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Table of Contents

Introduction	3
Objective	4
Required Tools and Concepts	4
Hardware Requirements	4
Software Requirements	4
Concepts	4
Steps to replicate	5
Conclusion	16
References	16
STEP 1: SERVER MANAGER'S DASHBOARD	5
STEP 2: GO TO LOCAL SERVER AND CLICK ON COMPUTER NAME TO CHANGE	5
STEP 3: CLICK ON CHANGE, A NEW DIALOGUE BOX APPEARS TO ENTER NEW NAME	6
STEP 4: RESTART THE COMPUTER TO TAKE EFFECT ON CHANGES MADE	6
STEP 5: FROM THE PREVIOUS DIALOGUE BOX, GO TO REMOTE TAB TO ALLOW REMOTE CONNECTION ON THE SERVER	7
STEP 6: GO TO NETWORK AND CONNECTIONS INTERFACE	7
STEP 7: SET NEW STATIC IP ADDRESS	8
STEP 8: FIND INTERNET PROTOCOL VERSION AND CLICK ON ITS PROPERTIES	8
STEP 9: CHANGE THE TIME ZONE SETTINGS	9
STEP 10: TURN OFF ENHANCED SECURITY CONFIG	9
STEP 11: CHECK AND UPDATE THE OS.....	10
STEP 12: GO TO COMPUTER MANAGEMENT FROM TOOLS MENU	10
STEP 13: ADDING USER IN GUI(DESKTOP EXPERIENCE)	11
STEP 14: ADD USER DETAILS	11
STEP 15: CHECK USER LIST IN GUI(DESKTOP EXPERIENCE)	12
STEP 16: RUN POWERSHELL AS ADMINISTRATOR.....	12
STEP 17: WORKING IN CLI USING POWERSHELL	13
STEP 18: ADDING USER THROUGH CLI	13
STEP 19: REMOVING USER.....	14
STEP 20: HIDE THE PASSWORD BY SECURESTRING	14
STEP 22: VERIFY THE PROCESS.....	15
STEP 21: ADD USER AFTER SECURESTRING FOR PASSWORD	15

Introduction

Windows Server is a operating system developed by Microsoft providing server level administrations with powerful tools to manage server infrastructure. Microsoft Windows Server 2022 is equipped with Graphical User interface in server management service which earlier versions like Windows server 2008 were lacking, such as configuring server settings, managing roles, and monitoring performance. (Microsoft, 2022) Microsoft Windows Server is widely used server operating system being compatible, secure, robust support.

Microsoft Windows Server has evolved through different phases of development with growing in the IT industry and its infrastructure. (Microsoft, learn microsoft, n.d.) Windows server has centralized management system for server management in GUI format to simplify the task of management. The new release also provides secured connectivity that introduces several new capabilities such as faster and more secure encrypted HTTPS connections, industry standard SMB AES 256 encryption and more.

Server management systems are developed by many companies but Windows server by Microsoft has wide support and Microsoft own cloud platform as “Azure” so they have a wide range of services so the system integration with other microsoft products will be easy. Other companies offer some server operating systems eg: Red Hat Enterprise Linux(RHEL), Mac OS X server, CentOS.

Here in this log we are installing windows server 2022 through UTM, emulating a virtual machine in the previous log. Microsoft has been developing windows server on security, data integrity, cloud performance, compatibility. This log outlines the post-installation configuration steps, focusing on crucial server setup tasks like renaming the server, enabling Remote Desktop, configuring a static IP address, and managing users.

Objective

This log reports the documentation processes of configuring Windows Server 2022 using Server Manager and PowerShell. Windows Server 2022 has been installed in our local device by virtualization technology using hypervisors like Vmware, UTM, etc. Through the use of a virtual machine we installed windows server in the previous log, here we are introduced to the concept of server management. The goal is to ensure the server is correctly configured and ready for operational use.

Required Tools and Concepts

Hardware Requirements

- o 1.4 GHz 64-bit processor
- o 2GB for server with Desktop Experience, 4GB recommended
- o 32GB minimum storage

Software Requirements

- o Windows 10 recommended, Mac OS, Linux
- o Virtualbox, Parallel Desktop, Vmbox, UTM, etc.
- o Windows Server 2022(iso file)

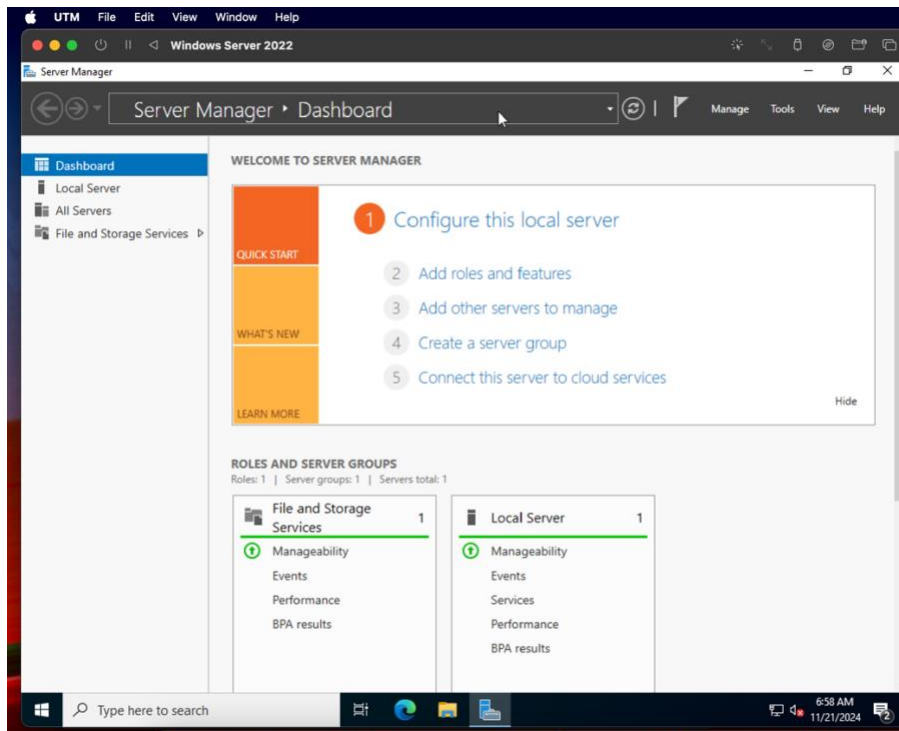
Concepts

Server Manager: A GUI tool for managing server configurations.

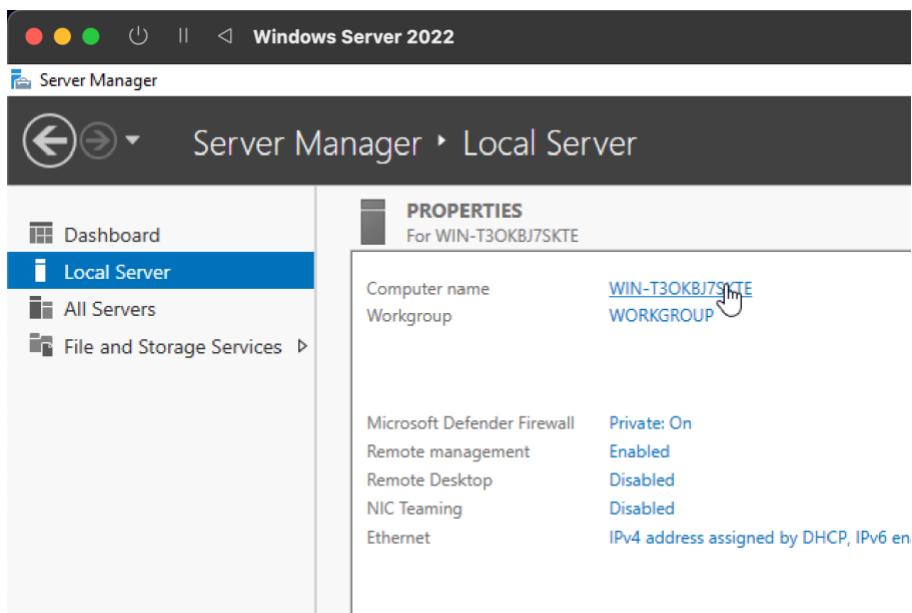
PowerShell: A command-line shell and scripting language for task automation.

Static IP Addressing: Manually configuring a fixed IP address.

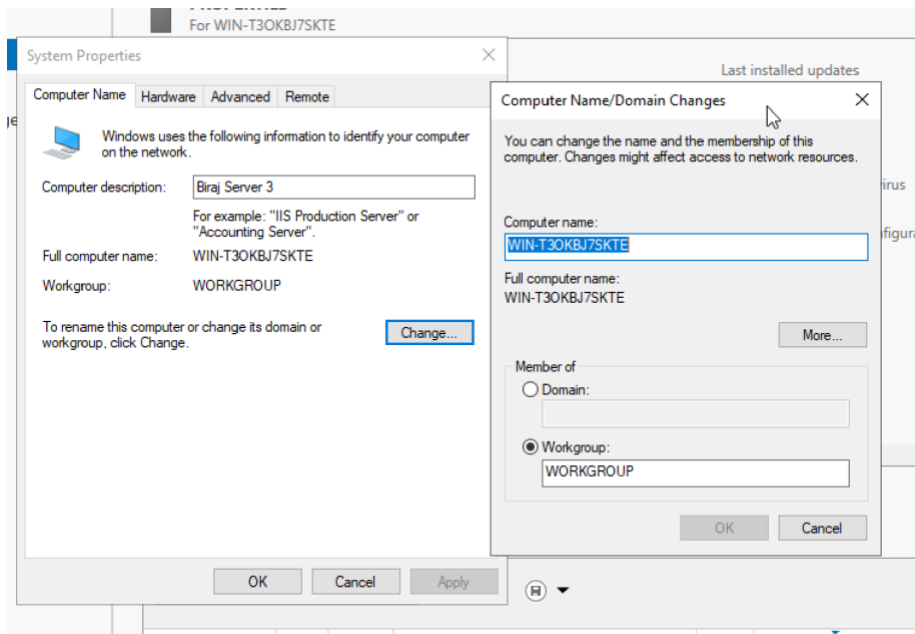
Steps to replicate



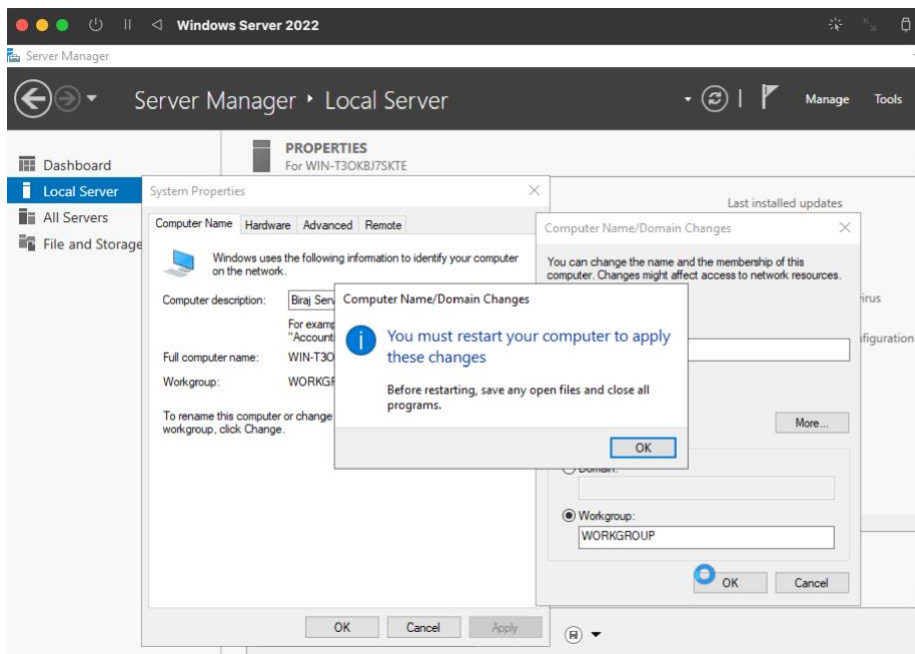
Step 1: Server Manager's Dashboard



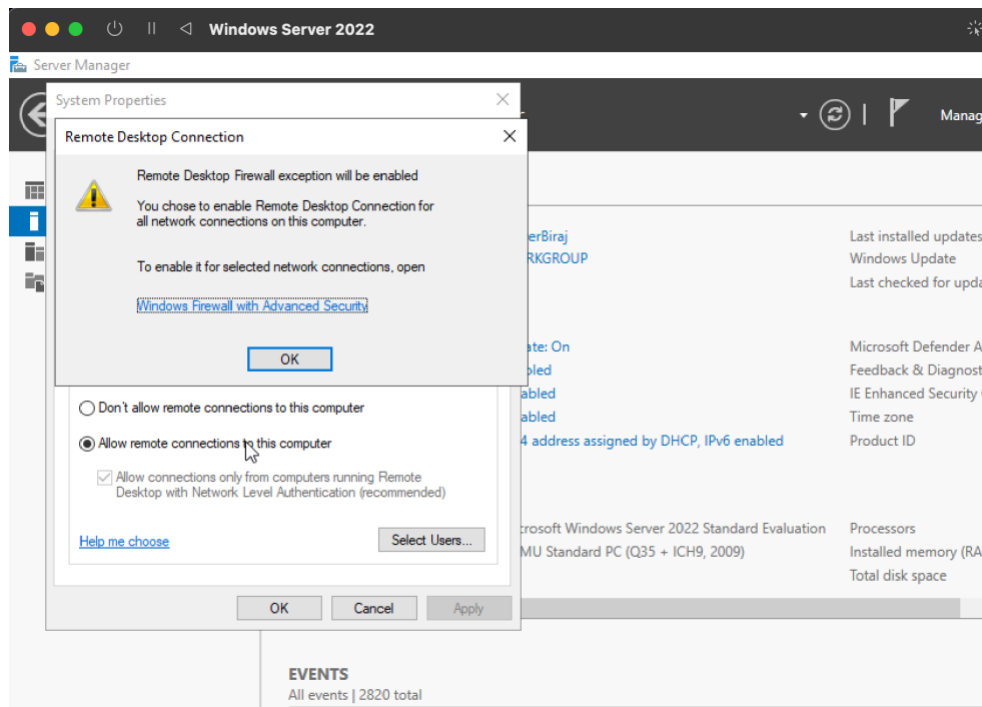
Step 2: Go to Local Server and Click on computer name to change



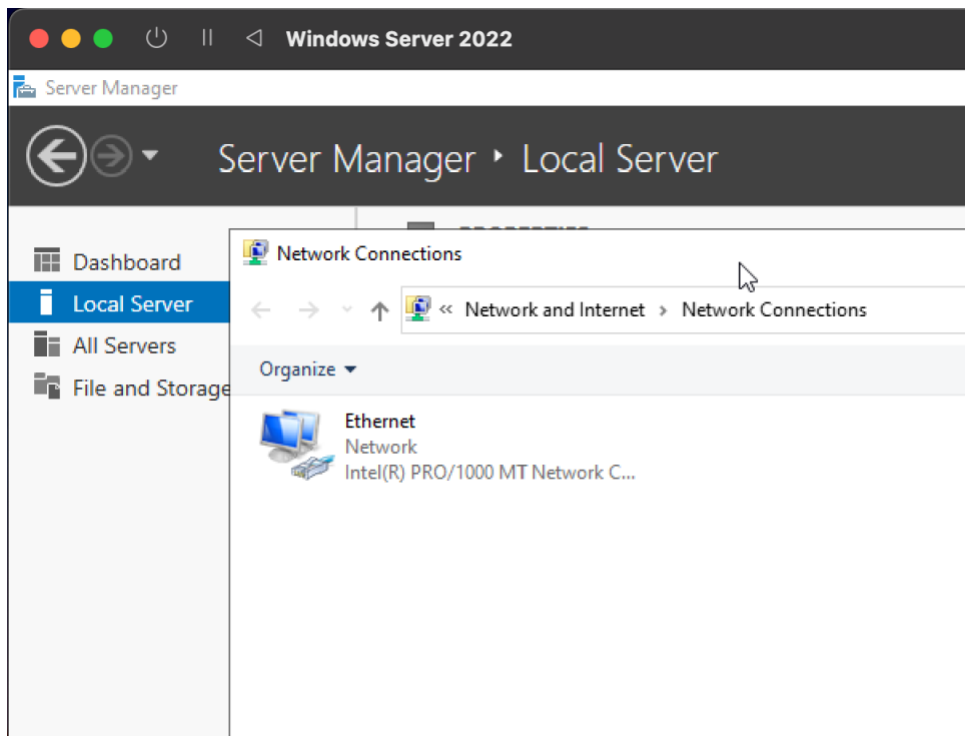
Step 3: Click on change, a new dialouge box appears to enter new name



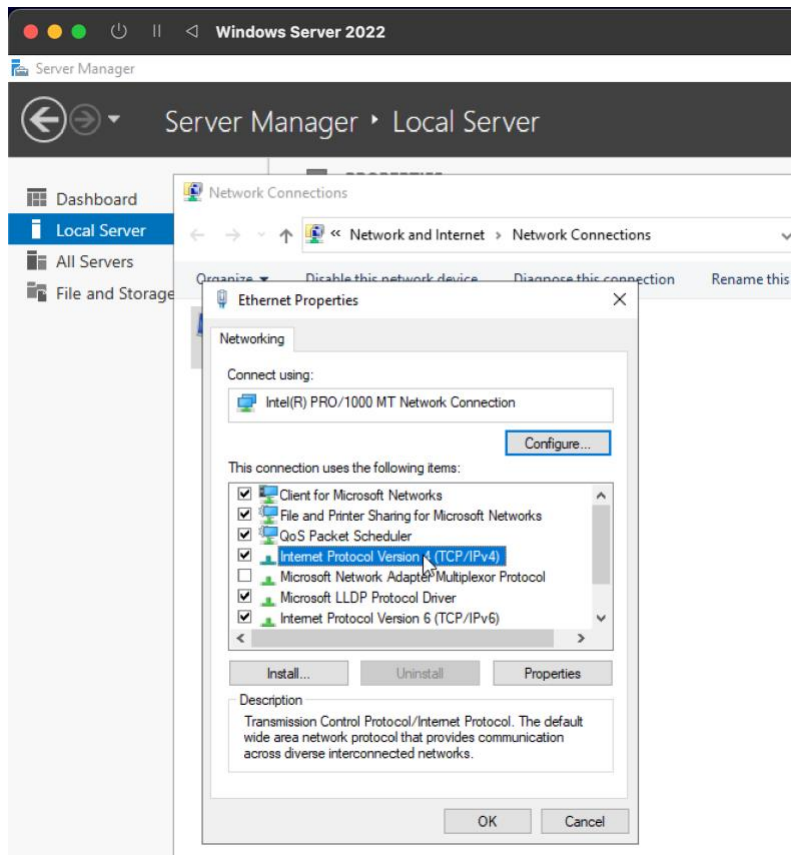
Step 4: restart the computer to take effect on changes made



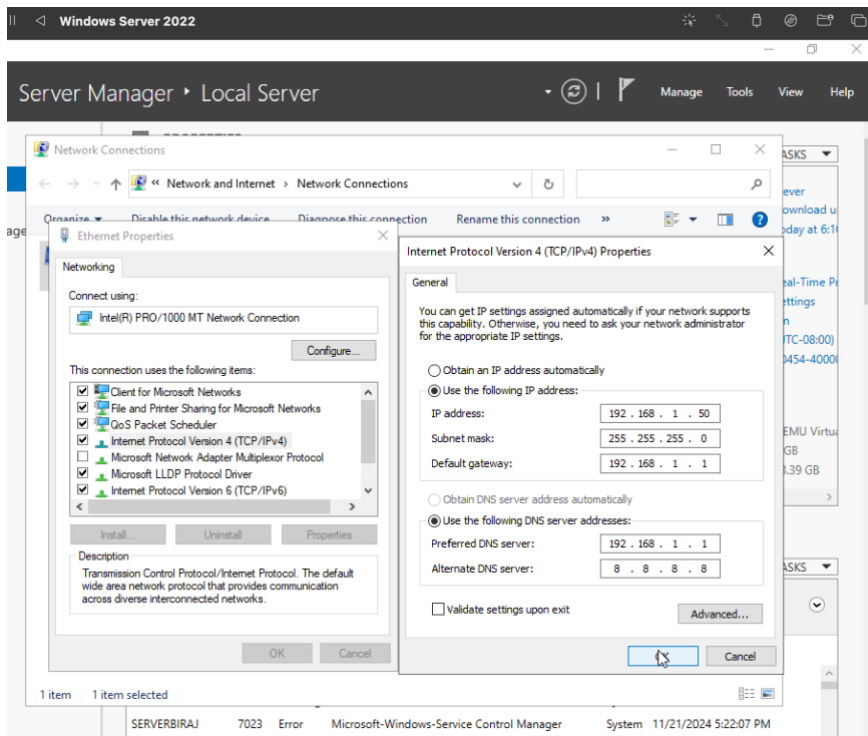
Step 5: from the previous dialog box, go to Remote tab to allow remote connection on the server



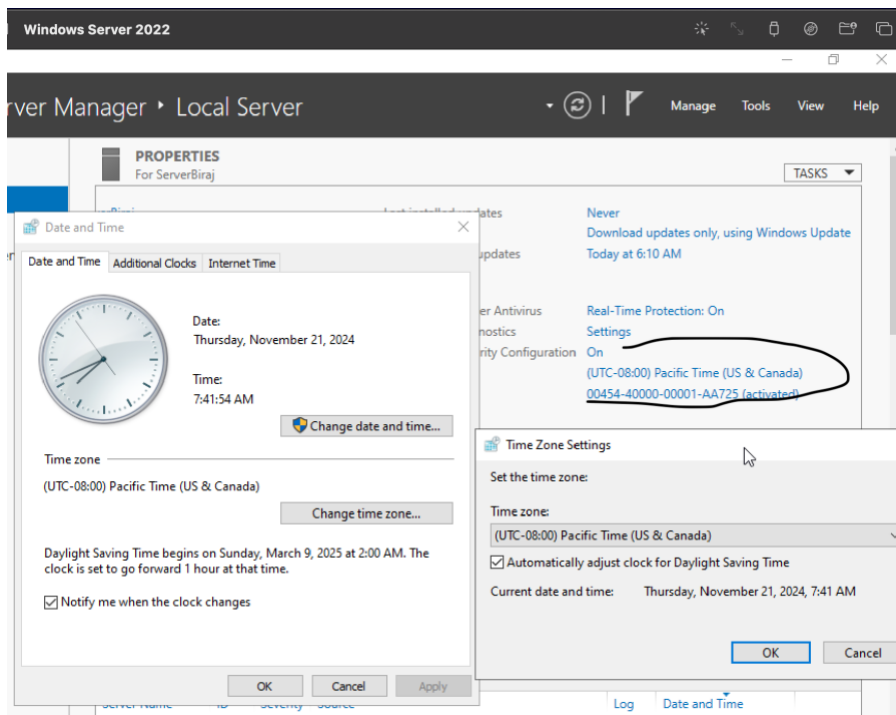
Step 6: Go to Network and Connections interface



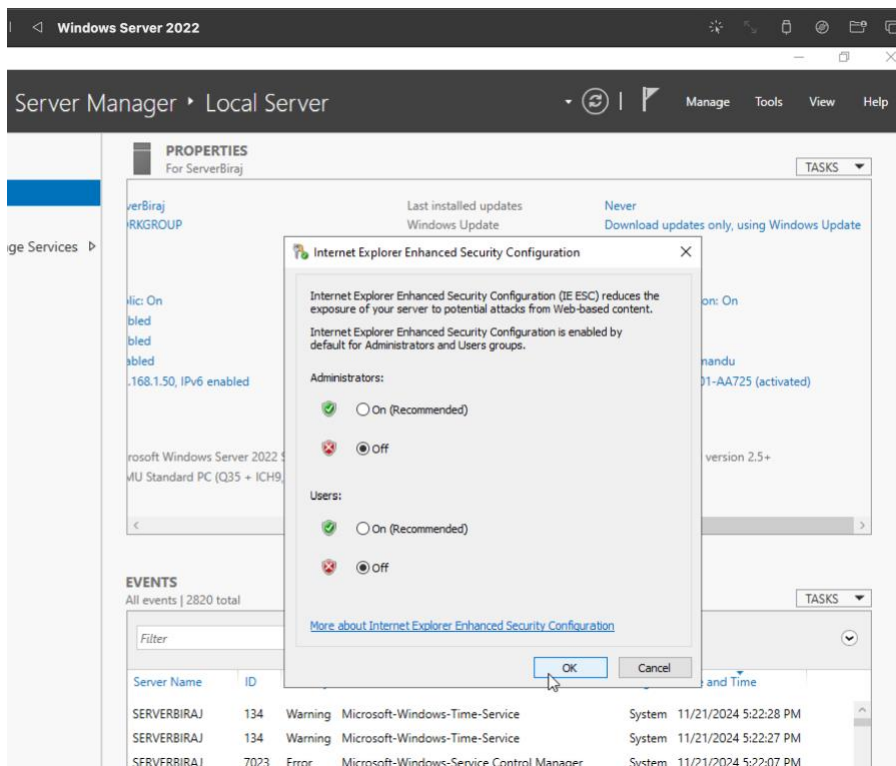
Step 8: Find Internet Protocol Version and click on its properties



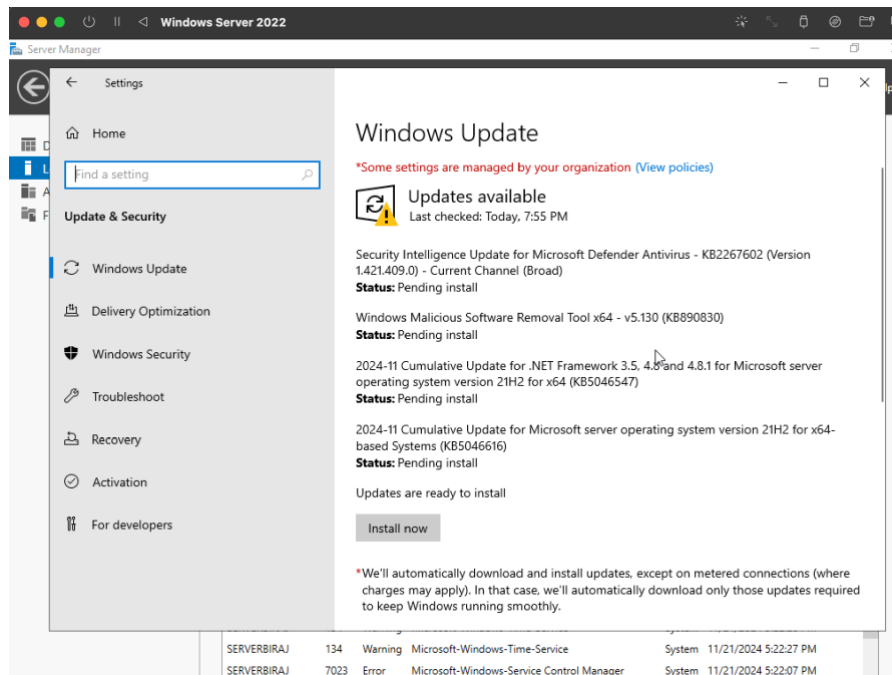
Step 7: Set new static IP address



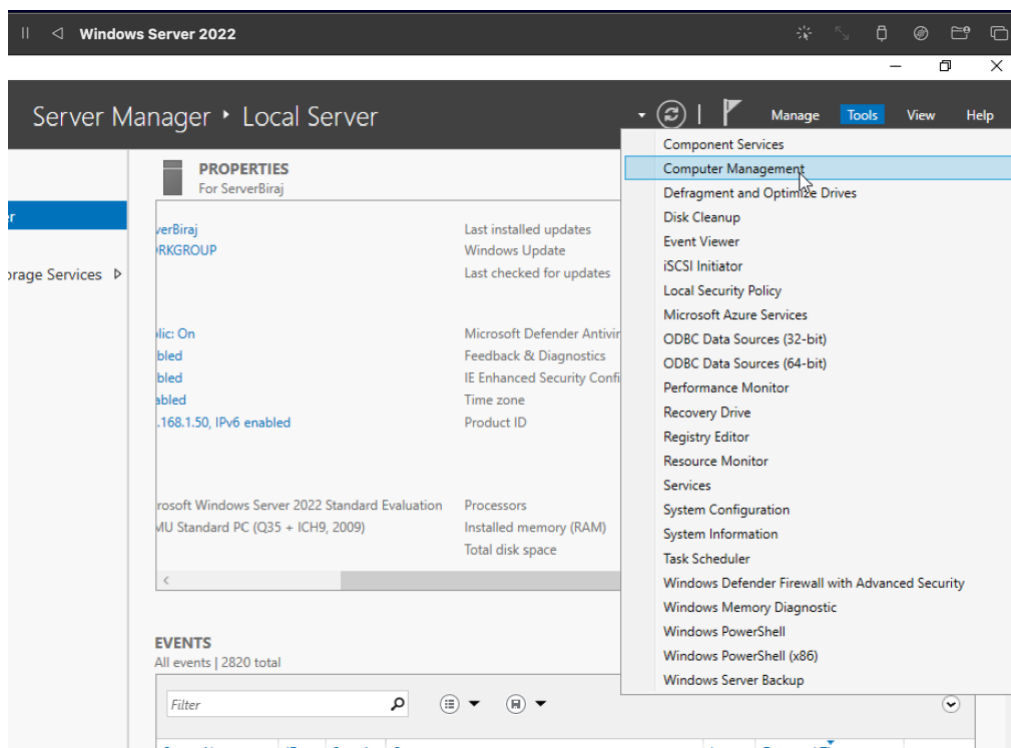
Step 10: Change the time zone settings



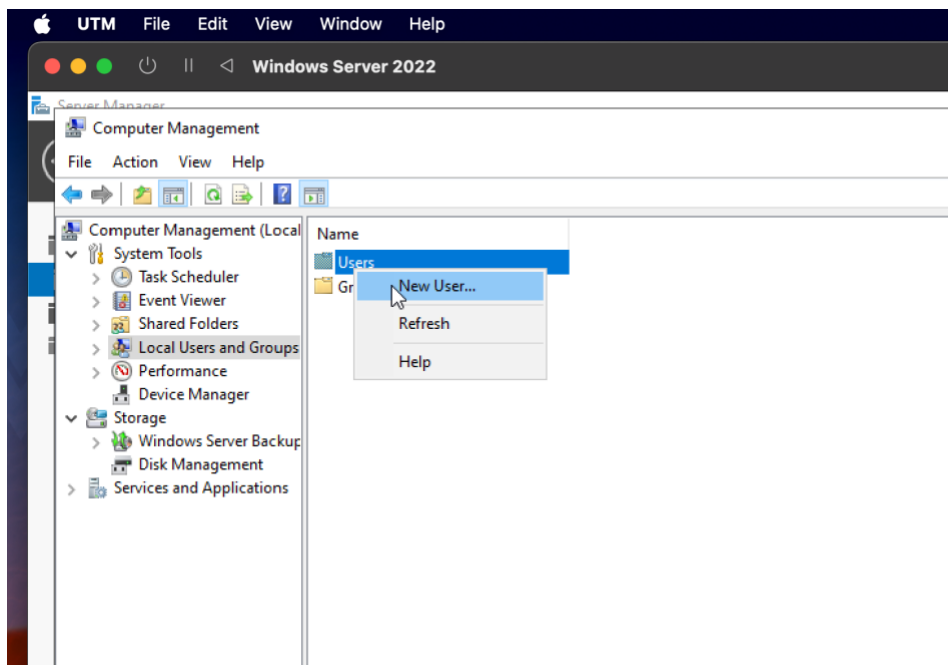
Step 9: Turn off enhanced security config



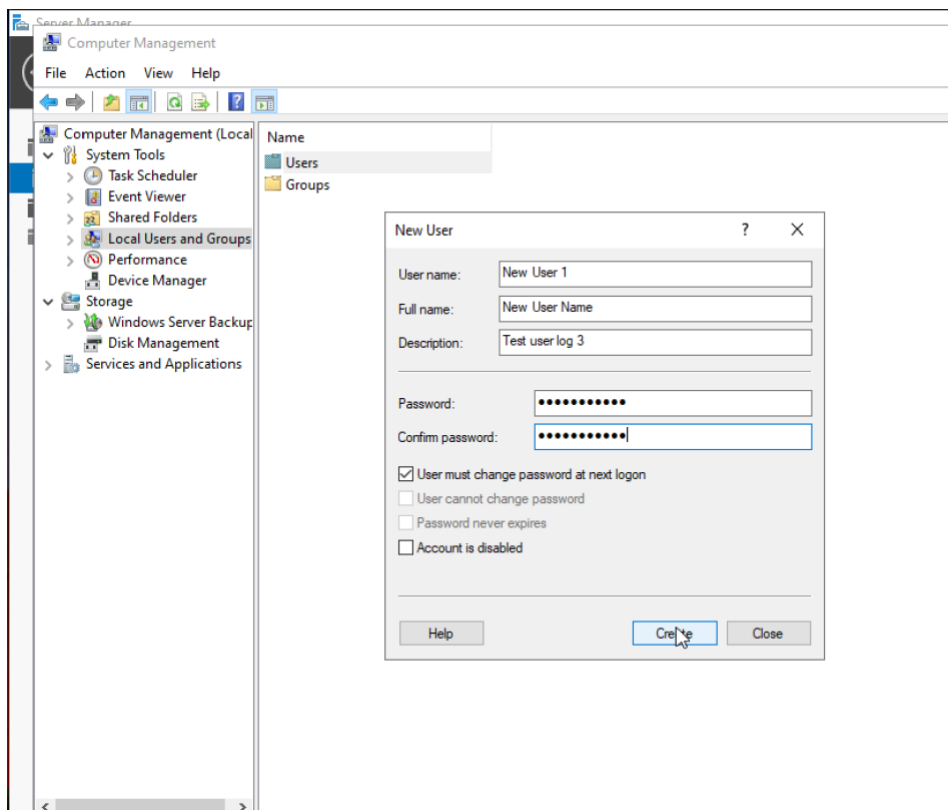
Step 11: Check and update the OS



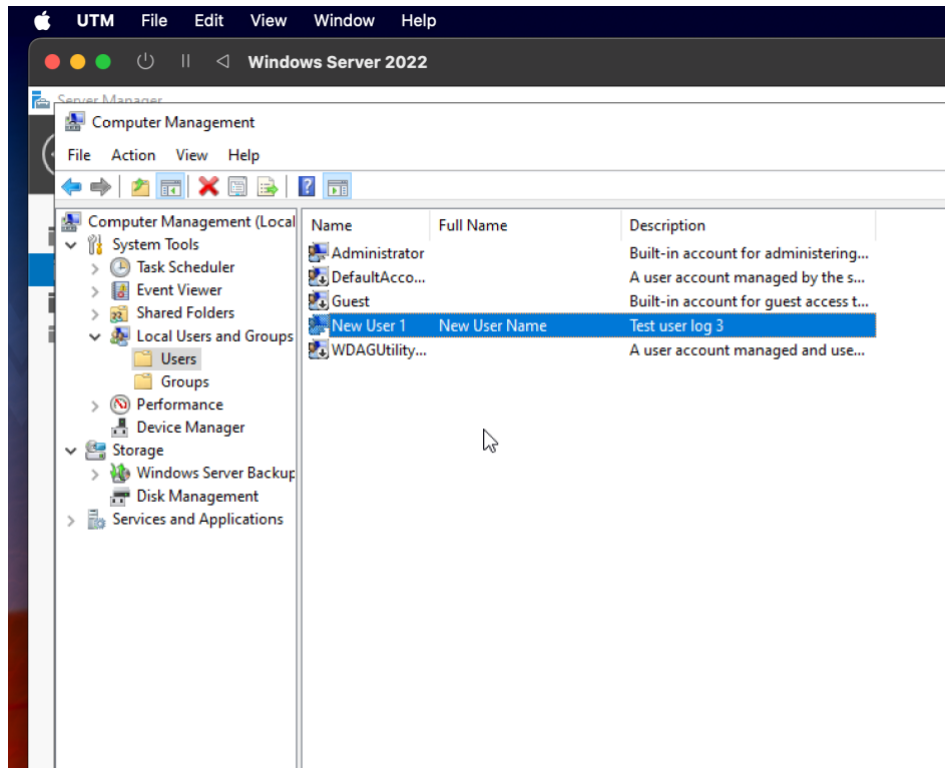
Step 12: Go to Computer Management from Tools menu



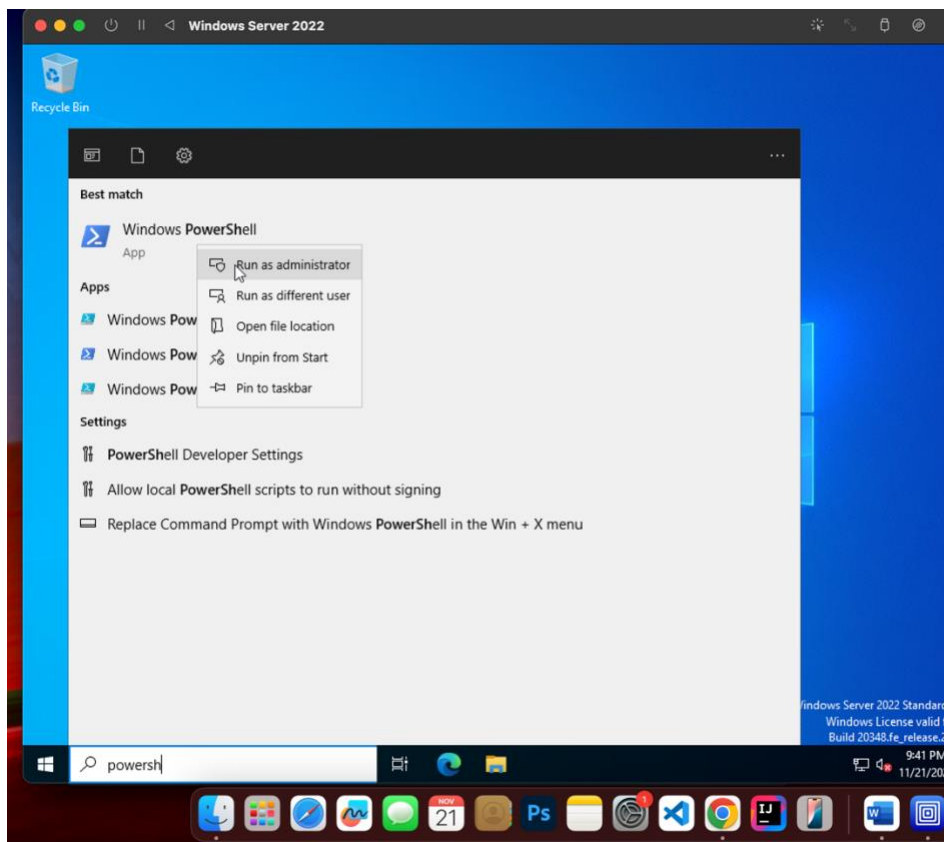
Step 13: Adding User in GUI(desktop experience)



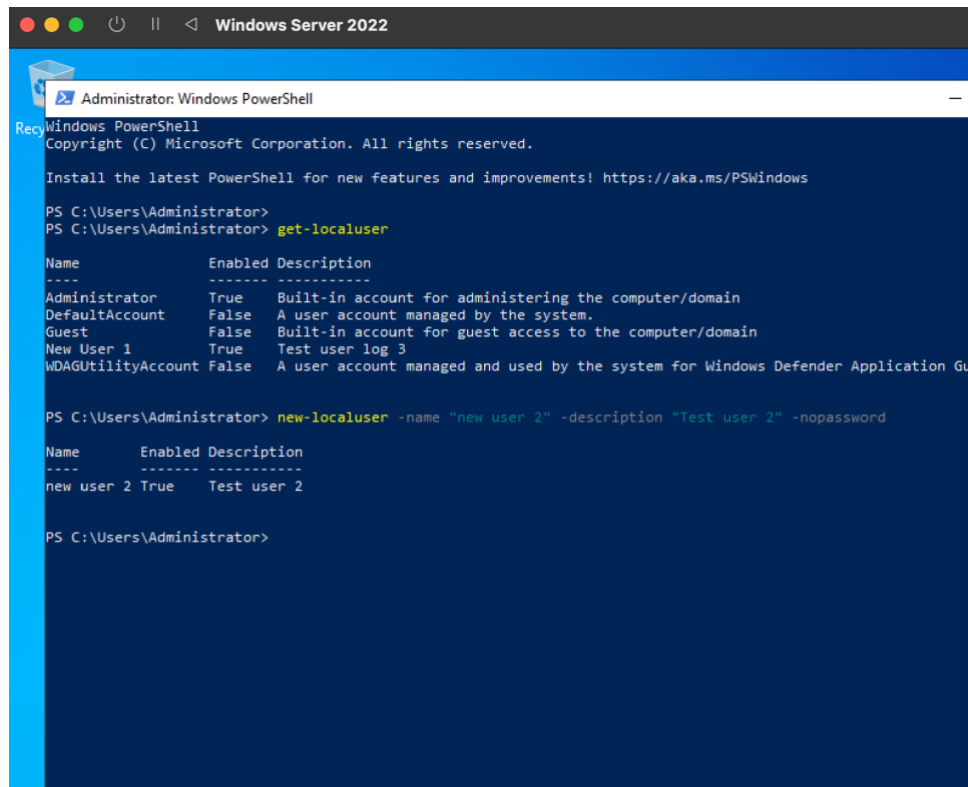
Step 14: Add user details



Step 15: Check user list in GUI(desktop experience)



Step 16: Run PowerShell as adminstrator



Administrator: Windows PowerShell

Windows PowerShell
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\Administrator>
PS C:\Users\Administrator> **get-localuser**

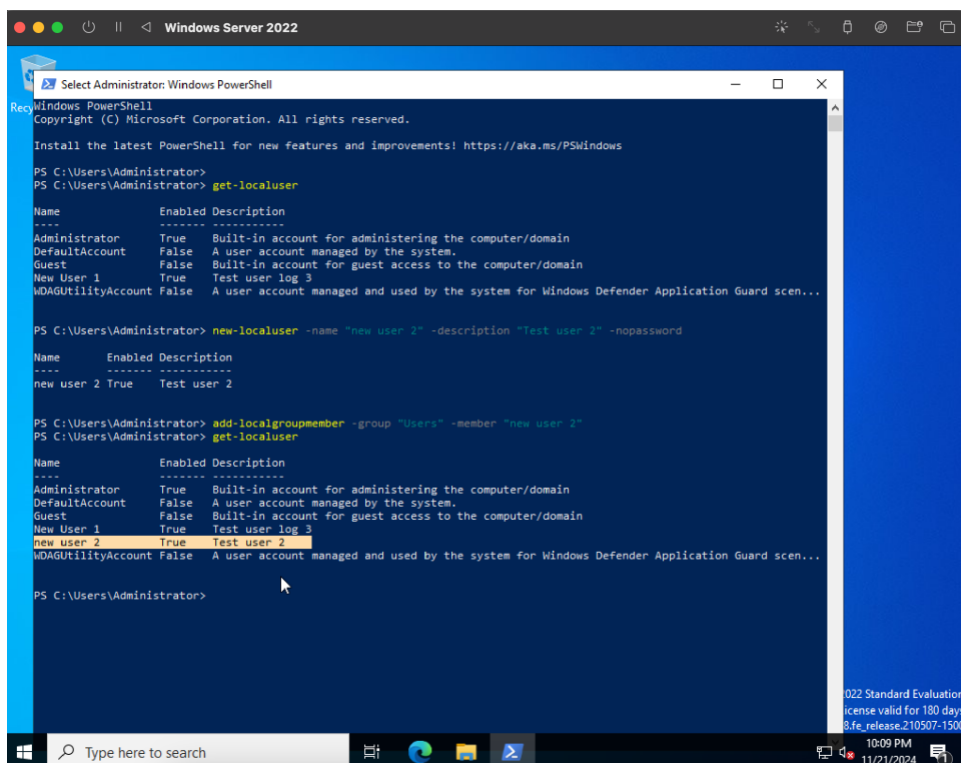
Name	Enabled	Description
Administrator	True	Built-in account for administering the computer/domain
DefaultAccount	False	A user account managed by the system.
Guest	False	Built-in account for guest access to the computer/domain
New User 1	True	Test user log 3
WDAGUtilityAccount	False	A user account managed and used by the system for Windows Defender Application Guard

PS C:\Users\Administrator> **new-localuser -name "new user 2" -description "Test user 2" -nopassword**

Name	Enabled	Description
new user 2	True	Test user 2

PS C:\Users\Administrator>

Step 17: working in CLI using PowerShell



Select Administrator: Windows PowerShell

Windows PowerShell
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\Administrator>
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 1	True	Test user log 3
WDAGUtilityAccount	False	A user account managed and used by the system for Windows Defender Application Guard scen...

PS C:\Users\Administrator> **new-localuser -name "new user 2" -description "Test user 2" -nopassword**

Name	Enabled	Description
new user 2	True	Test user 2

PS C:\Users\Administrator> **add-localgroupmember -group "Users" -member "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 1	True	Test user log 3
new user 2	True	Test user 2
WDAGUtilityAccount	False	A user account managed and used by the system for Windows Defender Application Guard scen...

PS C:\Users\Administrator>

022 Standard Evaluation
license valid for 180 days
8.fe_release.210507-1500

10:09 PM
11/21/2024

Step 18: adding user through CLI

```

Windows Server 2022
Administrator: Windows PowerShell
new user 2 True Test user 2

PS C:\Users\Administrator> add-localgroupmember -group "Users" -member "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 1           True    Test user log 3
new user 2           True    Test user 2
WDAGUtilityAccount   False   A user account managed and used by the system for Windows Defender Application Guard scen...

PS C:\Users\Administrator> remove-localuser -name"new user 2"
remove-localuser : User -namenew user 2 was not found.
At line:1 char:1
+ remove-localuser -name"new user 2"
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (-namenew user 2:String) [Remove-LocalUser], UserNotFoundException
+ FullyQualifiedErrorId : UserNotFound,Microsoft.PowerShell.Commands.RemoveLocalUserCommand

PS C:\Users\Administrator> remove-localuser -name "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 1           True    Test user log 3
WDAGUtilityAccount   False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Users\Administrator>

```

Step 19: removing user

```

WDAGUtilityAccount False A user account managed and used by the system for Windows Defender Application Gua

PS C:\Users\Administrator> remove-localuser -name"new user 2"
remove-localuser : User -namenew user 2 was not found.
At line:1 char:1
+ remove-localuser -name"new user 2"
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (-namenew user 2:String) [Remove-LocalUser], UserNotFoundException
+ FullyQualifiedErrorId : UserNotFound,Microsoft.PowerShell.Commands.RemoveLocalUserCommand

PS C:\Users\Administrator> remove-localuser -name "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 1           True    Test user log 3
WDAGUtilityAccount   False   A user account managed and used by the system for Windows Defender Application Gua

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

```

Step 20: Hide the password by securestring

```
Windows Server 2022
Administrator: Windows PowerShell

PS C:\Users\Administrator> remove-localuser -name "new user 2"
remove-localuser : User -namenew user 2 was not found.
At line:1 char:1
+ remove-localuser -name "new user 2"
~
+ CategoryInfo          : ObjectNotFound: (-namenew user 2:String) [Remove-LocalUser], UserNotFoundException
+ FullyQualifiedErrorId : UserNotFound,Microsoft.PowerShell.Commands.RemoveLocalUserCommand

PS C:\Users\Administrator> remove-localuser -name "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 1          True    Test user log 3
WDAGUtilityAccount  False   A user account managed and used by the system for Windows Defender Application Guard scenarios

PS C:\Users\Administrator> $password = read-host -assecurestring
*****
PS C:\Users\Administrator> new-localuser -name "new user3" -password $password -description "user 3 test"

Name                Enabled Description
-----
new user3           True    user 3 test

PS C:\Users\Administrator>
```

Step 22: add user after securestring for password

```
Windows Server 2022
Select Administrator: Windows PowerShell

+ remove-localuser -name "new user 2"
+ CategoryInfo          : ObjectNotFound: (-namenew user 2:String) [Remove-LocalUser], UserNotFoundException
+ FullyQualifiedErrorId : UserNotFound,Microsoft.PowerShell.Commands.RemoveLocalUserCommand

PS C:\Users\Administrator> remove-localuser -name "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 1          True    Test user log 3
WDAGUtilityAccount  False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Users\Administrator> $password = read-host -assecurestring
*****
PS C:\Users\Administrator> new-localuser -name "new user3" -password $password -description "user 3 test"

Name                Enabled Description
-----
new user3           True    user 3 test

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 1          True    Test user log 3
new user3           True    user 3 test
WDAGUtilityAccount  False   A user account managed and used by the system for Windows Defender Application Guard scenarios.

PS C:\Users\Administrator>
```

Step 21: verify the process

Conclusion

This log documented the essential post-installation configurations for Windows Server. Using Server Manager and PowerShell, tasks such as renaming the server, enabling Remote Desktop, setting a static IP address, and managing users were successfully completed. These steps ensure that the server is properly configured and ready for operational use.

References

- Microsoft. (2022). *Microsoft*. From Windows server: <https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2022>
- Microsoft. (n.d.). From learn microsoft: <https://learn.microsoft.com/en-us/windows-server/get-started/get-started-with-windows-server>