

**Module Code & Module Title**

Level 5 – CT5052NP

Assessment Type

Logbook three

Semester

2023/24 Spring/Autumn

Student Name: Subanta Poudel

London Met ID: 20048736

College ID: NP04CP4S210115

Assignment Due Date: November 23, 2024

Assignment Submission Date: November 22, 2024

Submitted To: Prasant Adhikari

Word Count (Where Required): 800

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

Contents

Table of Figures	3
Introduction.....	4
Objectives	4
Tools and Concepts.....	4
Tools	4
Concepts.....	4
Steps.....	5
Changing the Server's Name	5
Enabling Remote Desktop	8
Setting Up a Static IP Address.....	9
Changing the Time zone	13
Turning off IE Enhanced Security and Checking for Updates	14
Adding a User Using GUI.....	16
Adding a User Using Shell	19
Removing a User.....	20
Storing Passwords as Secure Strings	20
Errors that may occur in PowerShell	21
Summary	22

Table of Figures

Figure 1 : Server dashboard	5
Figure 2: Local Server dashboard	6
Figure 3 : System properties	6
Figure 4 : Change computer name	7
Figure 5 : Restart Prompt.....	7
Figure 6 : Remote desktop	8
Figure 7 : Remote desktop system properties	8
Figure 8 : Remote Desktop Connection warning prompt	9
Figure 9 : Ethernet Setting	10
Figure 10 : Network Connections settings.....	10
Figure 11 : Ethernet Properties	11
Figure 12 : Command Prompt ipconfig	11
Figure 13 : Command Prompt Ethernet adapter	12
Figure 14 : Internet Protocol changed warning.....	13
Figure 15 : Date and Time Settings	13
Figure 16 : Time Zone Setting dropdown menu.....	14
Figure 17 : Internet Explorer Enhanced Security Configuration	15
Figure 18 : Windows Update	15
Figure 19 : Tools Dropdown.....	16
Figure 20 : Computer management > Users	17
Figure 21 : Adding New User	17
Figure 22 : New User menu	18
Figure 23 : Computer Management after user added.....	18
Figure 24 : Windows PowerShell	19
Figure 25 : Windows PowerShell view all users	19
Figure 26 : Windows PowerShell add new user	19
Figure 27 : Windows PowerShell add user to a group.....	20
Figure 28 : Windows PowerShell remove a user.....	20
Figure 29 : Windows PowerShell creating secure string variable	20
Figure 30 : Windows PowerShell create new user with a password	20
Figure 31 : Windows PowerShell view all user after adding another user	21
Figure 32 : Windows PowerShell error due to password being spelled wrong	21
Figure 33 : Windows PowerShell error unrecognized cmdlet name	21
Figure 34 : Windows PowerShell error due to weak password	22

Introduction

This log is about the step-by-step instructions to manage a Windows Server using Server Manager and PowerShell. It covers tasks like renaming the server, enabling remote desktop, configuring static IP address, adding users, and more.

Windows Server is a robust operating system designed to handle enterprise-level tasks such as hosting applications, managing databases, and serving web pages. Effective server management ensures optimal performance, security, and scalability. This guide focuses on essential tasks using Server Manager and PowerShell, empowering administrators to efficiently manage and configure their servers. (Microsoft, n.d.)

Objectives

Understand the basic server management operations using Server Manager and PowerShell.

Learn to configure server settings such as hostname, IP addresses, and time zone.

Enable and manage Remote Desktop Services.

Add, modify, and remove users via GUI and PowerShell.

Improve server security and configuration efficiency.

Tools and Concepts

Tools

Server Manager: A built-in GUI tool in Windows Server for server management.

PowerShell: A command-line tool for advanced server configuration.

Concepts

Server Configuration: Basic setup like renaming, IP addressing, and time zone configuration.

Remote Desktop: A service for remotely accessing the server's GUI and features.

User Management: Adding, modifying, and removing users from the system.

IE Enhanced Security: Disabling browser security for usability during configuration.

Secure Strings: Storing sensitive data securely in PowerShell.

Steps

Changing the Server's Name

Open Server Manager

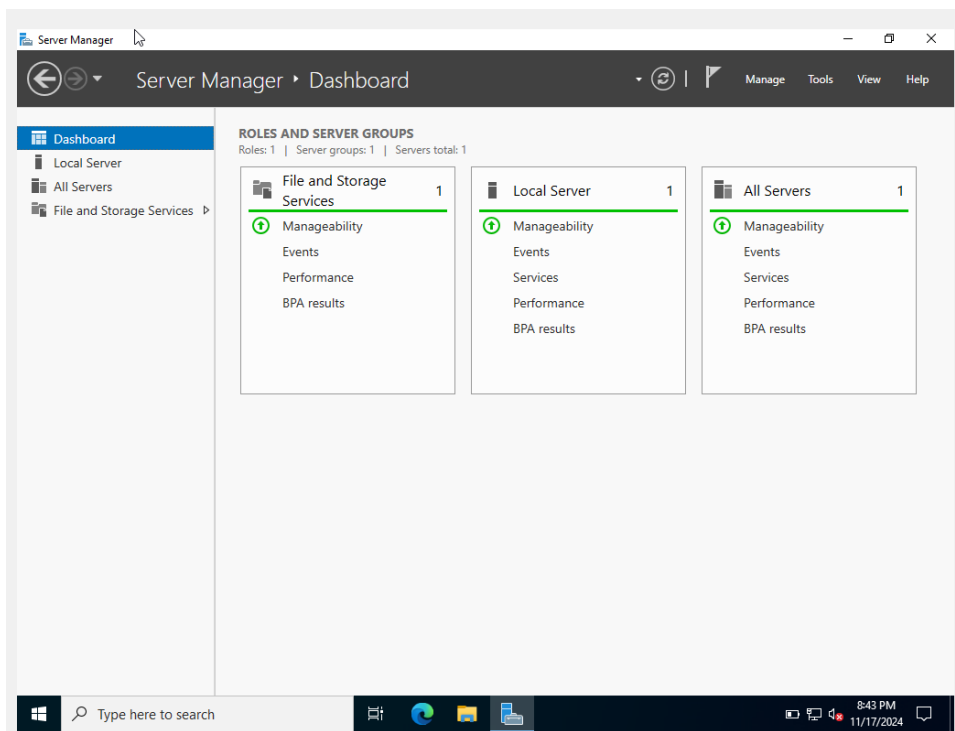


Figure 1 : Server dashboard

Navigate to Local Server and click the Computer Name

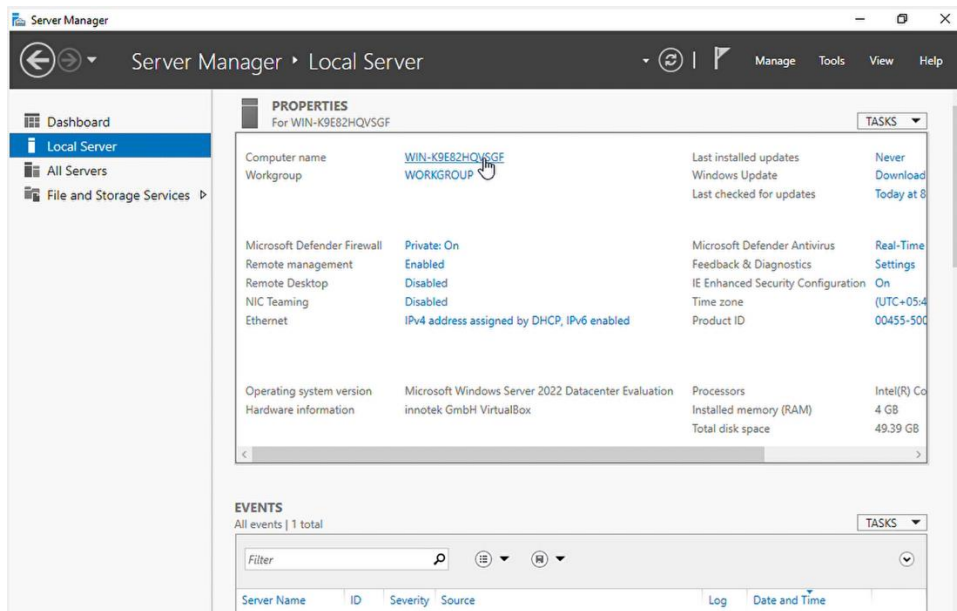


Figure 2: Local Server dashboard

In the new window, Click Change Button

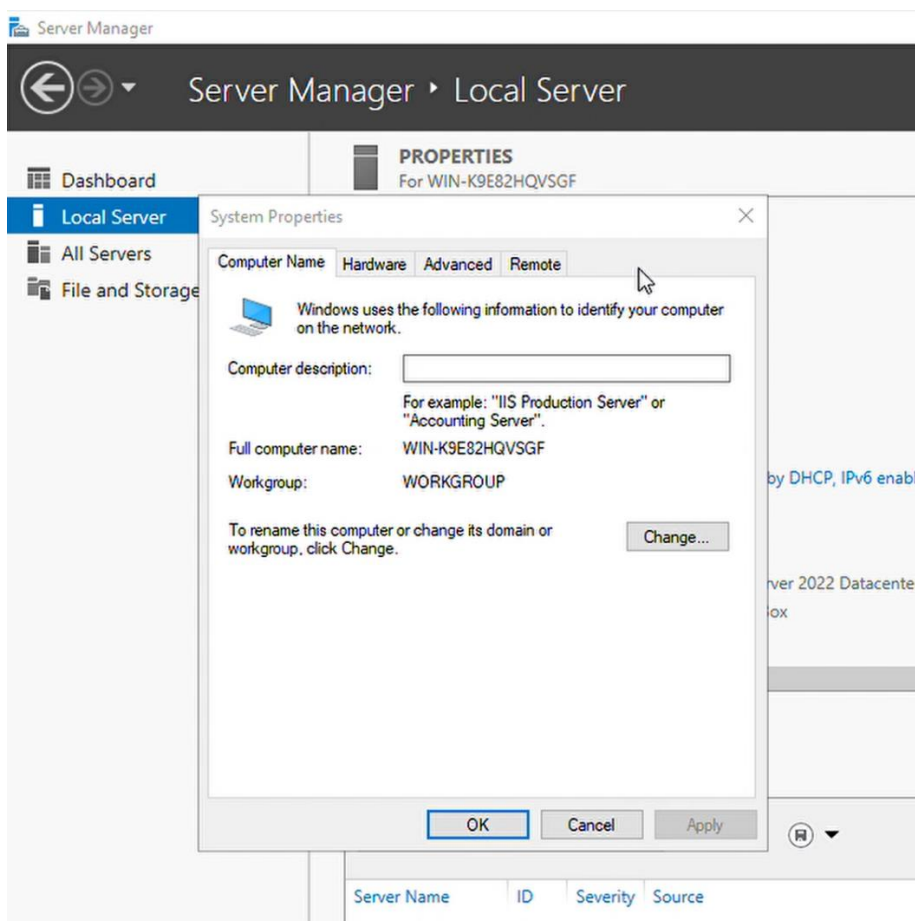


Figure 3 : System properties

Enter a new name for the server and press OK.

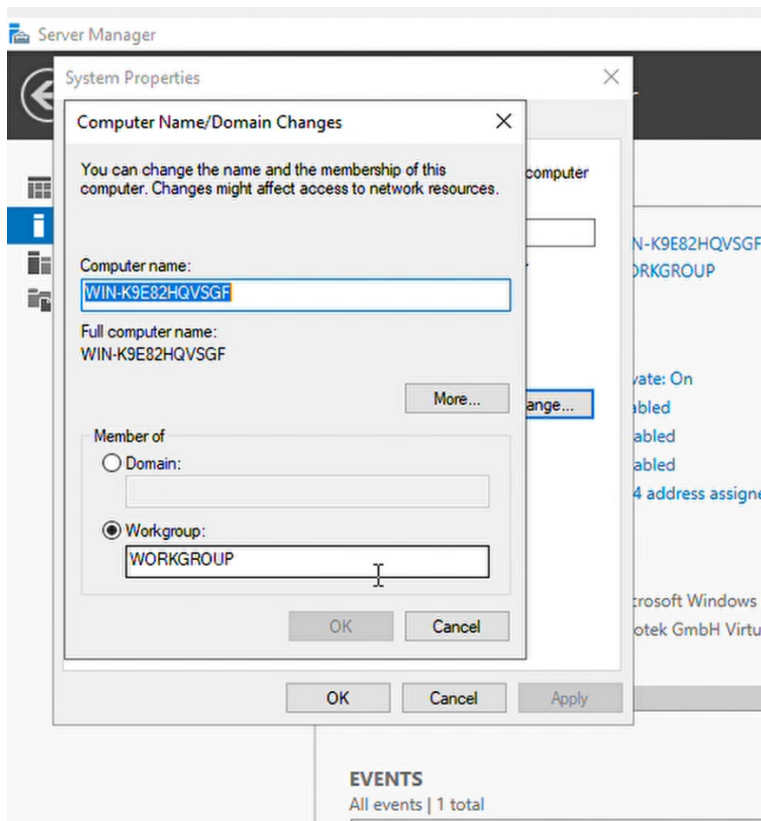


Figure 4 : Change computer name

Restart the server when prompted to apply the changes.

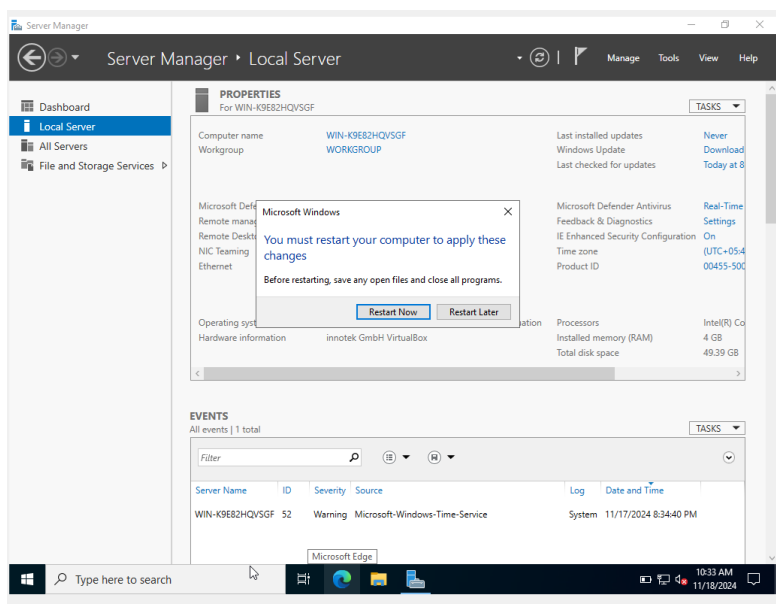


Figure 5 : Restart Prompt

Enabling Remote Desktop

Press the Remote Desktop button

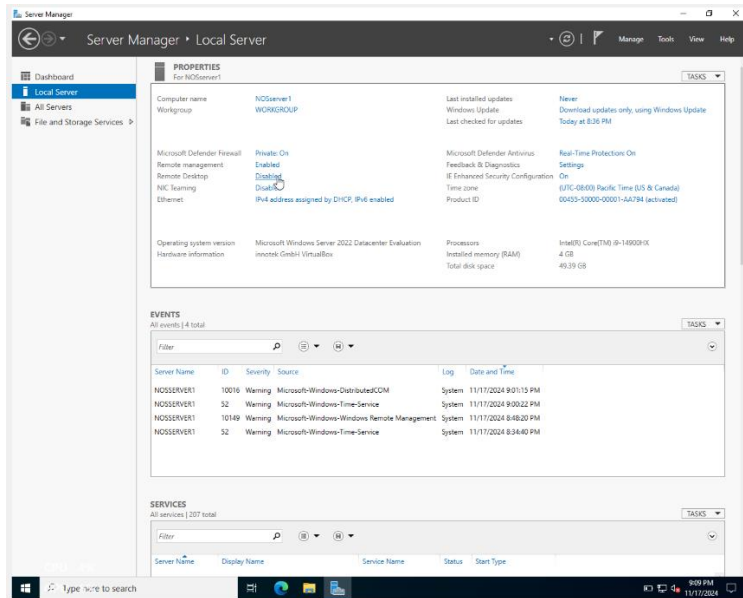


Figure 6 : Remote desktop

Click Allow button to enable the service

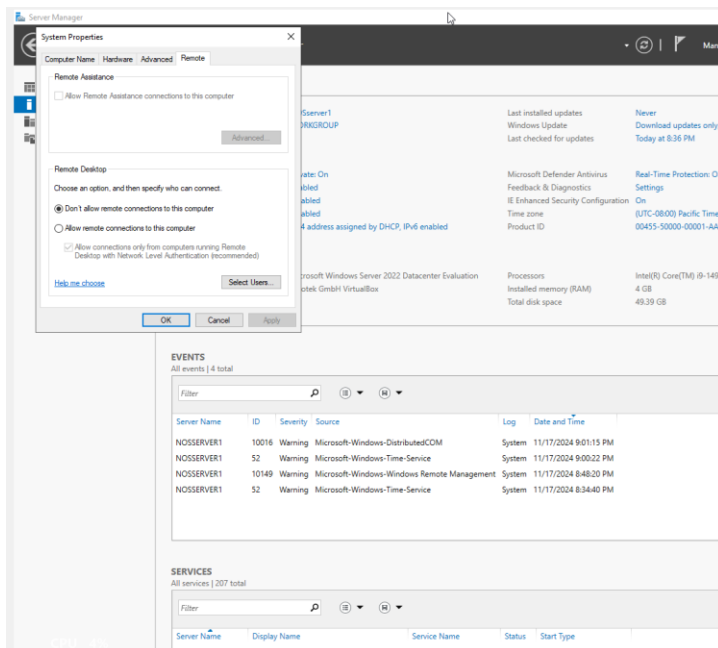


Figure 7 : Remote desktop system properties

A warning message about the firewall will be displayed; press OK to proceed.

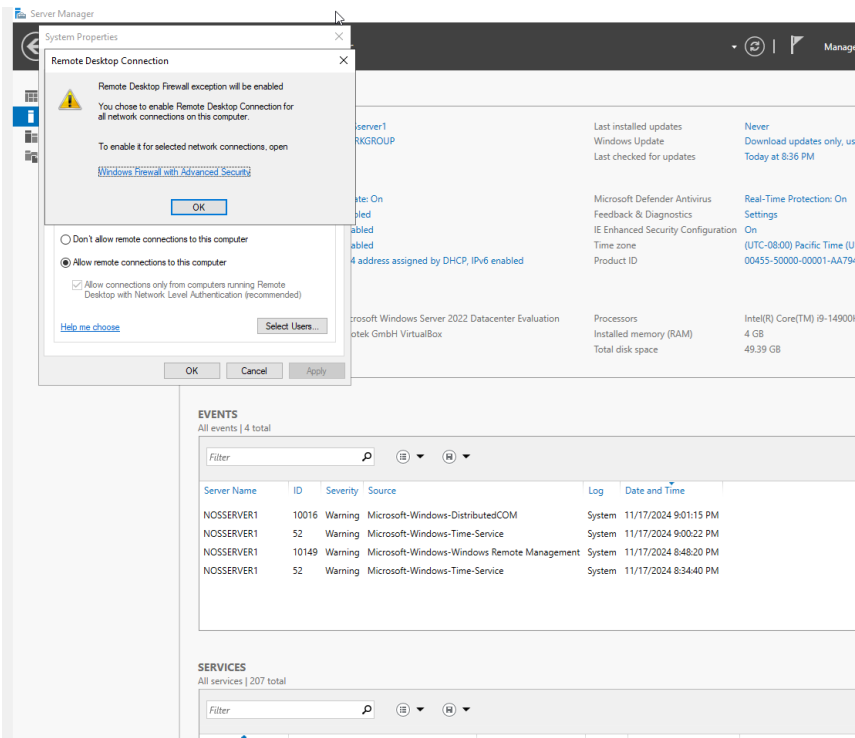


Figure 8 : Remote Desktop Connection warning prompt

Setting Up a Static IP Address

In Server Manager, click the Ethernet button to view network adapters.

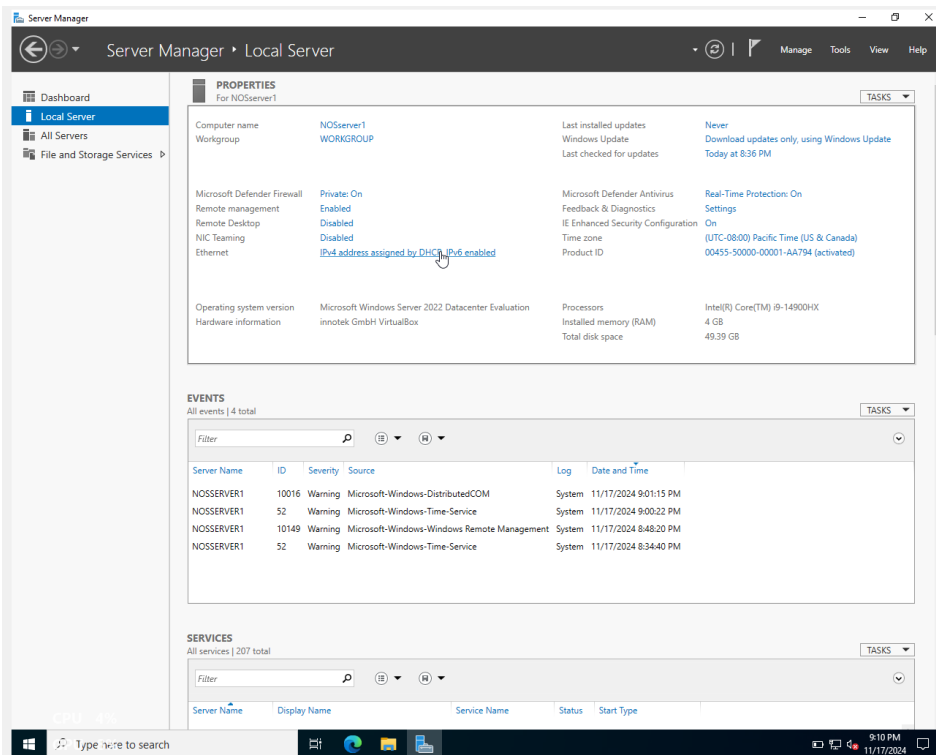


Figure 9 : Ethernet Setting

Right-click the desired adapter and select Properties.

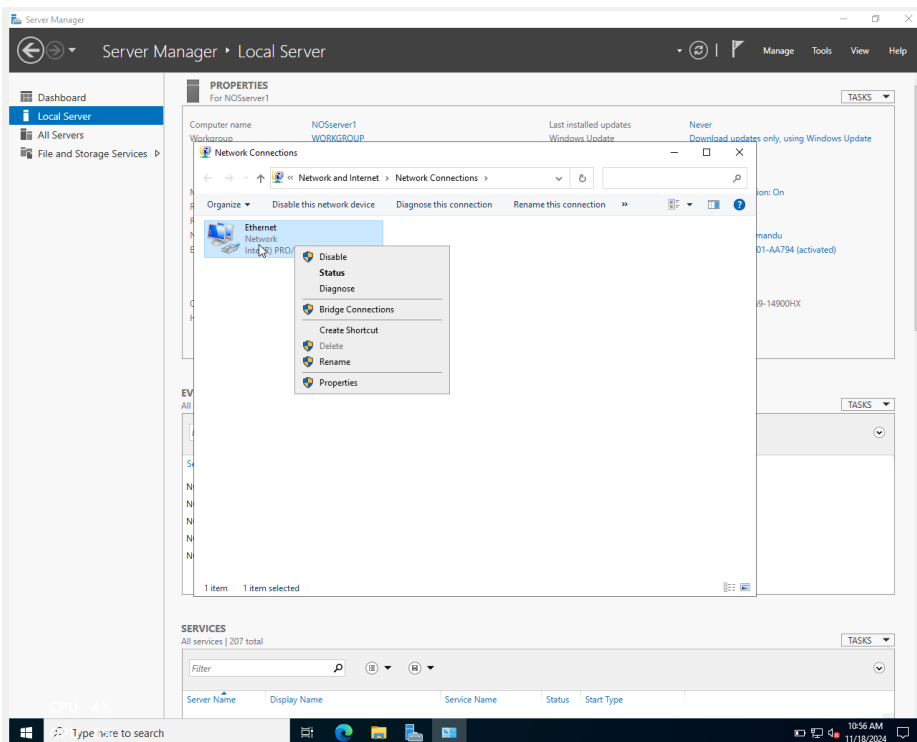


Figure 10 : Network Connections settings

Double-click IPv4 and enter the following details:

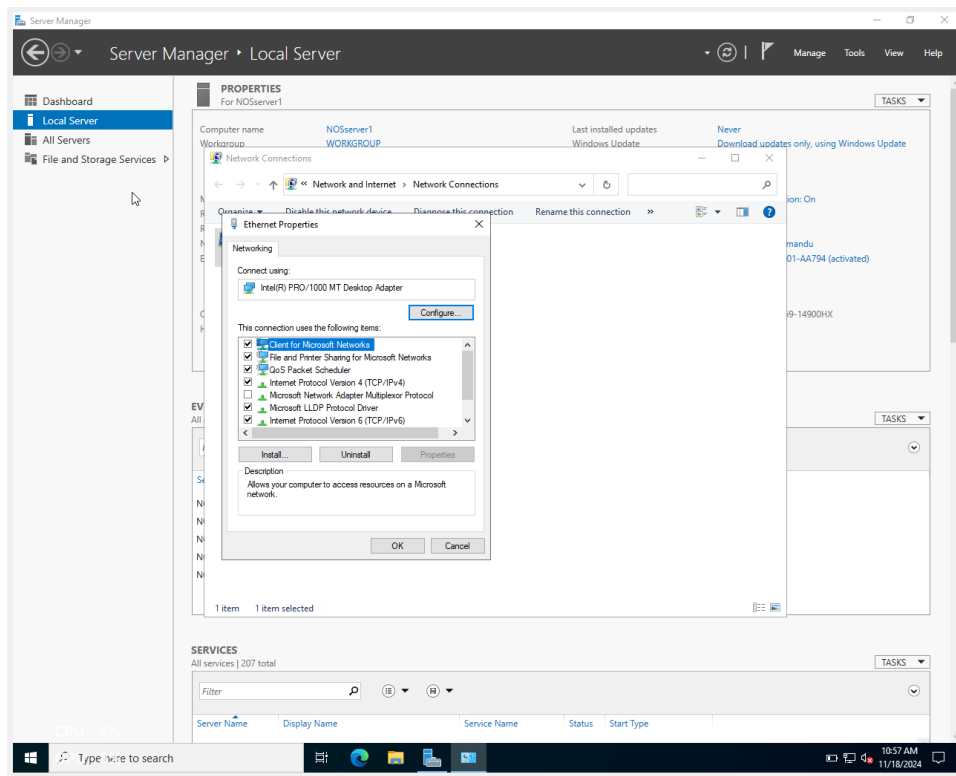


Figure 11 : Ethernet Properties

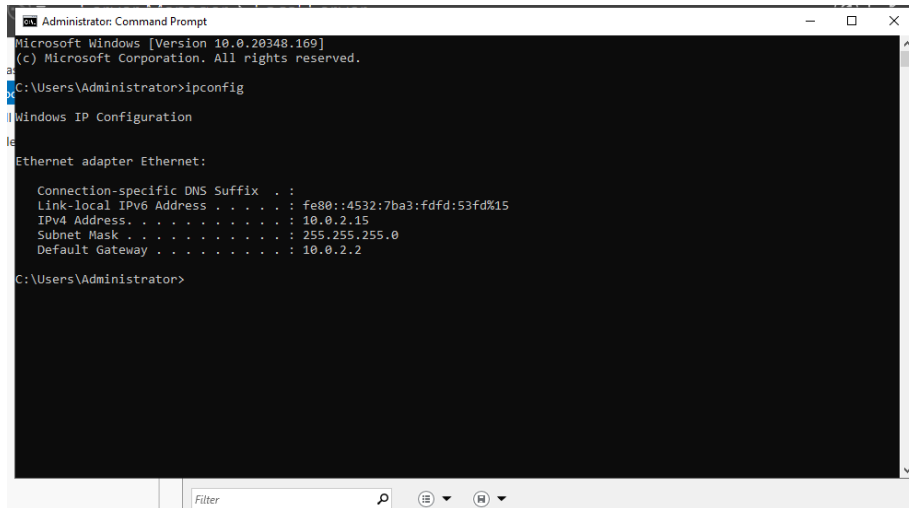


Figure 12 : Command Prompt ipconfig

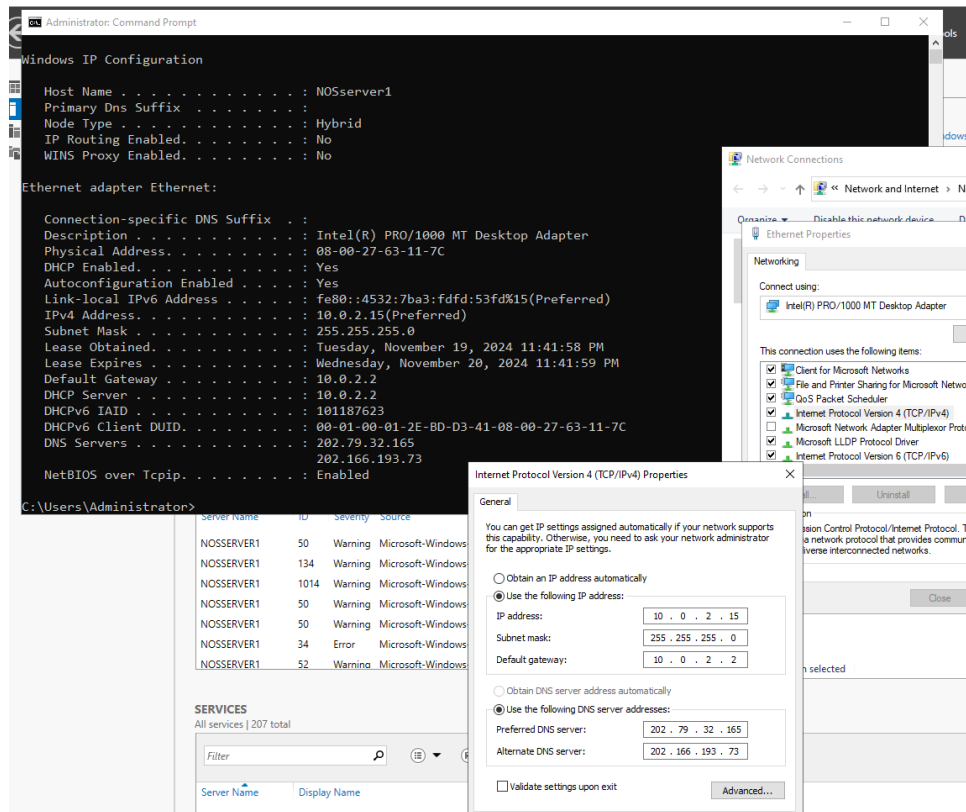


Figure 13 : Command Prompt Ethernet adapter

IP Address 192.168.56.1

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.254

DNS Server address (Primary and Secondary)

192.168.235.1 and 8.8.8.8

Press OK to save and apply the settings.

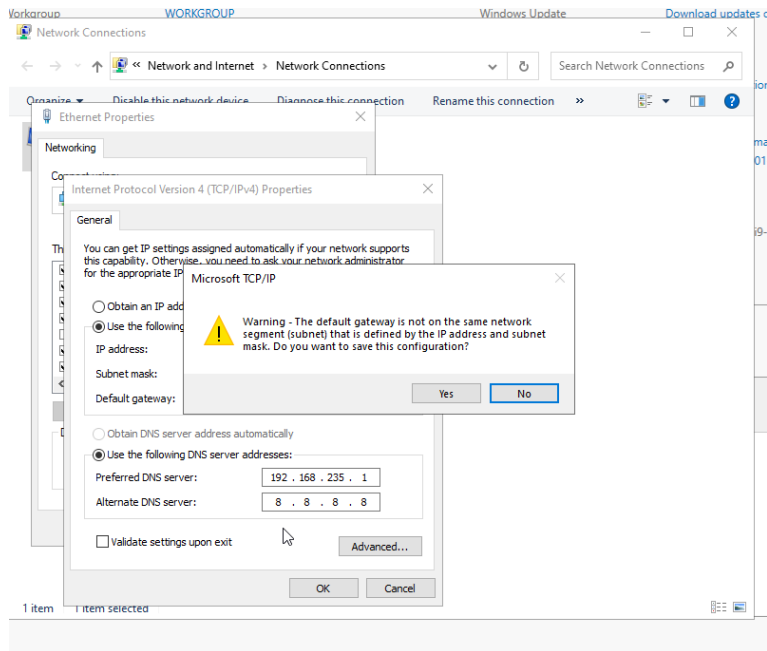


Figure 14 : Internet Protocol changed warning

Changing the Time zone

In Server Manager, select the Time Zone option

Press the Change Time Zone button in the window.

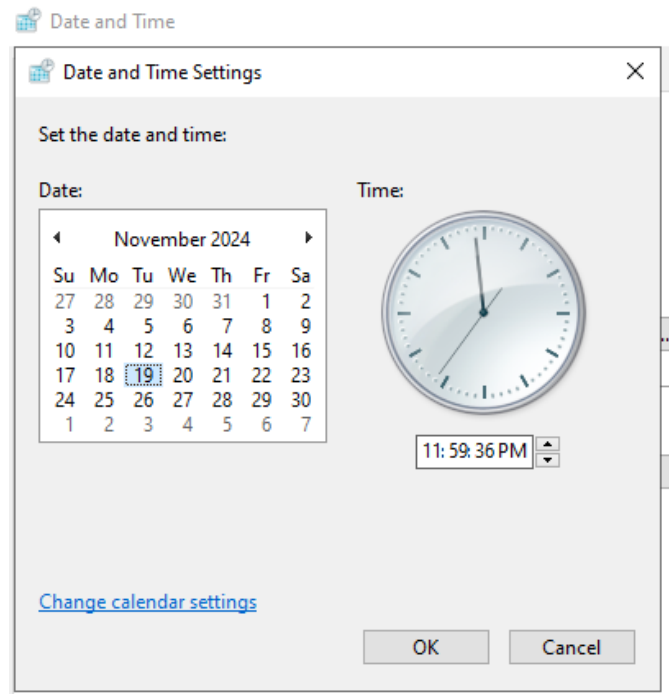


Figure 15 : Date and Time Settings

Select the appropriate time zone from the drop down menu

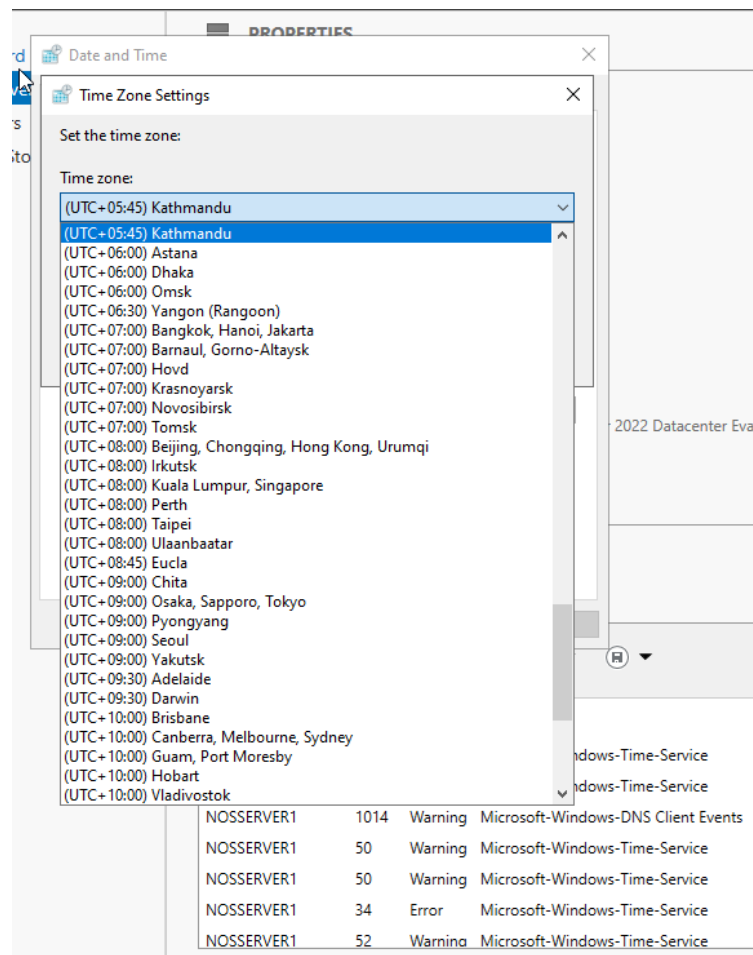


Figure 16 : Time Zone Setting dropdown menu

Turing off IE Enhanced Security and Checking for Updates

In Server Manager, press the IE Enhanced Security button

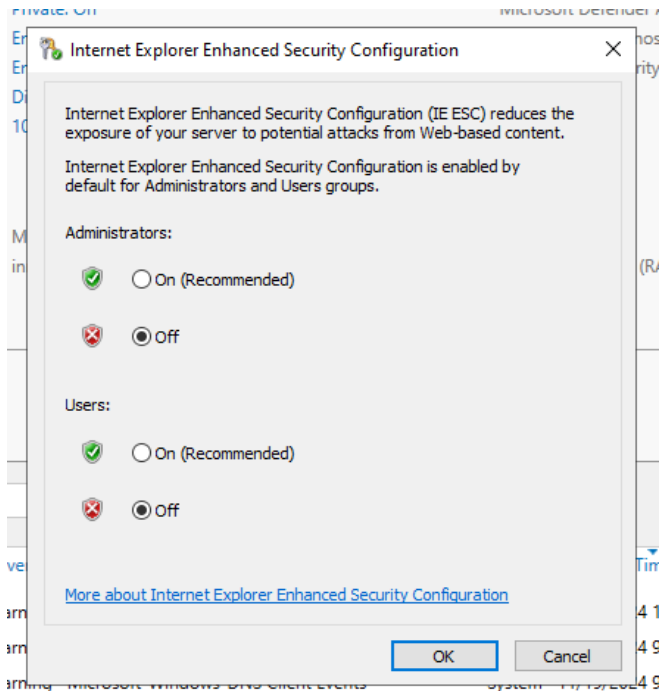


Figure 17 : Internet Explorer Enhanced Security Configuration

In the new window, disable security for both Administrators and Users

For updates, press the Update button and select check for updates

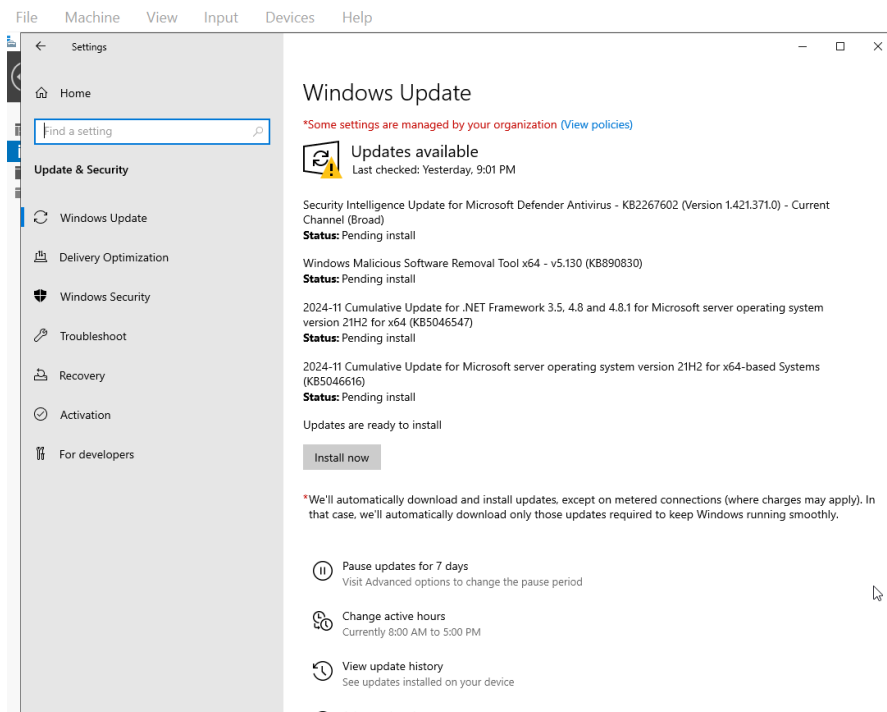


Figure 18 : Windows Update

Adding a User Using GUI

In Server Manager, select Tools > Computer Management

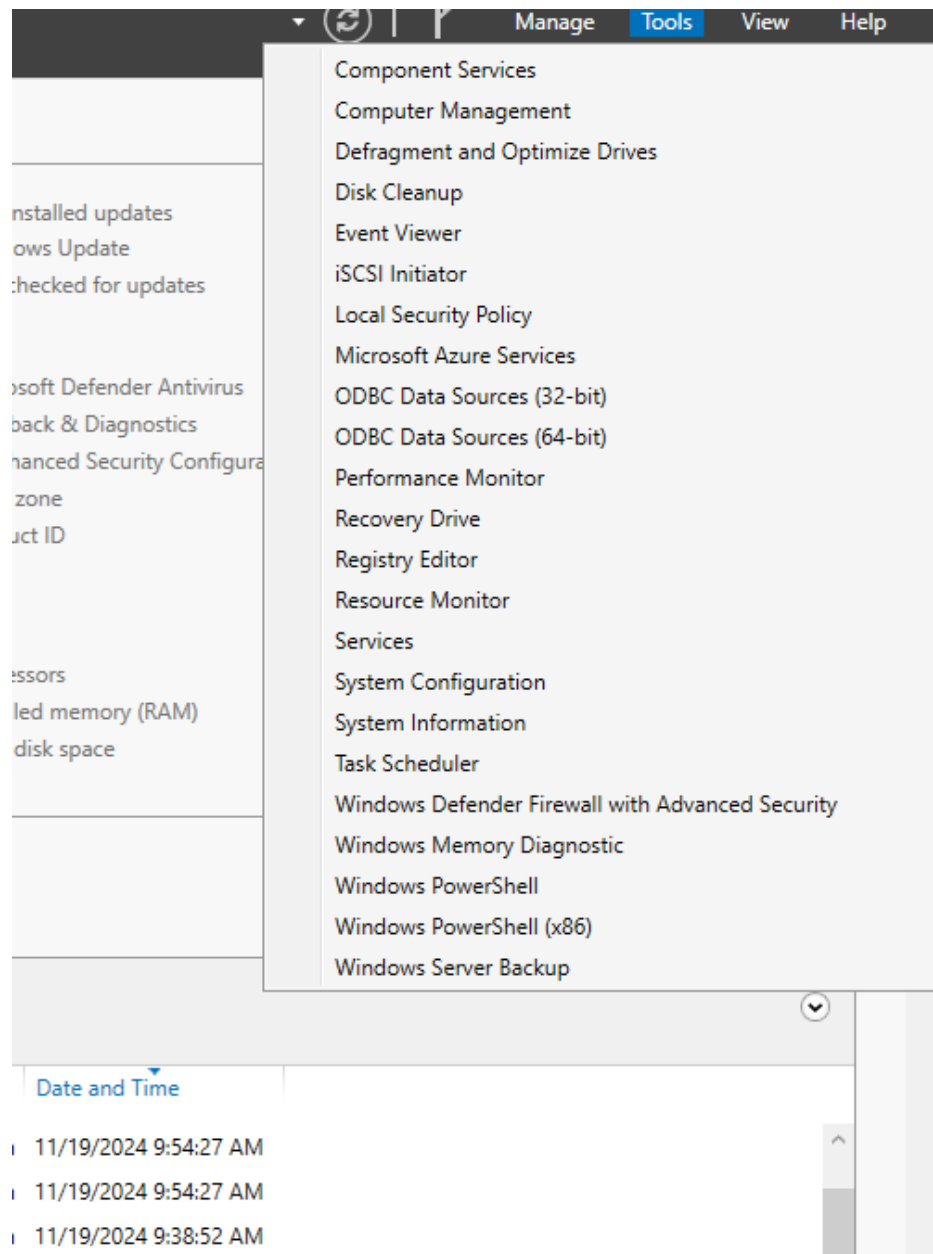


Figure 19 : Tools Dropdown

Navigate to Local Users and Groups > Users.

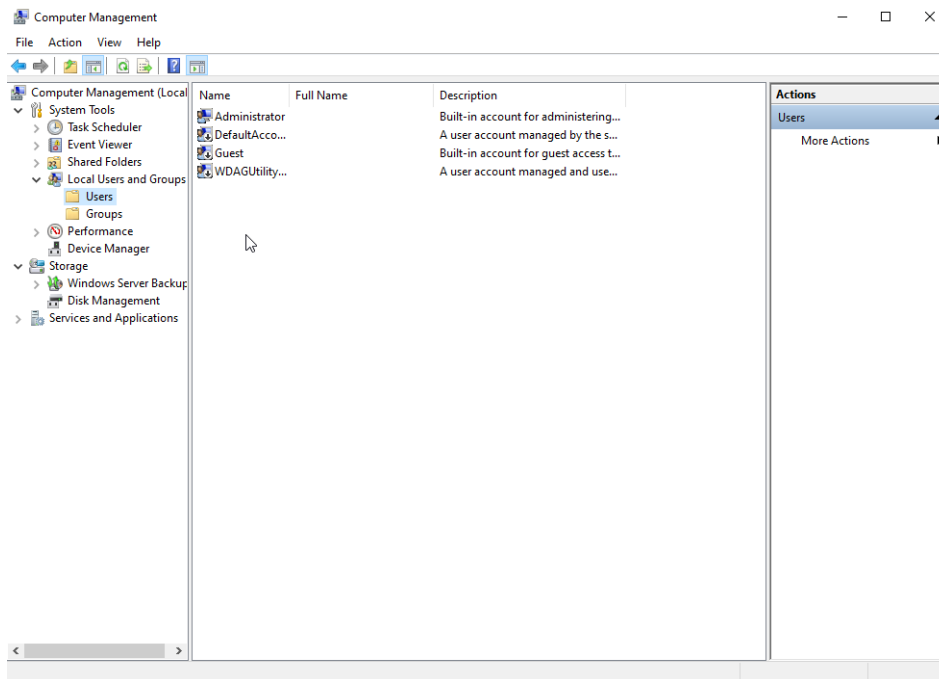


Figure 20 : Computer management > Users

Right click on Users and select New User.

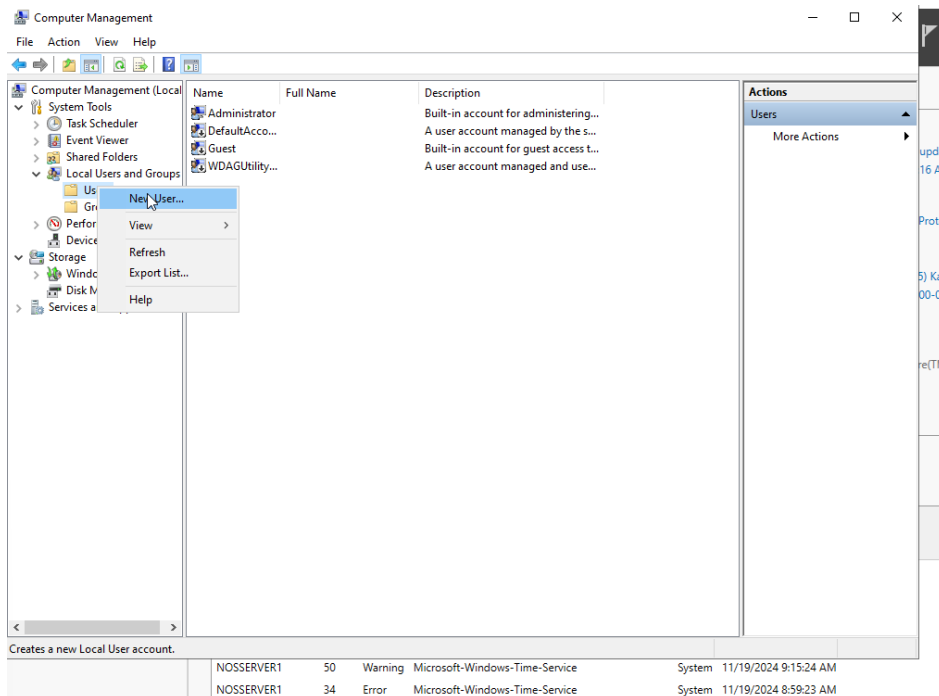


Figure 21 : Adding New User

Enter the user details and press Create.

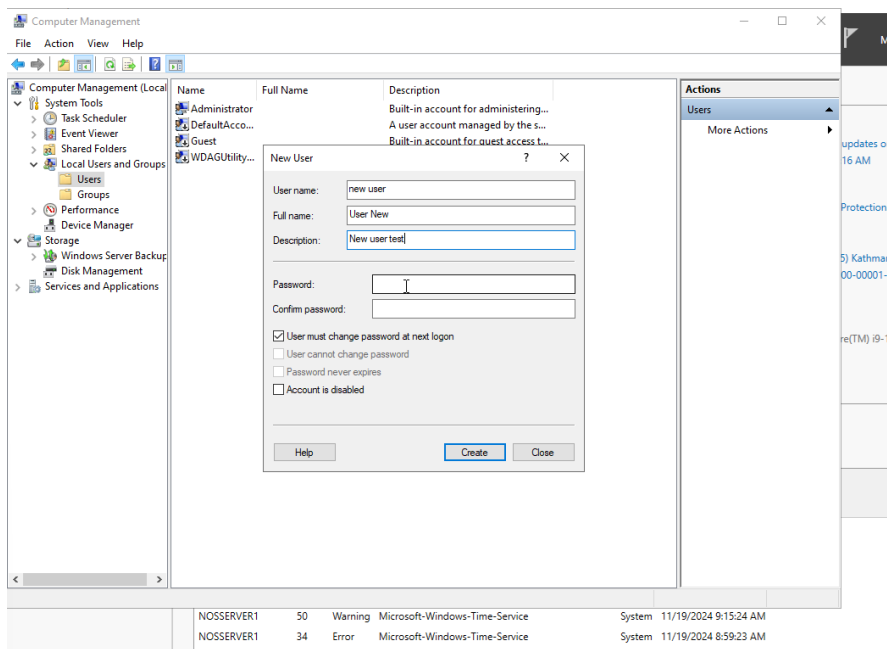


Figure 22 : New User menu

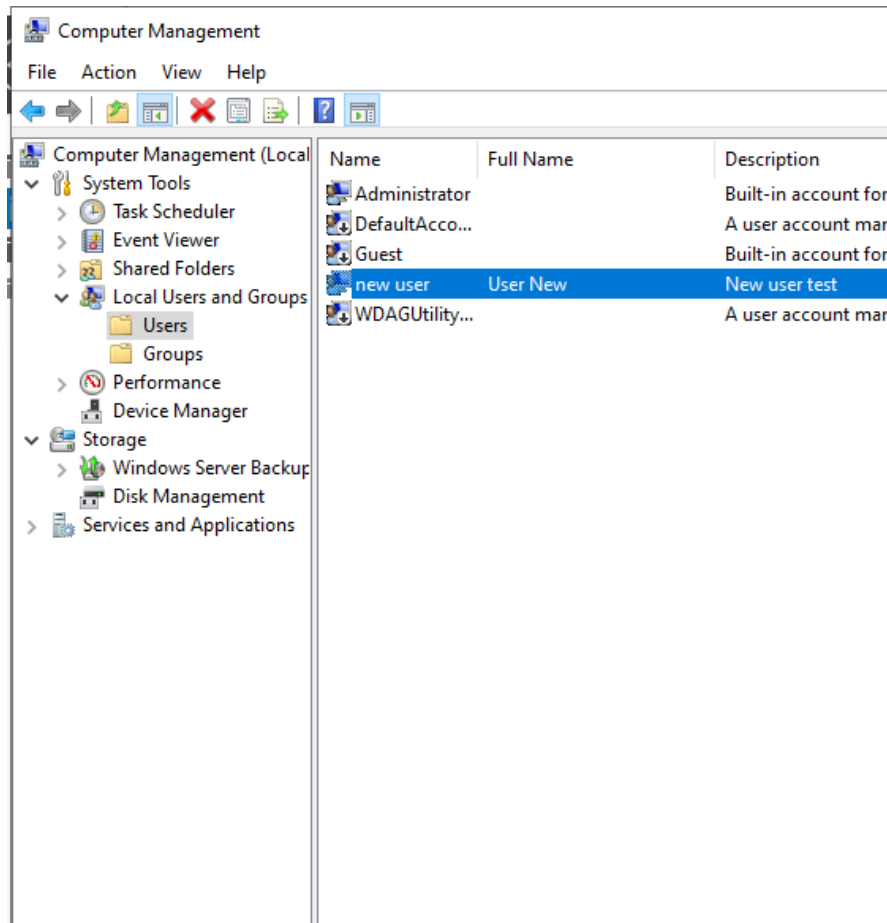


Figure 23 : Computer Management after user added

Adding a User Using Shell

Open PowerShell as Administrator.

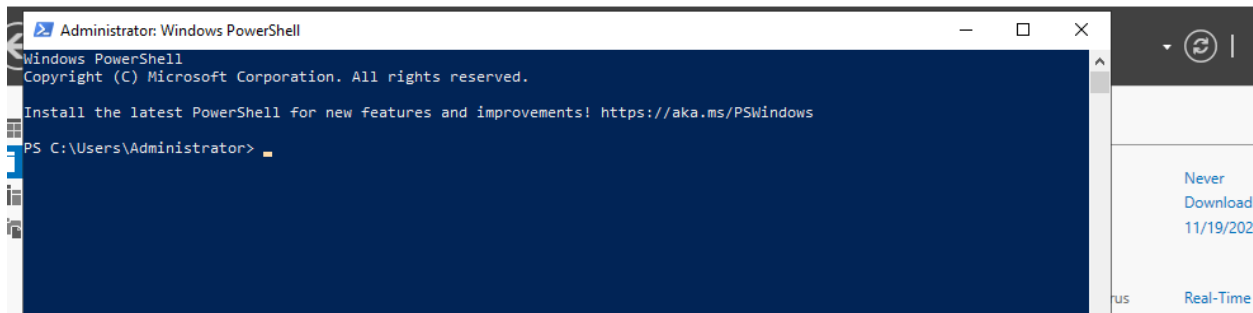


Figure 24 : Windows PowerShell

Use the following commands:

View all users: `get-localuser`

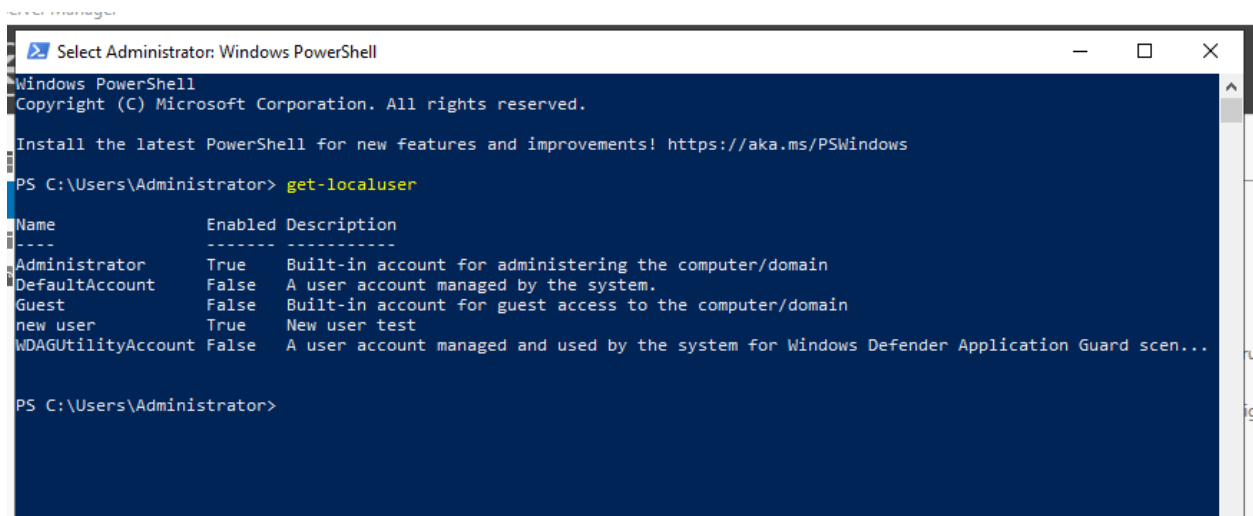


Figure 25 : Windows PowerShell view all users

Add a user:

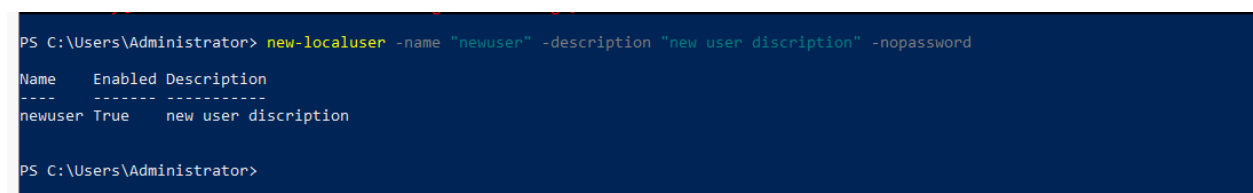


Figure 26 : Windows PowerShell add new user

Add user to a group:

```
PS C:\Users\Administrator> add-localgroupmember -group "users" -member "newuser"
PS C:\Users\Administrator> _
```

Figure 27 : Windows PowerShell add user to a group

Removing a User

In PowerShell, remove a user with:

```
PS C:\Users\Administrator> remove-localuser -name "newuser"
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.
Guest            False   Built-in account for guest access to the computer/domain
new user        True    New user test
WDAGUtilityAccount False    A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Users\Administrator> _
```

Figure 28 : Windows PowerShell remove a user

Storing Passwords as Secure Strings

Create a secure string variable

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

Figure 29 : Windows PowerShell creating secure string variable

Use this variable to create a user

```
PS C:\Users\Administrator> $password = read-host -assecurestring
*****
PS C:\Users\Administrator> new-localuser -name "new user 2" -password $password -description "this is new user 2"

Name           Enabled Description
-----
new user 2     True    this is new user 2

PS C:\Users\Administrator> _
```

Figure 30 : Windows PowerShell create new user with a password

```
PS C:\Users\Administrator> $password = read-host -assecurestring
*****
PS C:\Users\Administrator> new-localuser -name "new user 2" -password $password -description "this is new user 2"

Name      Enabled Description
----      -
new user 2 True      this is new user 2

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.
Guest      False     Built-in account for guest access to the computer/domain
new user   True      New user test
new user 2 True      this is new user 2
WDAGUtilityAccount False     A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Users\Administrator> █
```

Figure 31 : Windows PowerShell view all user after adding another user

Errors that may occur in PowerShell

```
PS C:\Users\Administrator> new-localuser -name 'username' -description 'description' -password 'passe
New-LocalUser : Cannot bind parameter 'Password'. Cannot convert the "passeord" value of type "System
"System.Security.SecureString".
At line:1 char:69
+ ... user -name 'username' -description 'description' -password 'passeord'
+ ~~~~~
+ CategoryInfo          : InvalidArgument: (:) [New-LocalUser], ParameterBindingException
+ FullyQualifiedErrorId : CannotConvertArgumentNoMessage,Microsoft.PowerShell.Commands.NewLocalUs

PS C:\Users\Administrator>
```

Figure 32 : Windows PowerShell error due to password being spelled wrong

```
PS C:\Users\Administrator> $password =readhost -assecurestring
readhost : The term 'readhost' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path
was included, verify that the path is correct and try again.
At line:1 char:12
+ $password =readhost -assecurestring
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (readhost:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\Administrator>
```

Figure 33 : Windows PowerShell error unrecognized cmdlet name

```

PS C:\Users\Administrator> $password = read-host -assecurestring
*****
PS C:\Users\Administrator> new-localuser -name "new user 2" -password $password -description "this is new user 2"
new-localuser : Unable to update the password. The value provided for the new password does not meet the length, complexity, or history requirements of the domain.
At line:1 char:1
+ new-localuser -name "new user 2" -password $password -description "th ...
+ ~~~~~
+ CategoryInfo          : InvalidArgument: (:) [New-LocalUser], InvalidPasswordException
+ FullyQualifiedErrorId : InvalidPassword,Microsoft.PowerShell.Commands.NewLocalUserCommand
PS C:\Users\Administrator>

```

Figure 34 : Windows PowerShell error due to weak password

Summary

This log provides detailed instructions for common server management tasks such as renaming the server, enabling remote desktop, and configuring static IP addresses. By mastering these tasks administrators can ensure that their Windows Server is properly configured, secured, and efficient.

Bibliography

Microsoft. (n.d.). *Windows Server documentation*. Retrieved November 06, 2024, from <https://learn.microsoft.com/en-us/windows/win32/srvnodes/windows-server>

Oracle. (n.d.). *Oracle VM Server hardware requirements*. Retrieved November 06, 2024, from Italicized: https://docs.oracle.com/html/E50247_08/vmiug-server-hardware.html#:~:text=Oracle%20VM%20Server%20requires%20a,or%20Athlon%20CPU%20is%20recommended.

solar winds. (n.d.). *what is Windows Server?* Retrieved November 07, 2024, from <https://www.solarwinds.com/resources/it-glossary/windows-server>

VMware. (n.d.). *what is server Virtualization?* Retrieved November 07, 2024, from <https://www.vmware.com/topics/server-virtualization>