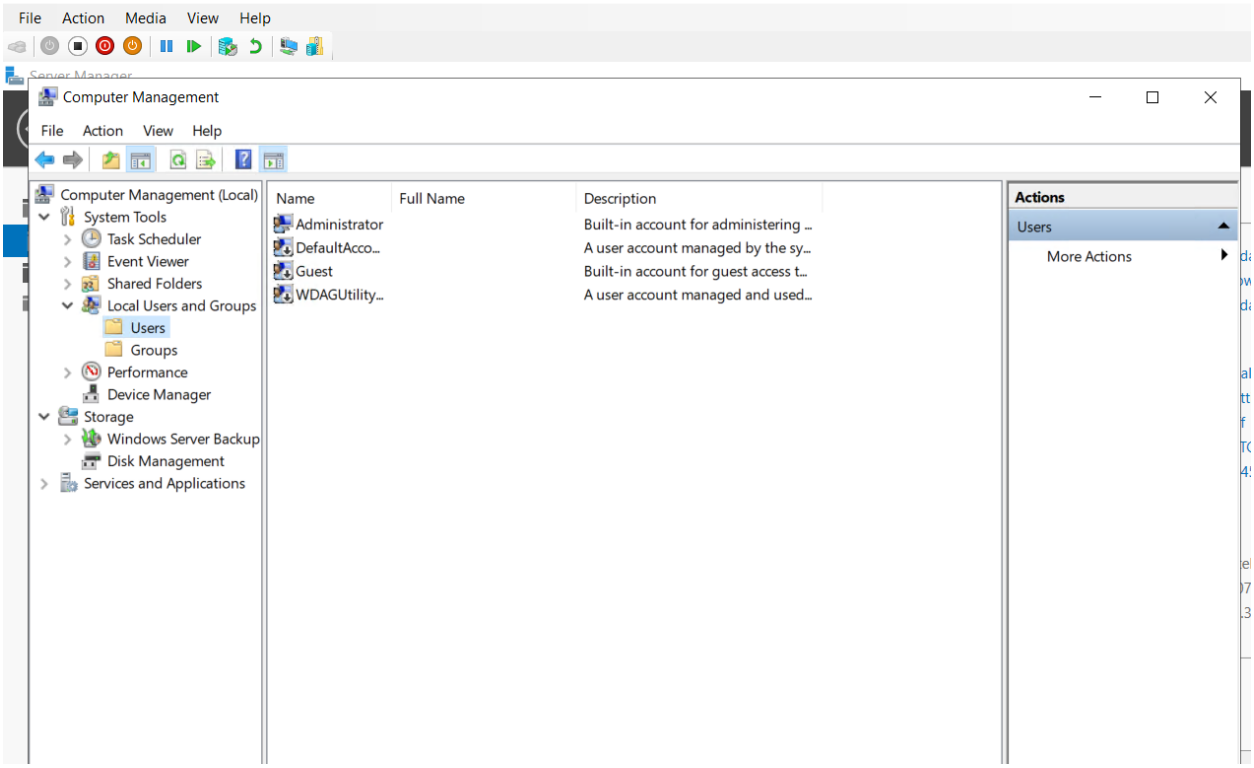

Figure 26: Selecting User

On the new window, details on the new user were entered and Create button was pressed.

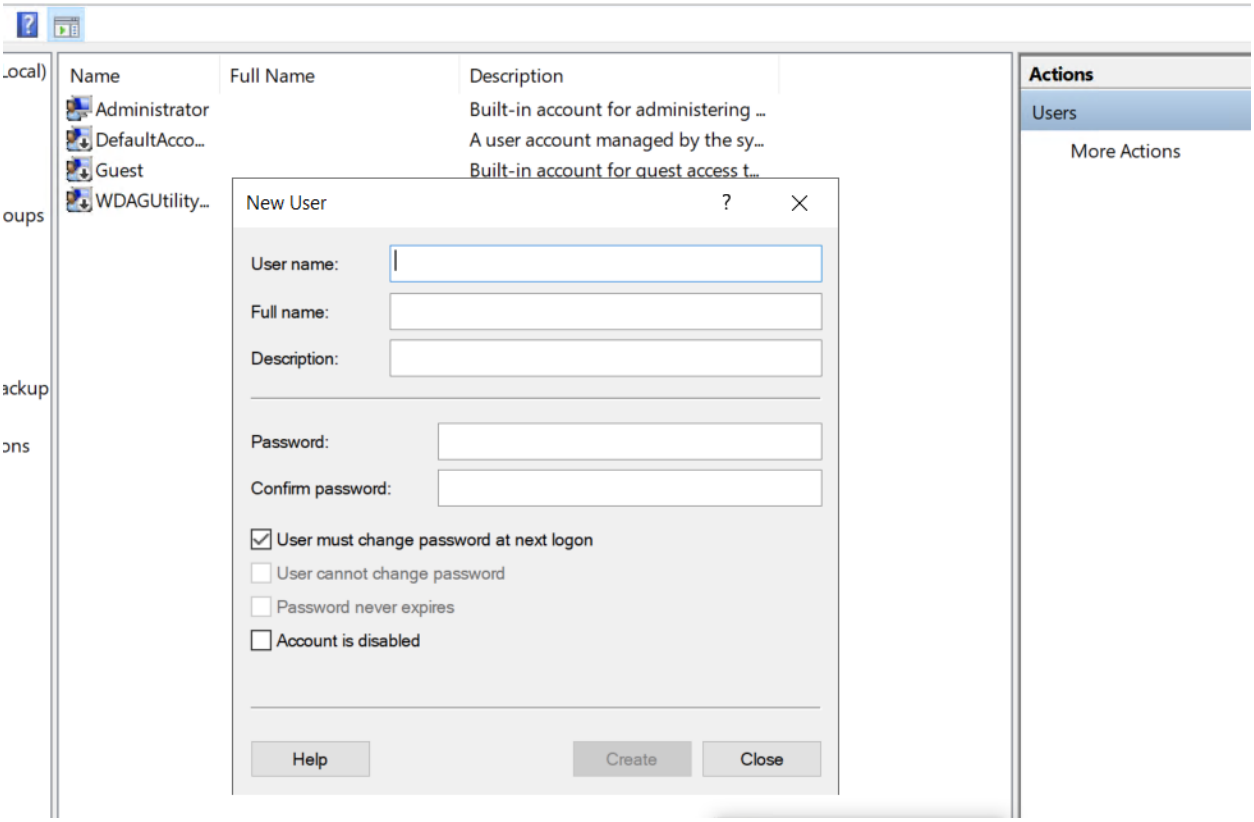

Figure 27: Adding User Interface

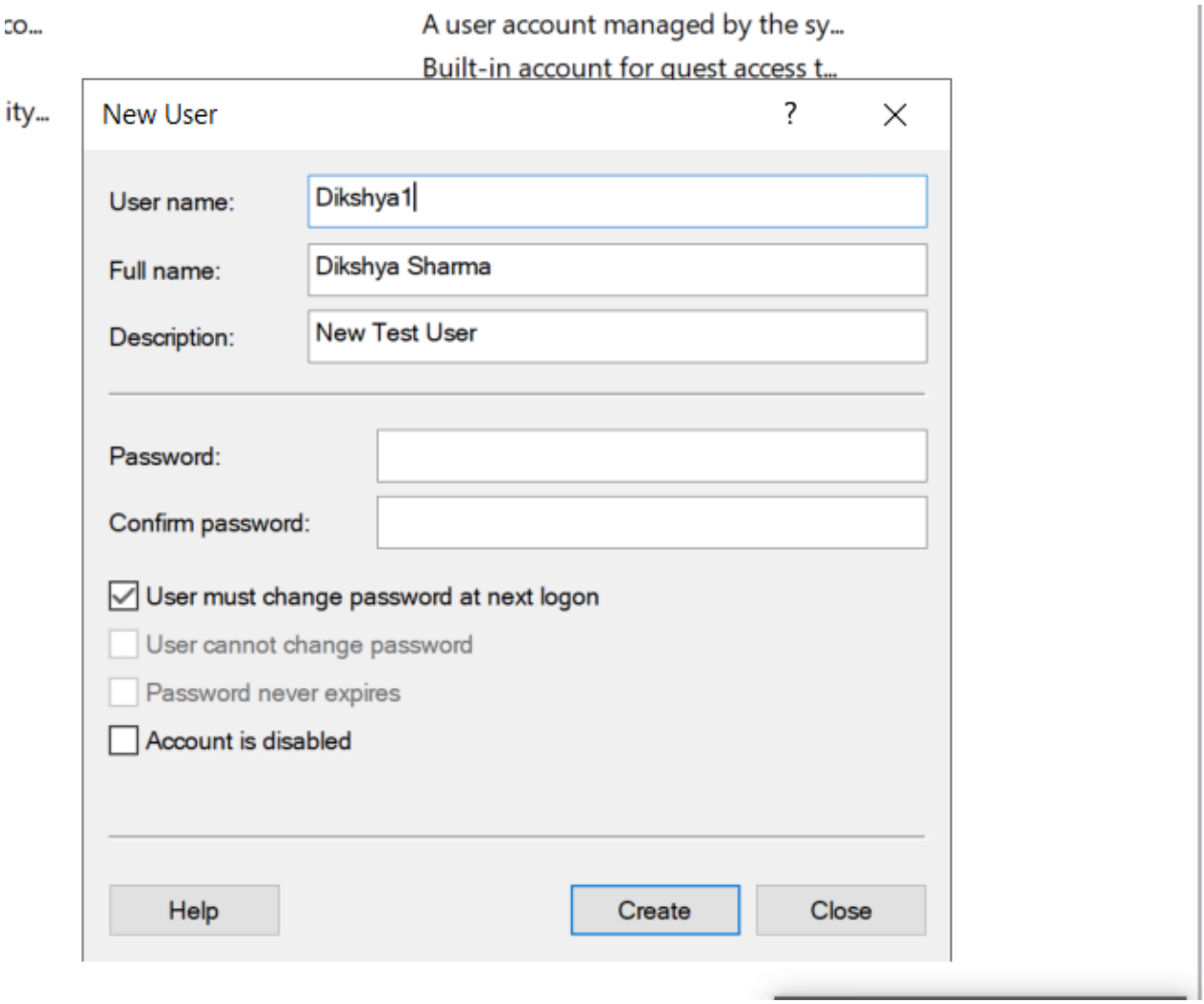

Figure 28: Adding New User

On clicking create button, new user was created.

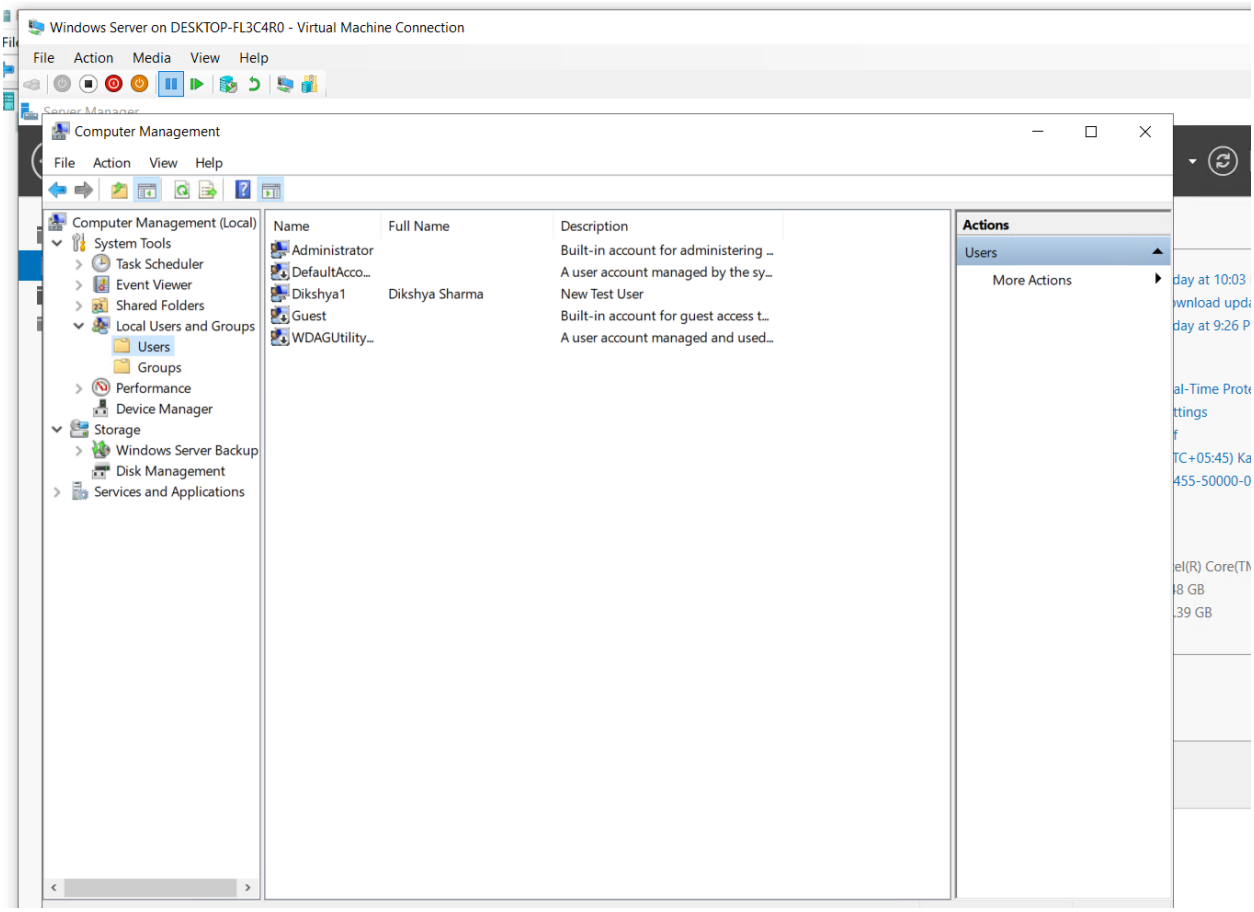

Figure 29: Users Interface

1.8. Step 8: Adding new user using PowerShell.

PowerShell was first opened as an administrator.

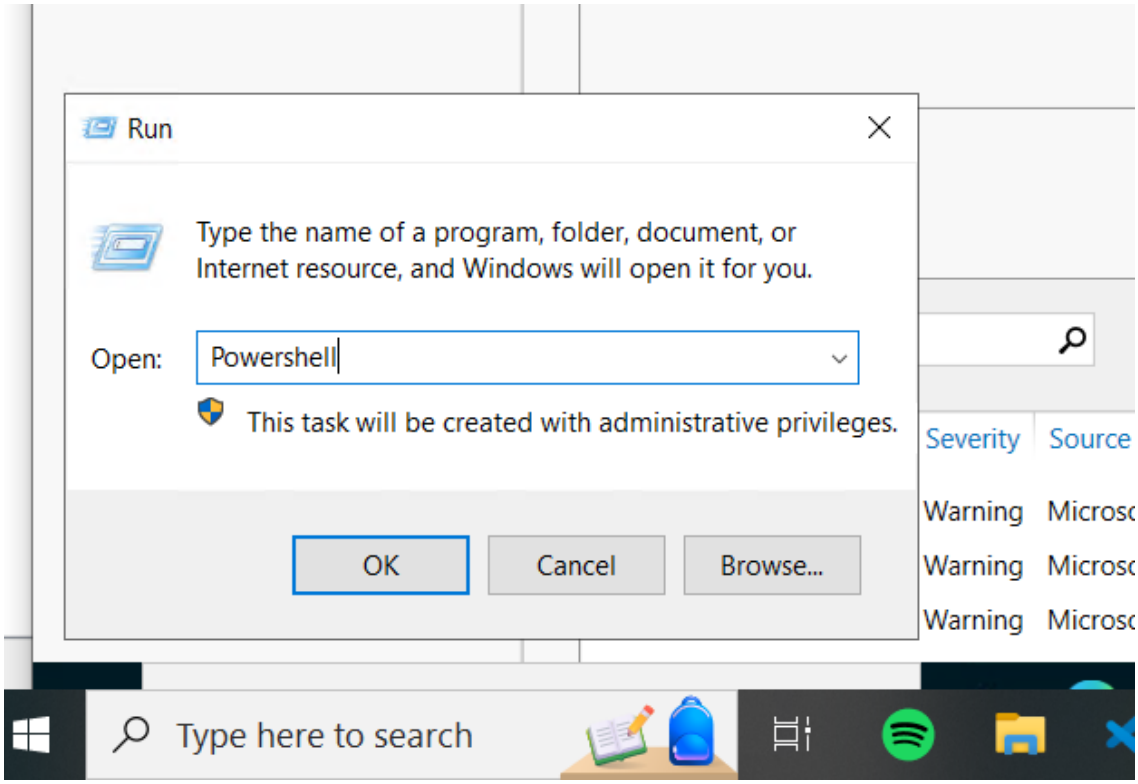

Figure 30: Opening PowerShell

To view all the users, the command “get-localuser” was entered.

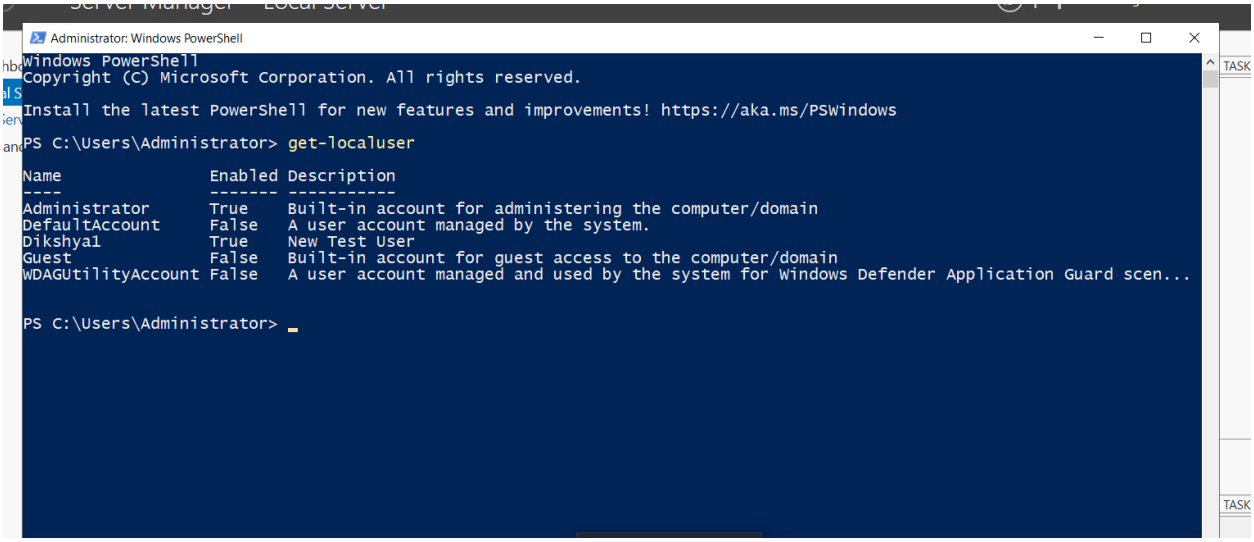

Figure 31: PowerShell interface and viewing all the users.

To create new user, the command “new-localuser -name ‘Dikshya2’ -description ‘Test user 2’ -nopassword was entered. In this case, nopassword was given to skip the password.

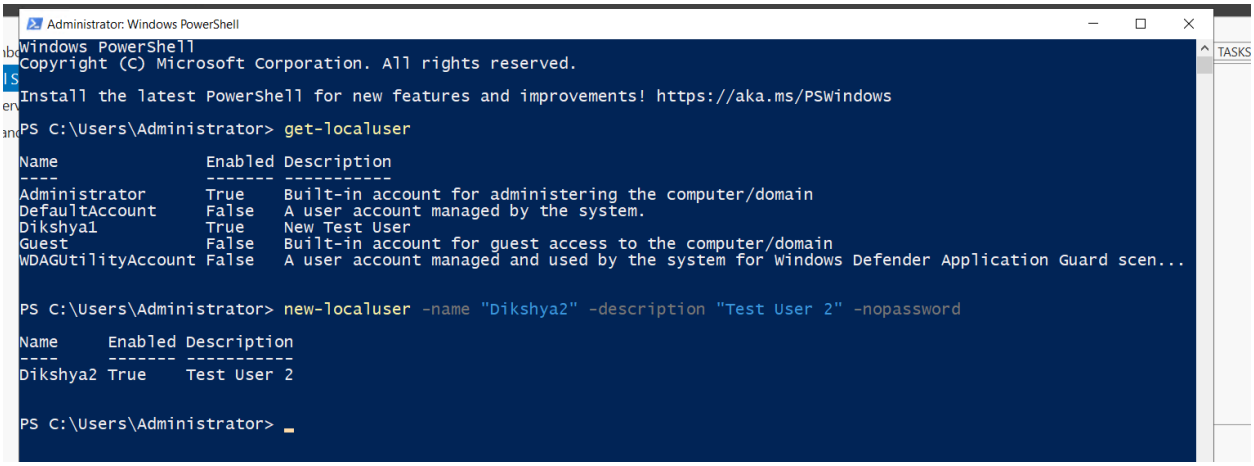

Figure 32: Creating New User using Powershell.

The new user was added successfully.

Unlike GUI, users were not added automatically to the group and require them to be manually added from the Shell. The command “add-localgroupmember -group ‘users’ -member ‘Dikshya2’” was entered to add user manually from the shell.

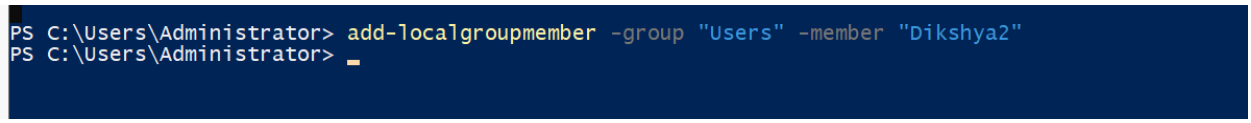

Figure 33: Adding Using manually from the shell.

1.9. Step 9: Removing the user.

Command “remove-localuser -name ‘Dikshya2’” was entered to remove the user. Again, “get-localuser” was entered to make sure user was removed.

```
PS C:\Users\Administrator> remove-localuser -name "Dikshya2"
PS C:\Users\Administrator> get-localuser

Name               Enabled Description
----               ------- -----------
Administrator      True    Built-in account for administering the computer/domain
DefaultAccount     False   A user account managed by the system.
Dikshya1           True    New Test User
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...
```

Figure 34: Removing User

1.10. Step 10: Storing passwords using variables as secure strings.

To store strings as secure string a new variable was created using the command $variable -read-host -assecurestring.

Password string was given and was stored by the variable.

```
PS C:\Users\Administrator> $password = read-host -assecurestring
**********
```

Figure 35: Storing Passwords using variables.

Again, new user was created by giving the variable as password.

```
PS C:\Users\Administrator> $password = read-host -assecurestring
**********
PS C:\Users\Administrator> new-localuser -name "Dikshya3" -password $password -description "This is user 3"

Name     Enabled Description
----     ------- -----------
Dikshya3 True    This is user 3
```

Figure 36: Adding New User

Making sure, new user was added by entering command “get-localuser”.

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> $password = read-host -assecurestring
**********
PS C:\Users\Administrator> new-localuser -name "Dikshya3" -password $password -description "This is user 3"

Name     Enabled Description
----     ------- -----------
Dikshya3 True    This is user 3


PS C:\Users\Administrator> get-localuser

Name               Enabled Description
----               ------- -----------
Administrator      True    Built-in account for administering the computer/domain
DefaultAccount     False   A user account managed by the system.
Dikshya1           True    New Test User
Dikshya3           True    This is user 3
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:\Users\Administrator>
```

Figure 37: viewing all users.

2. Conclusion

This workshop was extremely beneficial to learn about the Windows Server 2022 Operating System. This workshop was specifically aimed at teaching us about Managing server. We got to experience practical knowledge about how the name of the server is changed. It taught us to enable remote desktop. Likewise, we got to experience to set up static IP address by providing IP address, subnet, and gateways. Similarly, we also learned about changing time zone and turning off IE enhanced security. We added users using GUI as well as PowerShell, learning to remove the user and to store passwords using variables. All in all, this workshop laid a foundation to the upcoming workshops and also provided knowledge regarding the use of Network Operating Software (i.e., Windows Server 2022).