

System Administration 1

Prepared by Dr. Ahmed Omar

IT391

System Administration 1

Lecture 5



User and Group Management: Windows Server

Lecture 5

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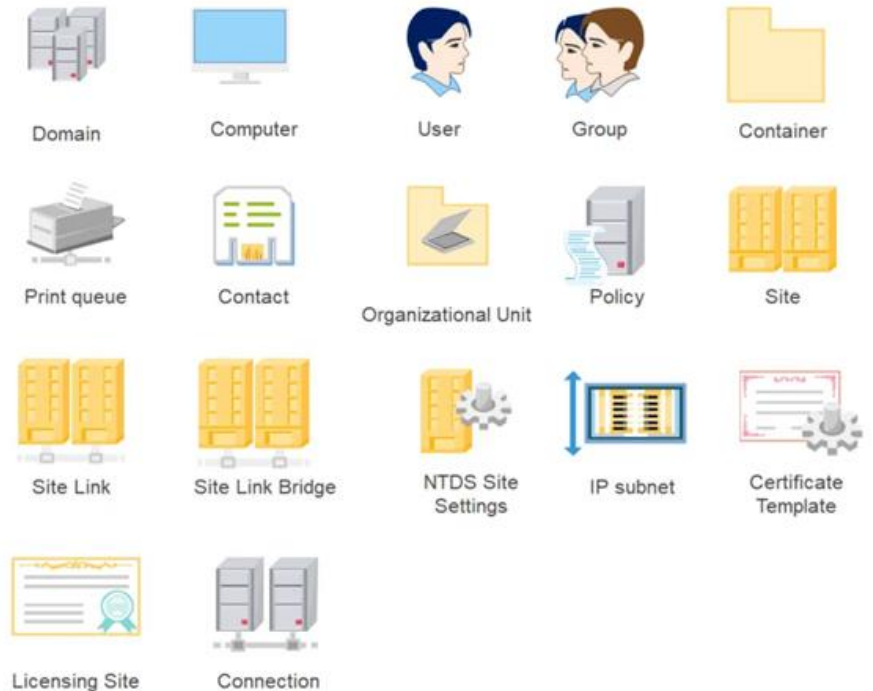
Agenda

- ☐ Active Directory Structure
- ☐ Organizational Units (OUs) vs. Containers
- ☐ Domain and Client Management
- ☐ Joining a Client to a Domain
- ☐ User Account Management
- ☐ Remote Management

Active Directory Structure

- ❑ Active Directory Stores information about **objects** on the network and makes this information available to users and administrators.
- ❑ Uses **containers** and **organizational units** to organize objects

Type 1: Active Directory Objects

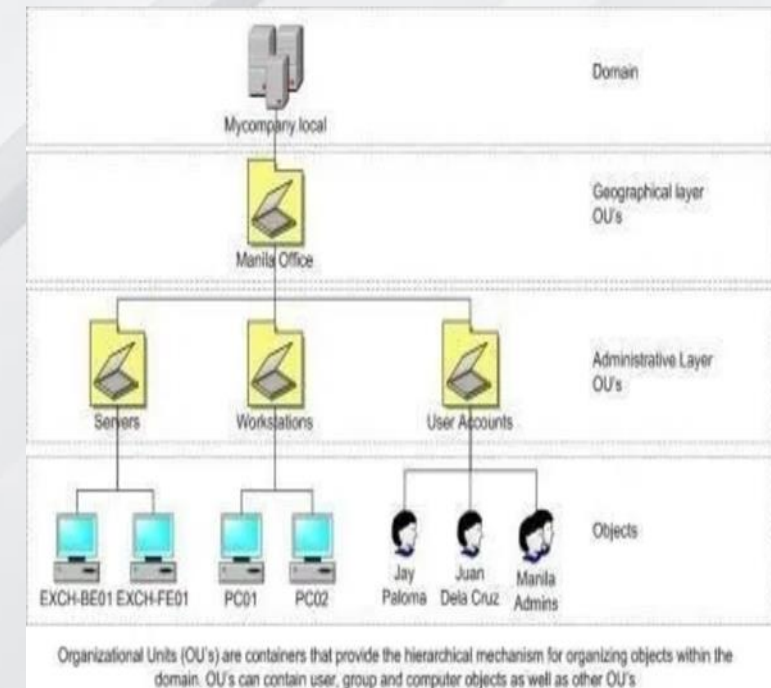


Organizational Unit (OU)

Organizational Unit (OU): A container within Active Directory that can hold users, groups, computers, and other OUs, used for applying Group Policy settings and delegating .

Primary Purposes of OUs:

- Organize Active Directory objects in a hierarchical structure
- Delegate administrative permissions to specific users or groups
- Apply Group Policy Objects (GPOs) to collections of users and computers
- Simplify management of large, complex Active Directory environments



Containers

A default object in Active Directory that holds other objects but cannot have Group Policy Objects applied to it and offers limited administrative delegation capabilities.

Primary Purposes of Containers:

- Provide basic organizational structure in Active Directory
- Store default objects created during Active Directory installation
- Serve as simple collection points for similar objects
- Offer basic administrative convenience without policy application



Containers vs. OUs: Key Differences

Feature	Containers	Organizational Units (OUs)
Group Policy Application	Cannot have Group Policy Objects applied	Can have Group Policy Objects applied
Administrative Delegation	Limited delegation capabilities	Full administrative delegation support
Creation	Created automatically during AD installation	Created manually by administrators
Purpose	Basic organizational structure	Reflects business or functional structure
Examples	Users, Computers, Builtin	HR, Finance, IT, Sales departments
Modification	Limited modification capabilities	Highly customizable

Container vs Organizational Unit (OU)



Recycle Bin

Server Manager

Server Manager ▸ Dashboard

Manage Tools View Help

Dashboard

- Local Server
- All Servers
- AD DS
- DNS
- File and Storage Services ▸

WELCOME TO SERVER MANAGER

QUICK START

- 1 Configure this local server
- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group
- 5 Connect this server to cloud services

WHAT'S NEW

LEARN MORE

ROLES AND SERVER GROUPS

Roles: 3 | Server groups: 1 | Servers total: 1

- Active Directory Administrative Center
- Active Directory Domains and Trusts
- Active Directory Module for Windows PowerShell
- Active Directory Sites and Services
- Active Directory Users and Computers
- ADSI Edit
- Component Services
- Computer Management
- Defragment and Optimize Drives
- Disk Cleanup
- DNS
- Event Viewer
- Group Policy Management
- iSCSI Initiator
- Local Security Policy
- Microsoft Azure Services
- ODBC Data Sources (32-bit)
- ODBC Data Sources (64-bit)
- Performance Monitor
- Recovery Drive
- Registry Editor
- Resource Monitor
- Services
- System Configuration

Container vs Organizational Unit (OU)

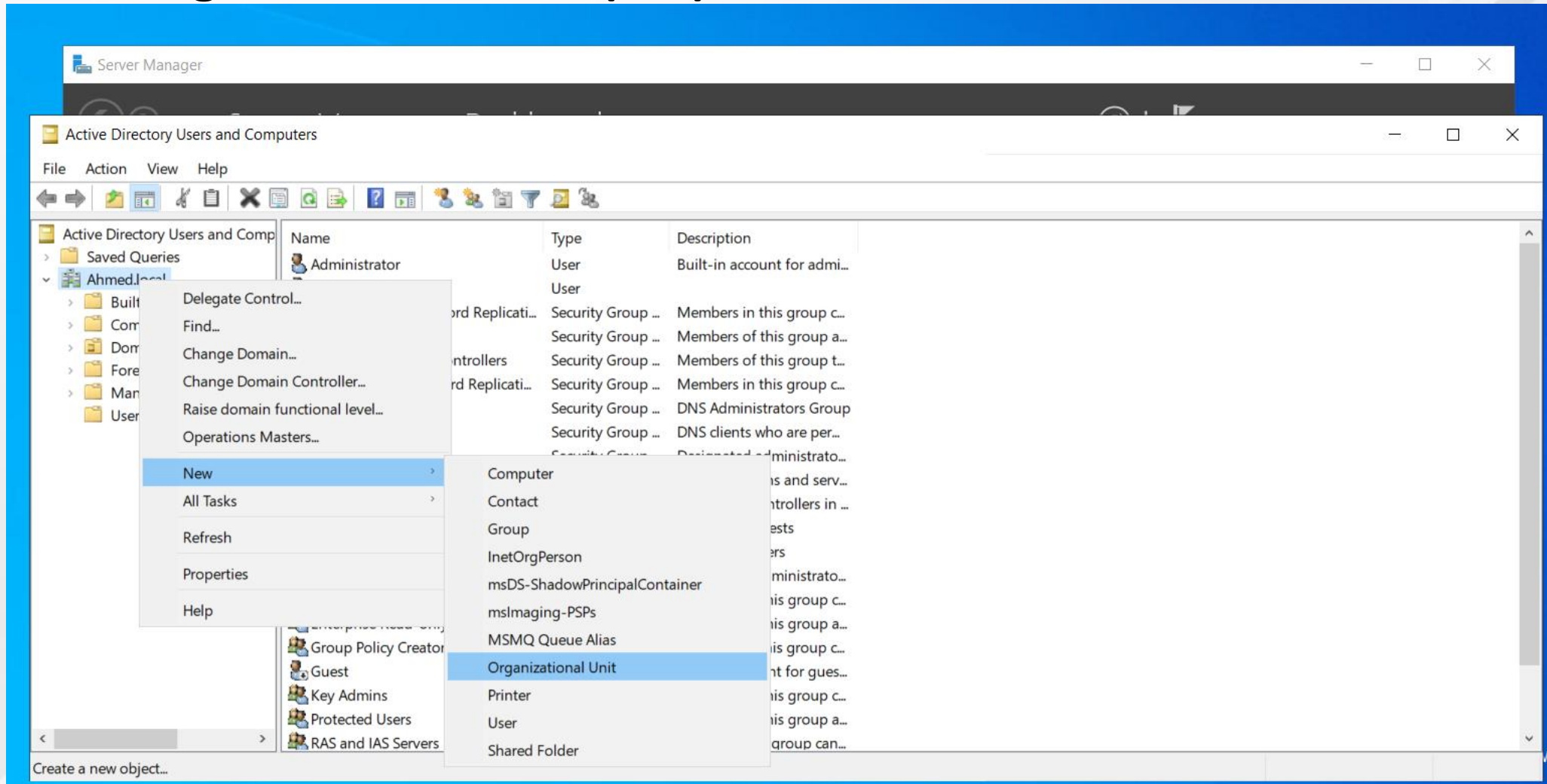
Active Directory Users and Computers

File Action View Help

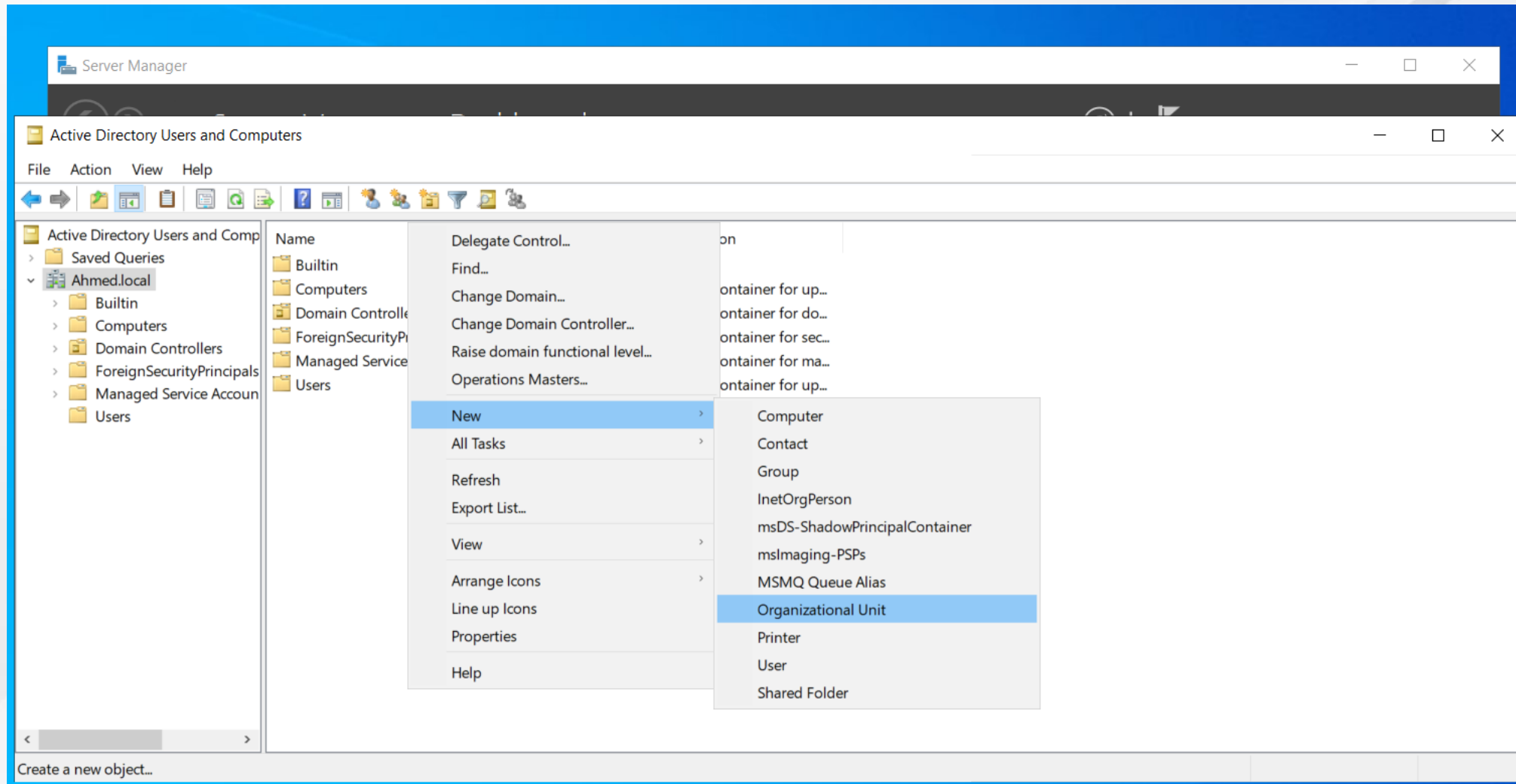
Active Directory Users and Comp

- > Saved Queries
- > Ahmed.local
 - > Builtin
 - > Computers
 - > **Domain Controllers**
 - > ForeignSecurityPrincipals
 - > Managed Service Account
 - > **Users**

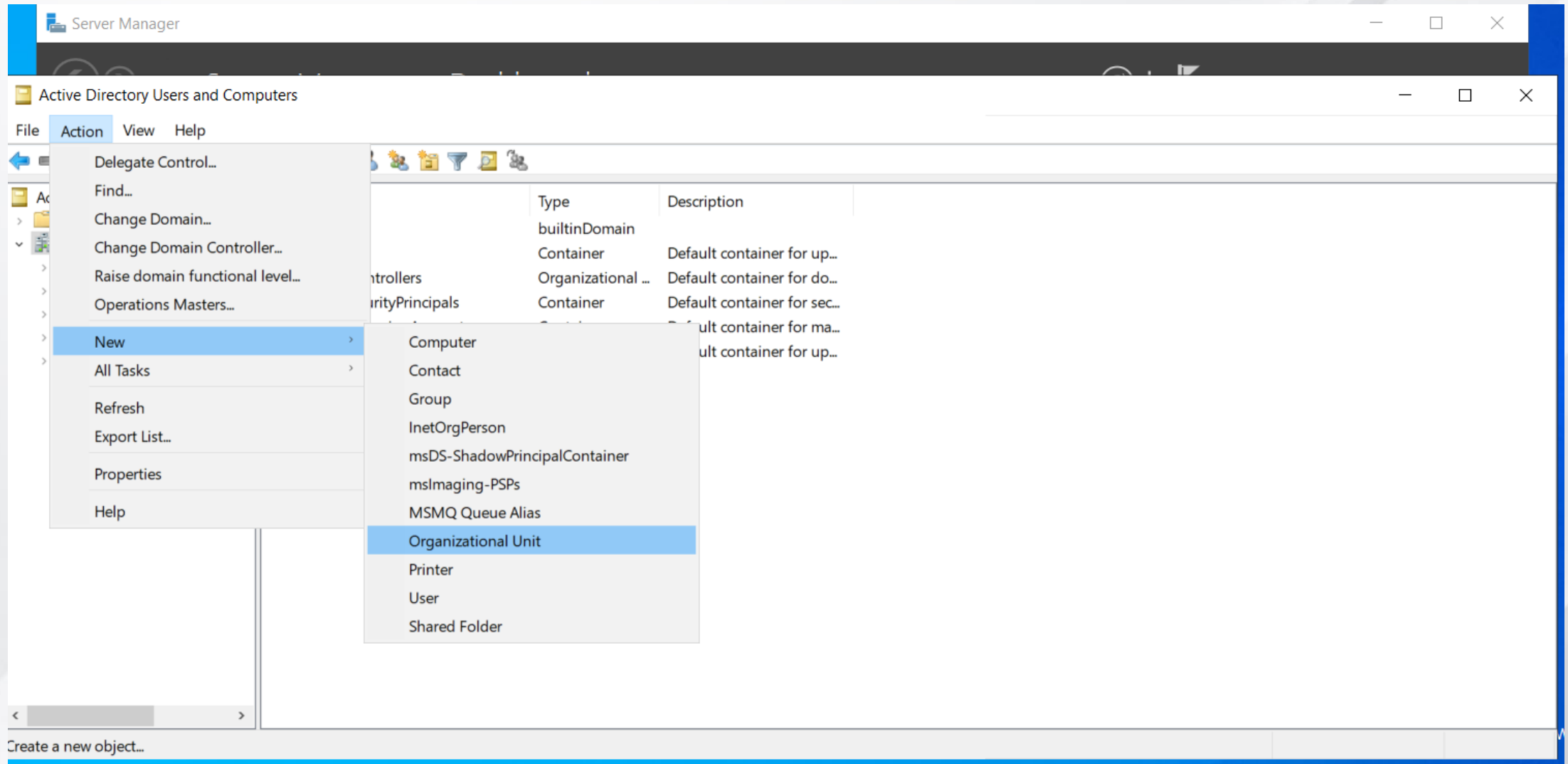
Name	Type	Description
Administrator	User	Built-in account for admi...
Ahmed Omar	User	
Allowed RODC Password Replicati...	Security Group ...	Members in this group c...
Cert Publishers	Security Group ...	Members of this group a...
Cloneable Domain Controllers	Security Group ...	Members of this group t...
Denied RODC Password Replicati...	Security Group ...	Members in this group c...
DnsAdmins	Security Group ...	DNS Administrators Group
DnsUpdateProxy	Security Group ...	DNS clients who are per...
Domain Admins	Security Group ...	Designated administrato...
Domain Computers	Security Group ...	All workstations and serv...
Domain Controllers	Security Group ...	All domain controllers in ...
Domain Guests	Security Group ...	All domain guests
Domain Users	Security Group ...	All domain users
Enterprise Admins	Security Group ...	Designated administrato...
Enterprise Key Admins	Security Group ...	Members of this group c...
Enterprise Read-only Domain Co...	Security Group ...	Members of this group a...
Group Policy Creator Owners	Security Group ...	Members in this group c...
Guest	User	Built-in account for gues...
Key Admins	Security Group ...	Members of this group c...
Protected Users	Security Group ...	Members of this group a...
RAS and IAS Servers	Security Group ...	Servers in this group can



Create Organizational Unit (OU)



Create Organizational Unit (OU)



Create Organizational Unit (OU)

New Object - Organizational Unit

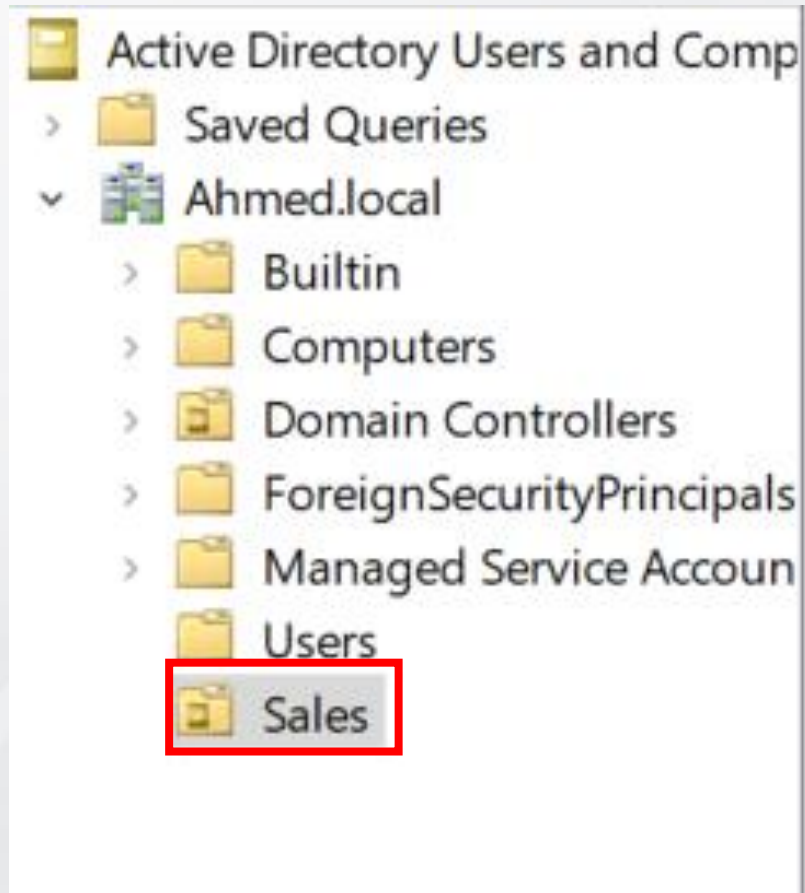
Create in: Ahmed.local/

Name:
Sales

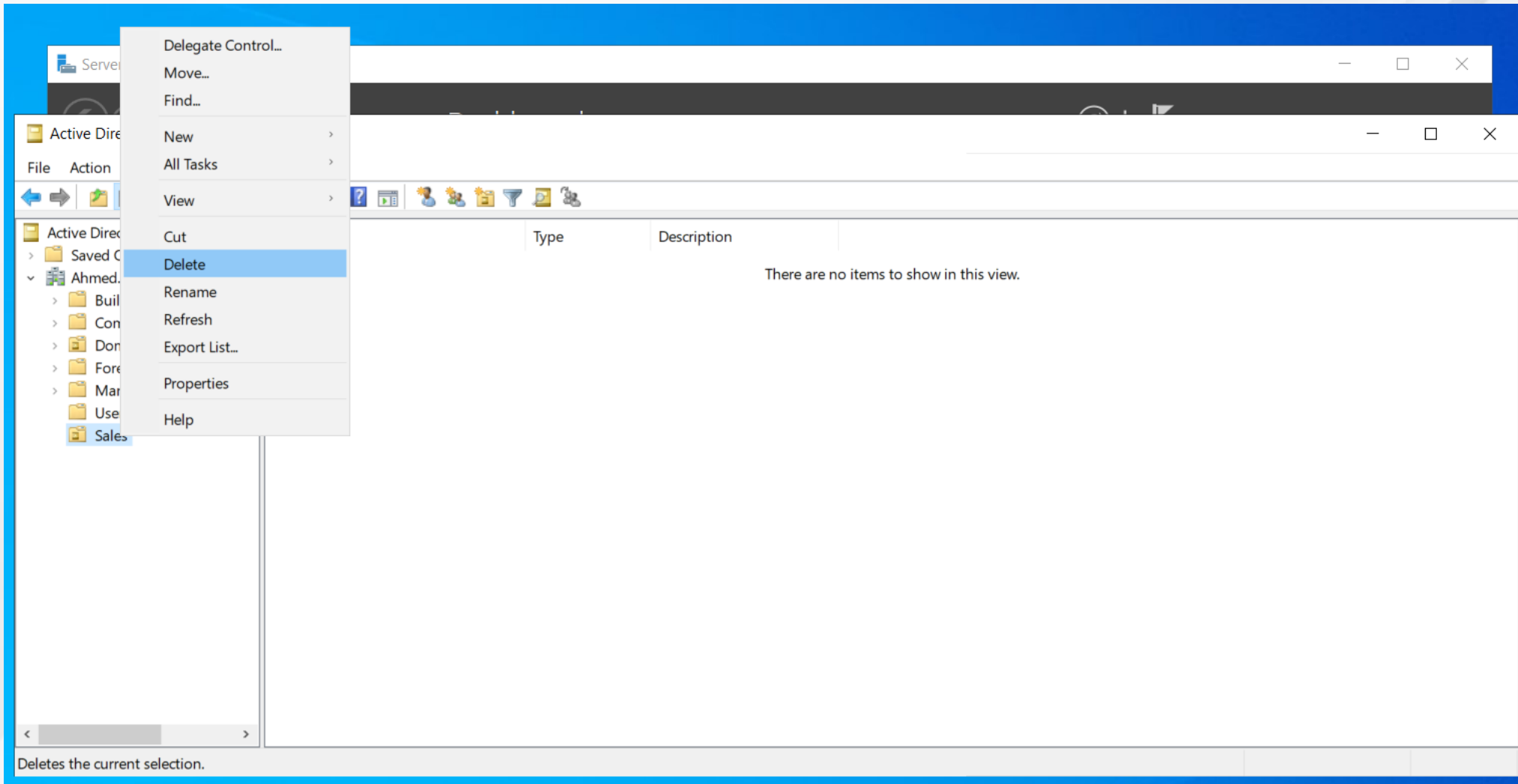
☒ Protect container from accidental deletion

OK Cancel Help

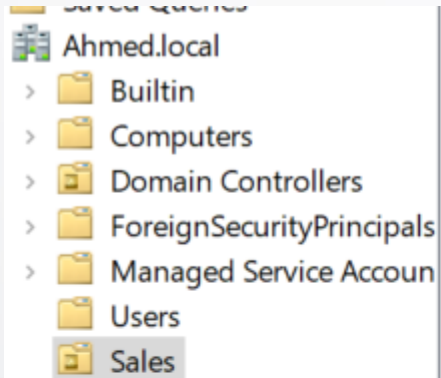
Create Organizational Unit (OU)



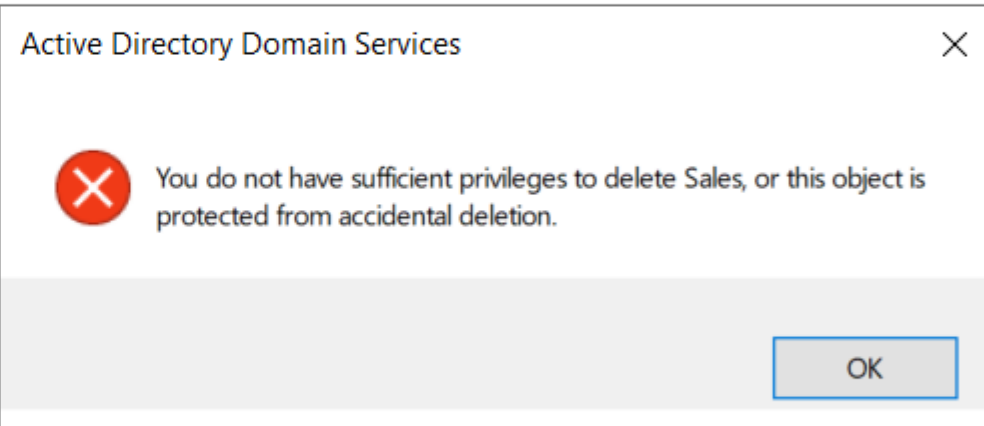
Delete Organizational Unit (OU)



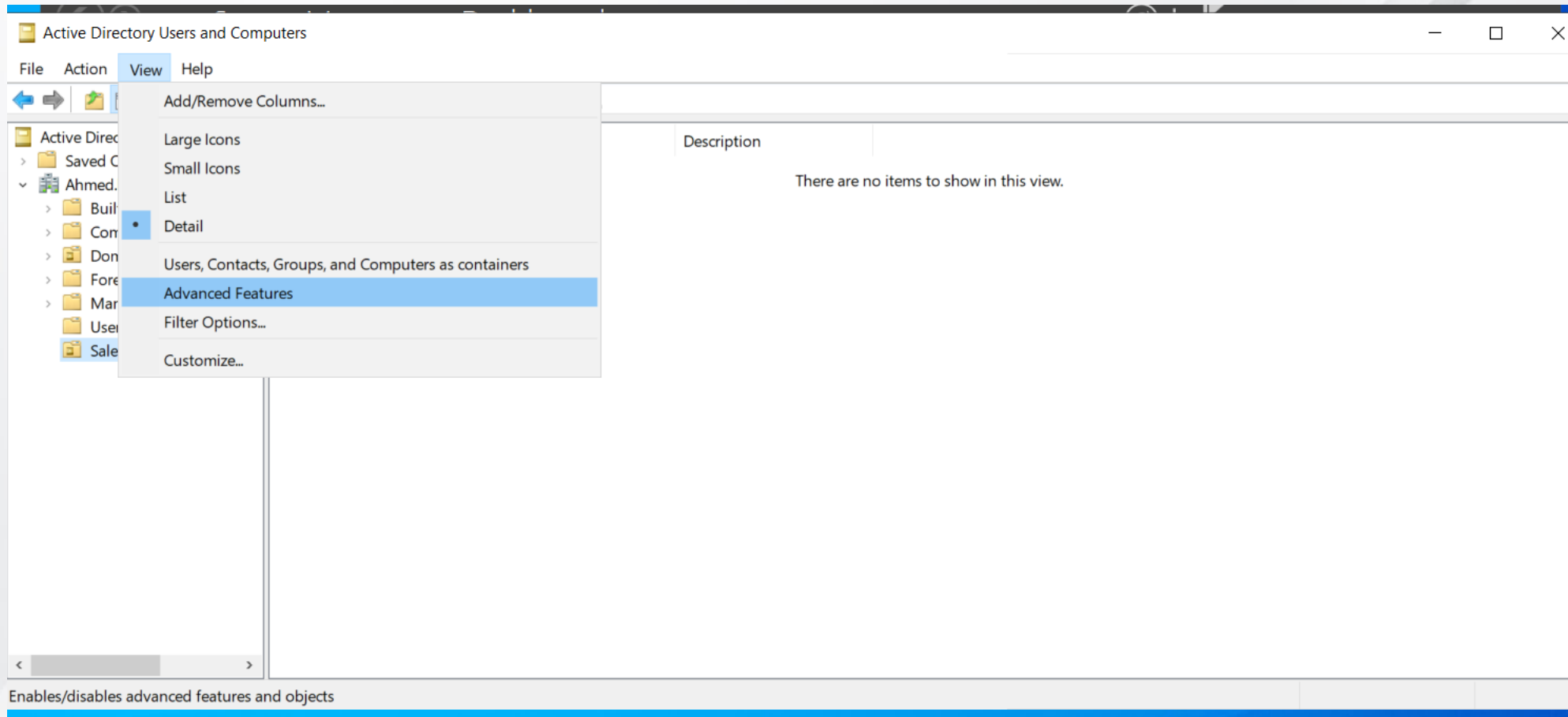
Delete Organizational Unit (OU)



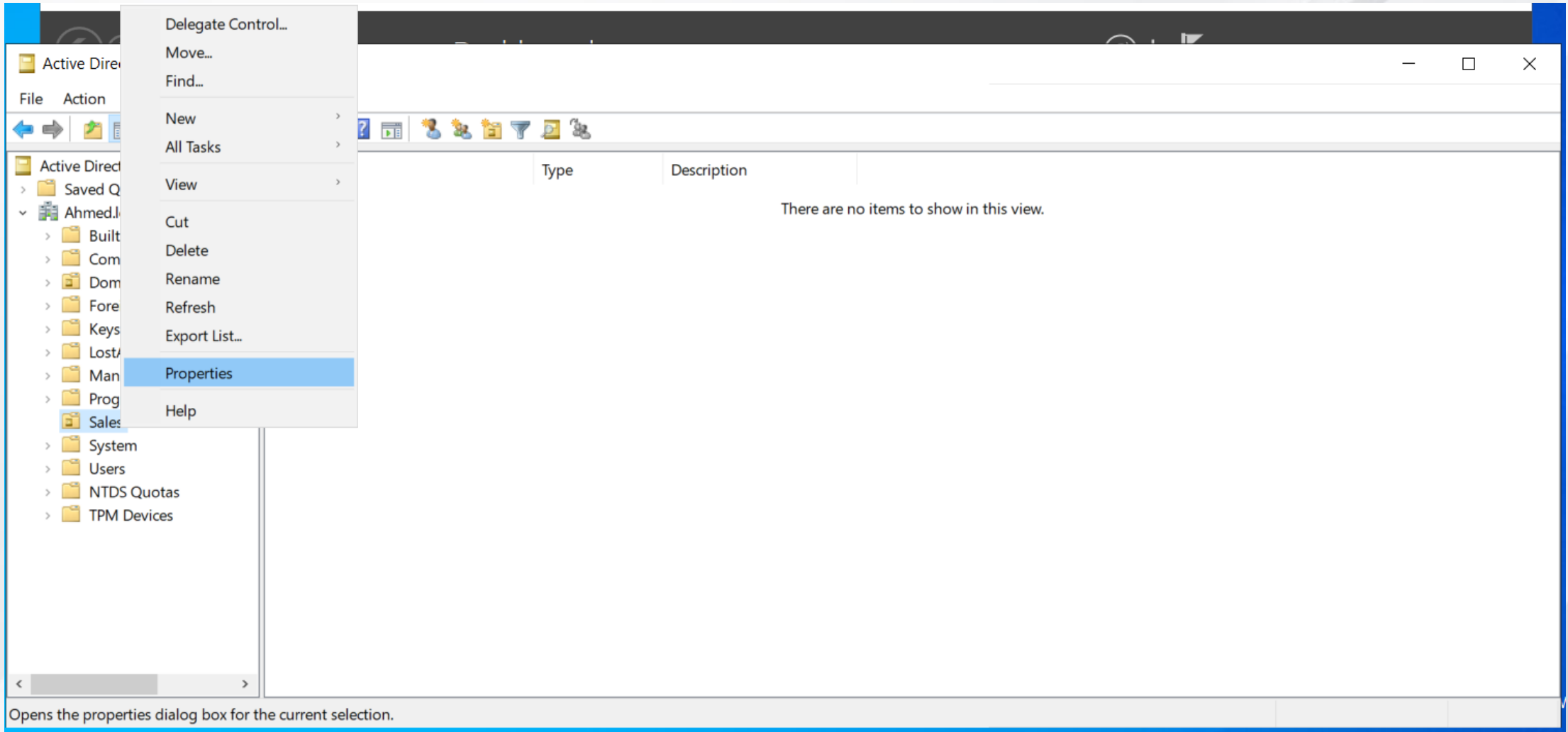
There are no items to show in this view.



Delete Organizational Unit (OU)



Delete Organizational Unit (OU)



Delete Organizational Unit (OU)

Sales Properties

General Managed By Object Security COM+ Attribute Editor

Canonical name of object:
Ahmed.local/Sales

Object class: Organizational Unit

Created: 7/5/2025 5:19:48 AM

Modified: 7/5/2025 5:19:48 AM

Update Sequence Numbers (USNs):

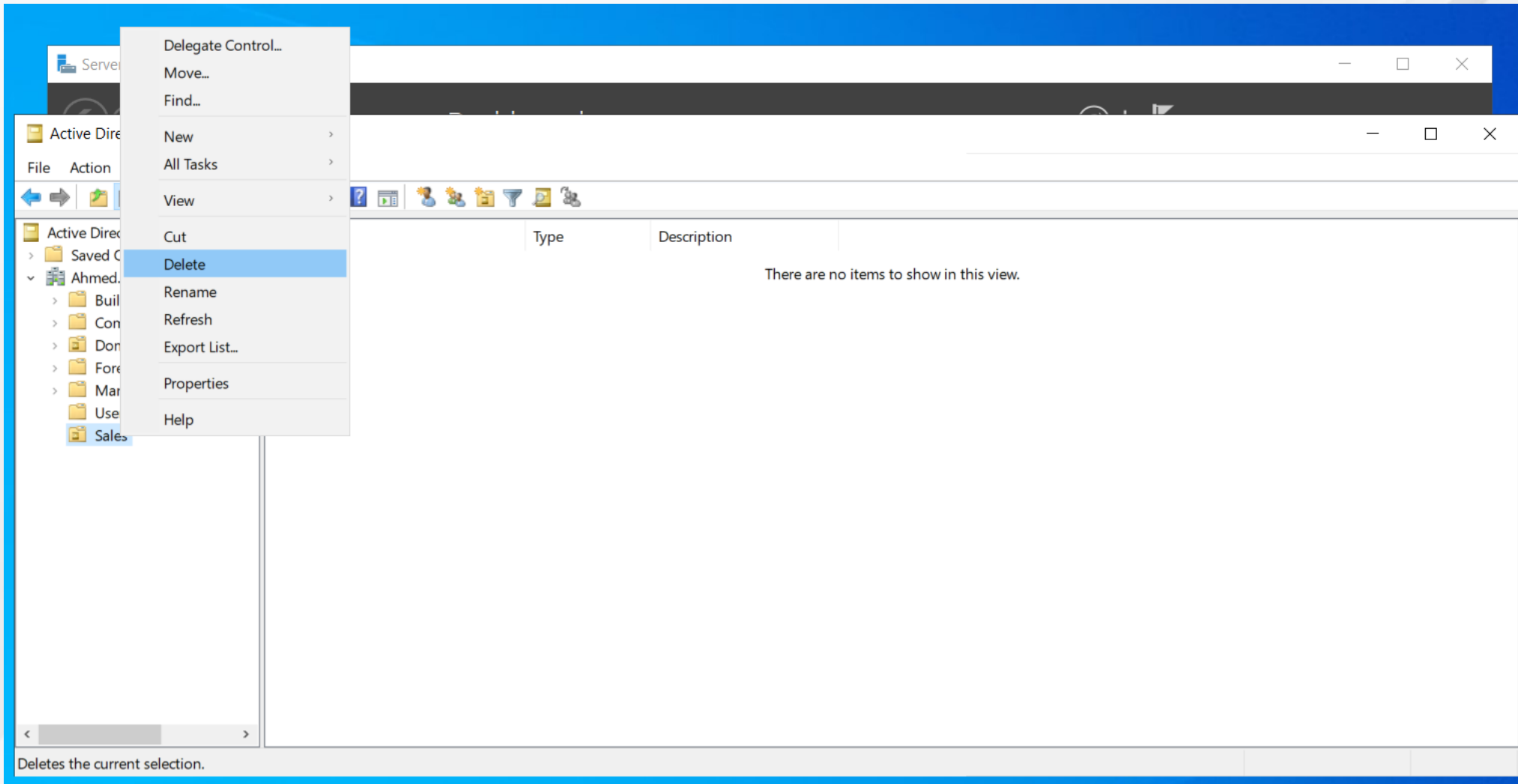
Current: 28694

Original: 28693

☒ Protect object from accidental deletion

OK Cancel Apply Help

Delete Organizational Unit (OU)



Join Domain

Join client to the domain

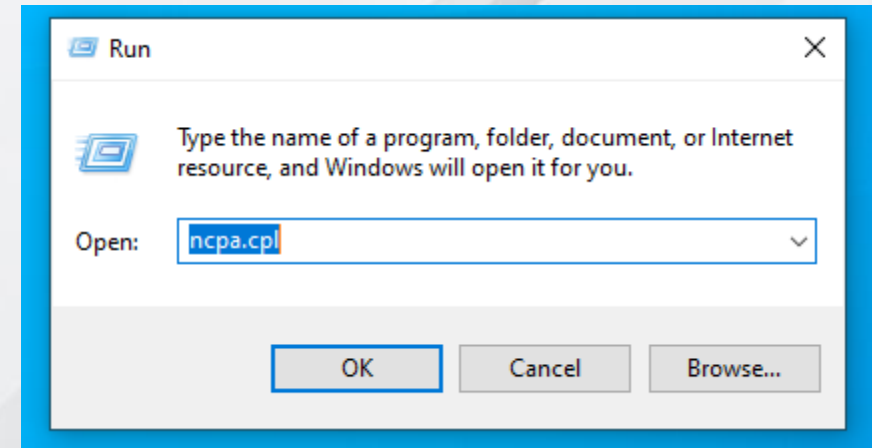
We need first to set the client DNS

Open Run :



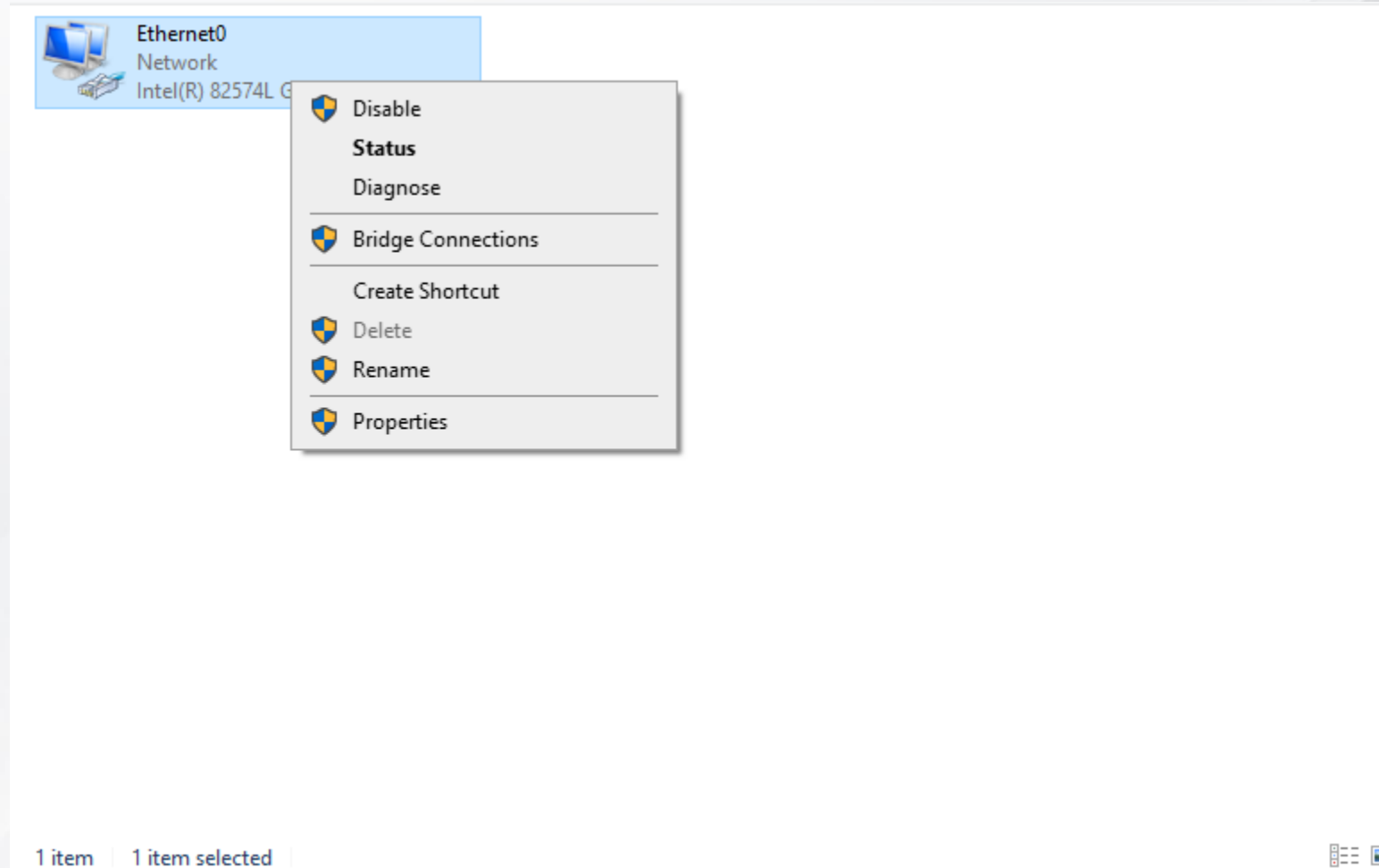
+ R

ncpa.cpl



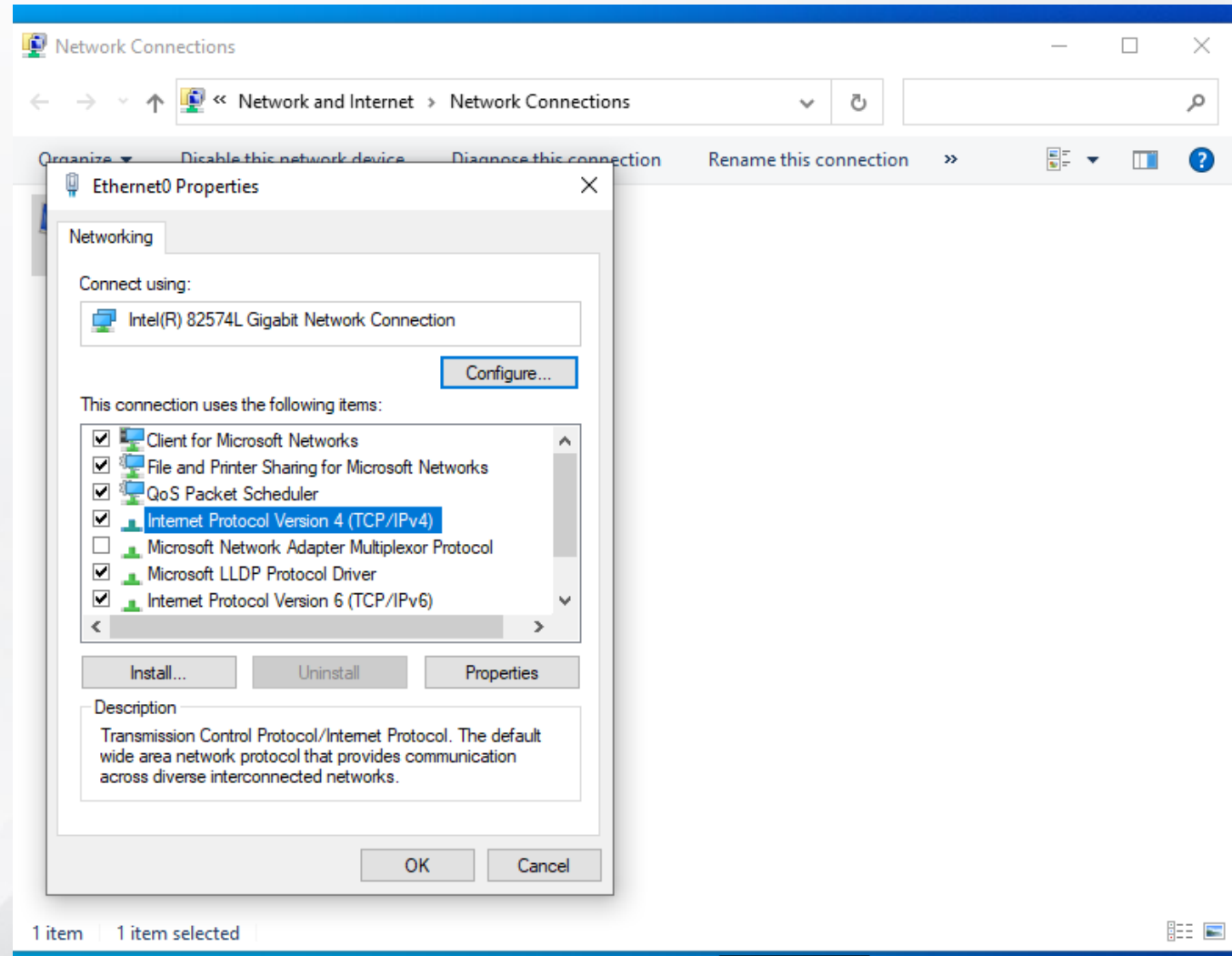
Join Domain

Join client to the domain



Join Domain

Join client to the domain



Join Domain

Join client to the domain

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 10 . 11 . 100 . 20

Subnet mask: 255 . 255 . 255 . 0

Default gateway: . . .

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: 10 . 11 . 100 . 100

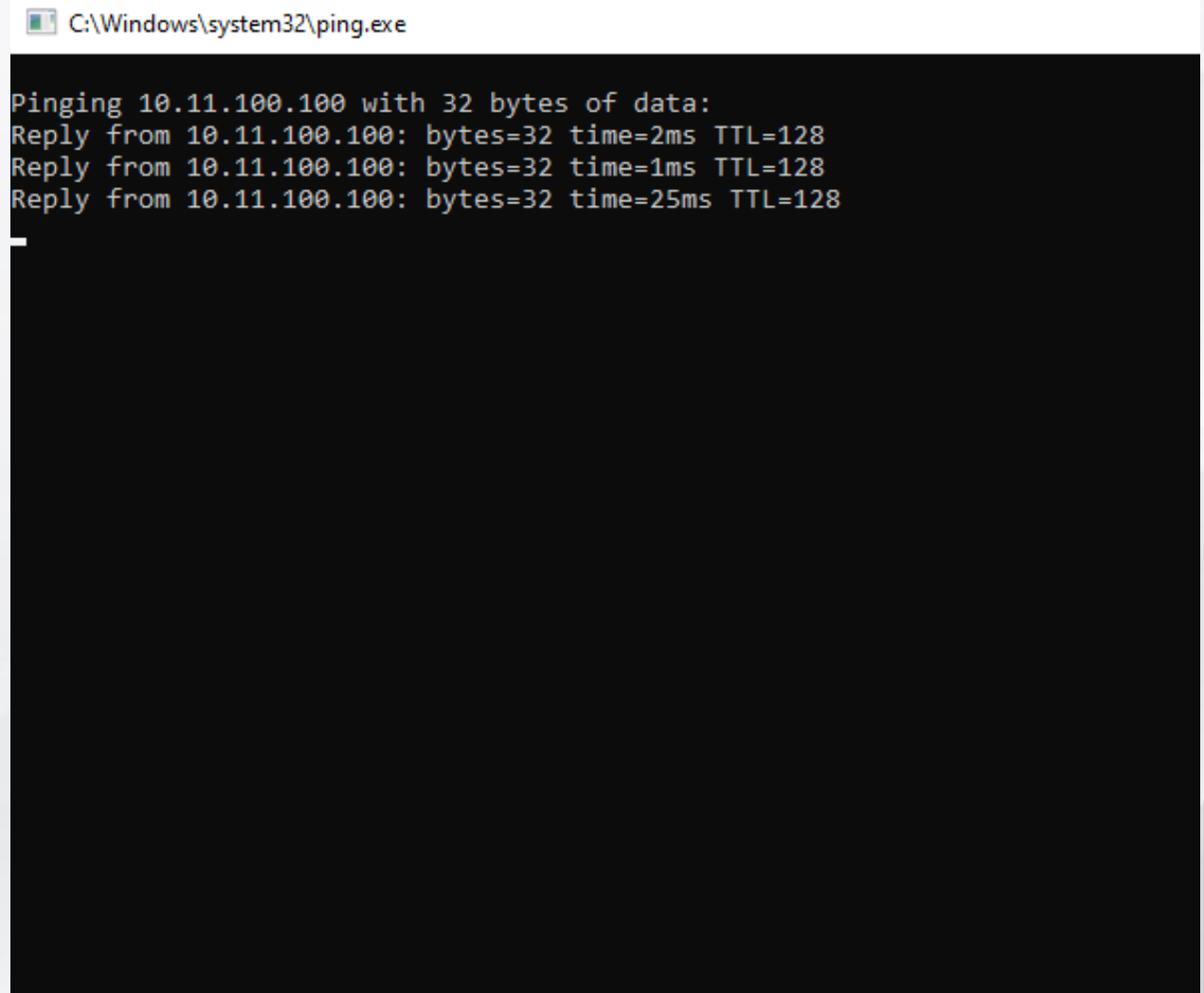
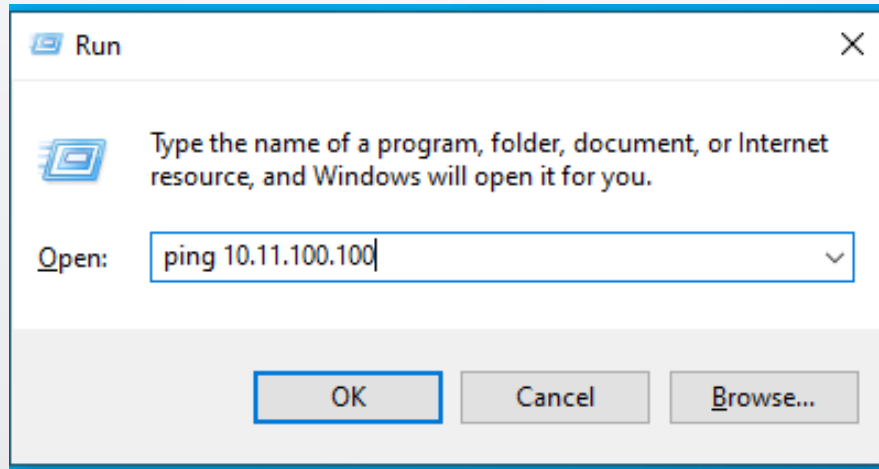
Alternate DNS server: . . .

☐ Validate settings upon exit

Advanced...

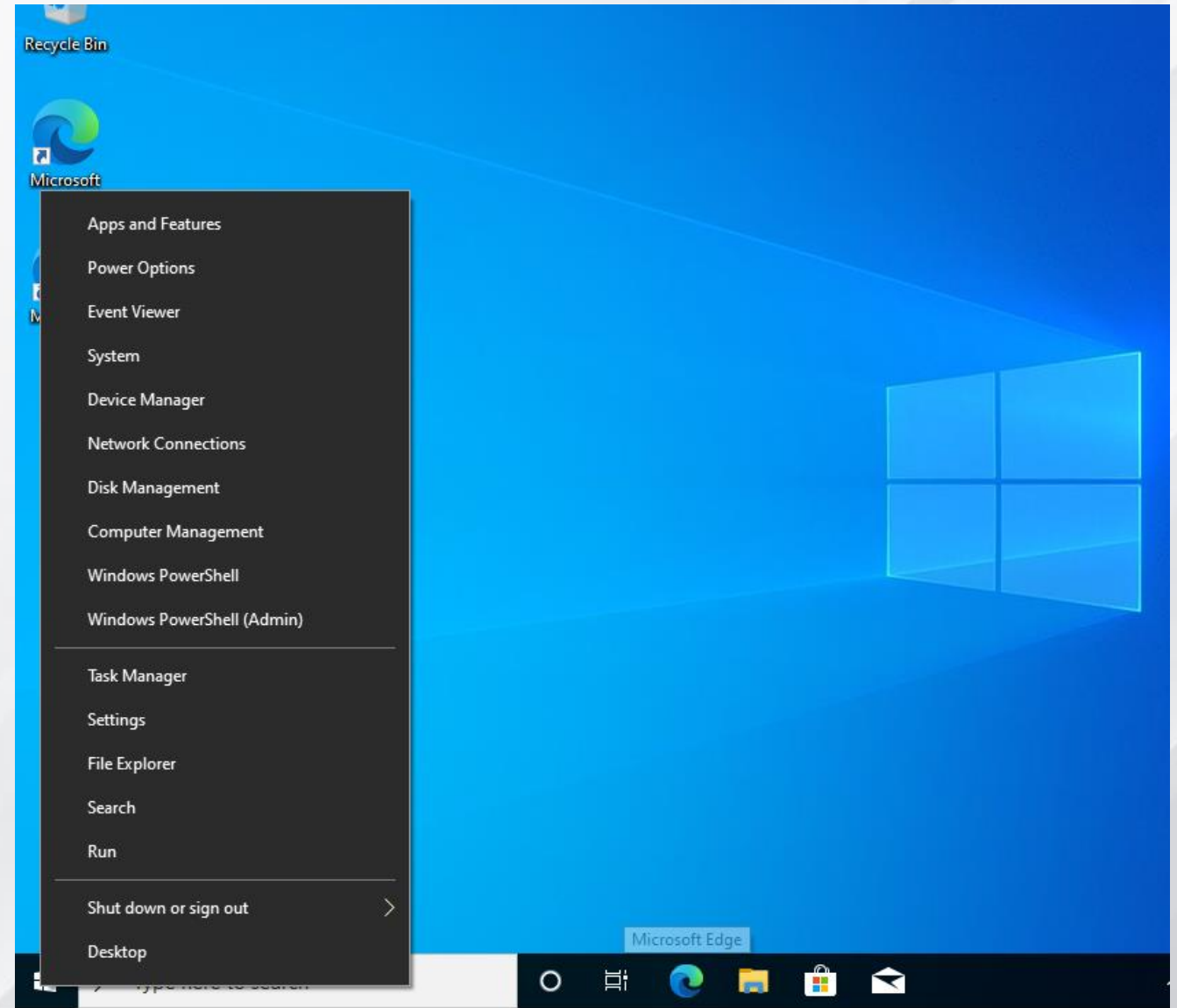
OK Cancel

Join Domain



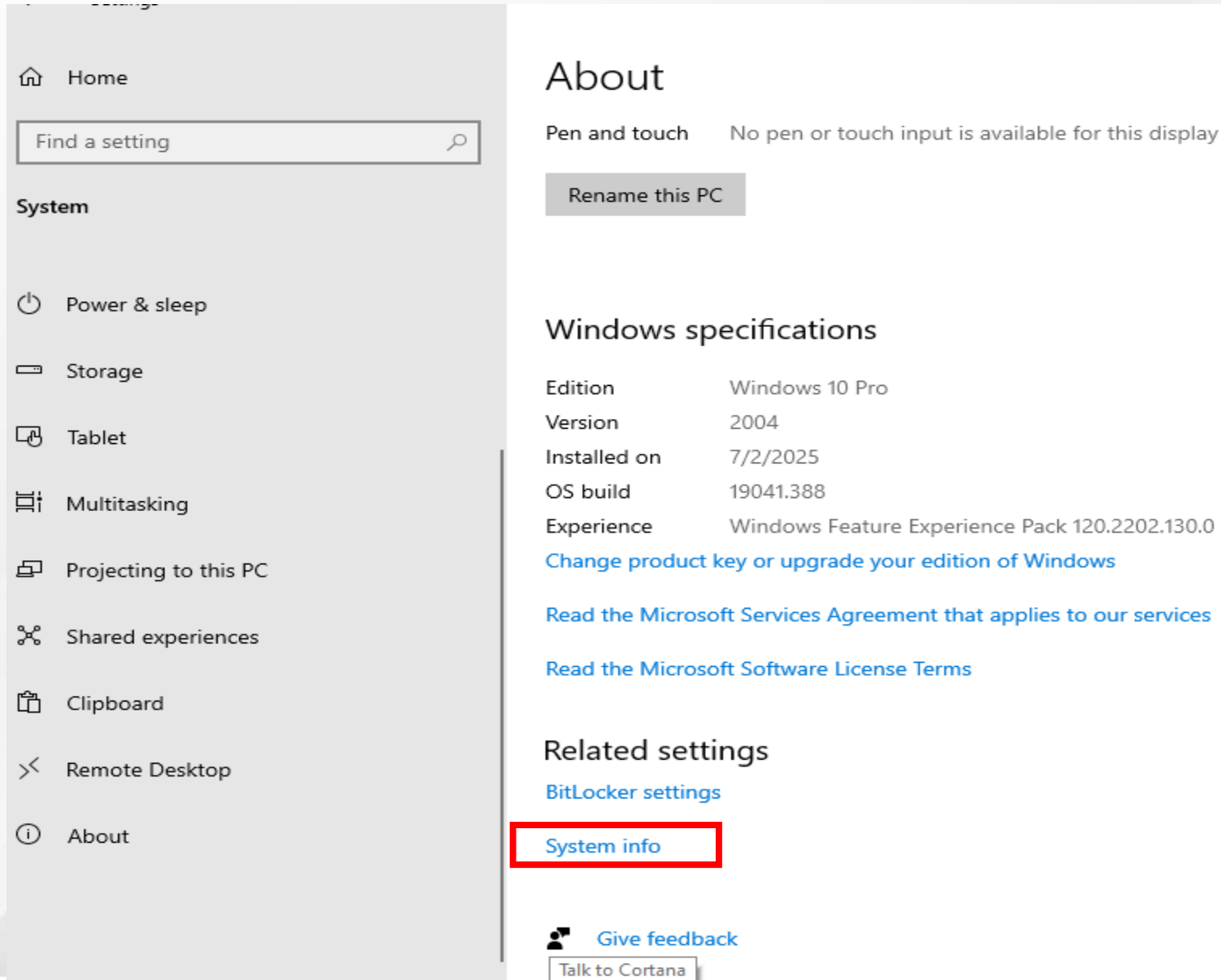
Join Domain

Right-click on the Start menu and select System



Join Domain

Click about
Then system info



The image shows a Windows Settings window with the 'About' page selected. The left sidebar lists various settings categories, with 'About' at the bottom. The main pane displays system information including Windows specifications and related settings. A red rectangle highlights the 'System info' link in the 'Related settings' section.

Home

Find a setting

System

- Power & sleep
- Storage
- Tablet
- Multitasking
- Projecting to this PC
- Shared experiences
- Clipboard
- Remote Desktop
- About

About

Pen and touch No pen or touch input is available for this display

Rename this PC

Windows specifications

Edition	Windows 10 Pro
Version	2004
Installed on	7/2/2025
OS build	19041.388
Experience	Windows Feature Experience Pack 120.2202.130.0

[Change product key or upgrade your edition of Windows](#)

[Read the Microsoft Services Agreement that applies to our services](#)

[Read the Microsoft Software License Terms](#)

Related settings

[BitLocker settings](#)

[System info](#)

[Give feedback](#)

Talk to Cortana

Join Domain

Click Change settings
next to the computer name.

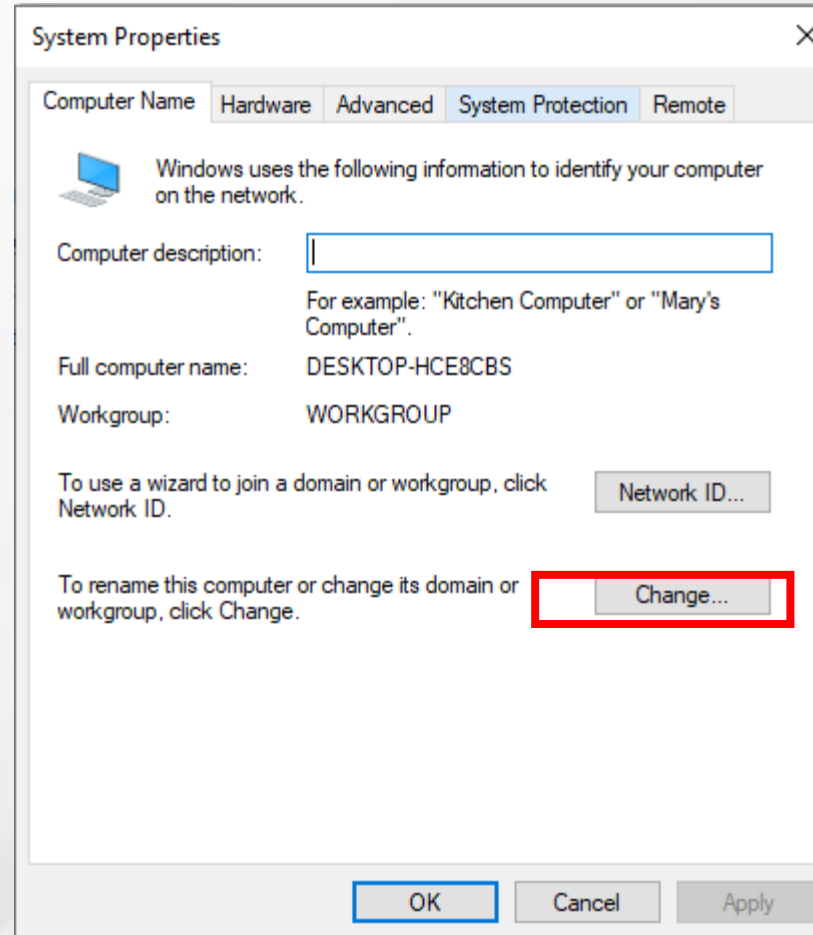
The screenshot shows the Windows 10 'System' page. The breadcrumb navigation at the top reads: Control Panel > System and Security > System. On the left sidebar, there are links to 'Device Manager', 'Remote settings', 'System protection', and 'Advanced system settings'. The main content area is titled 'View basic information about your computer'. It displays the following information:

- Windows edition:** Windows 10 Pro, © 2020 Microsoft Corporation. All rights reserved.
- System:**
 - Processor: Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz 2.39 GHz (2 processors)
 - Installed memory (RAM): 2.00 GB
 - System type: 64-bit Operating System, x64-based processor
 - Pen and Touch: No Pen or Touch Input is available for this Display
- Computer name, domain, and workgroup settings:**
 - Computer name: DESKTOP-HCE8CBS (This link is highlighted with a red box and labeled 'Change settings')
 - Full computer name: DESKTOP-HCE8CBS
 - Computer description:
 - Workgroup: WORKGROUP
- Windows activation:** Windows is not activated. [Read the Microsoft Software License Terms](#)

At the bottom, it shows the Product ID: 00330-80000-00000-AA600 and an 'Activate Windows' button. A 'See also' link for 'Security and Maintenance' is at the bottom left.

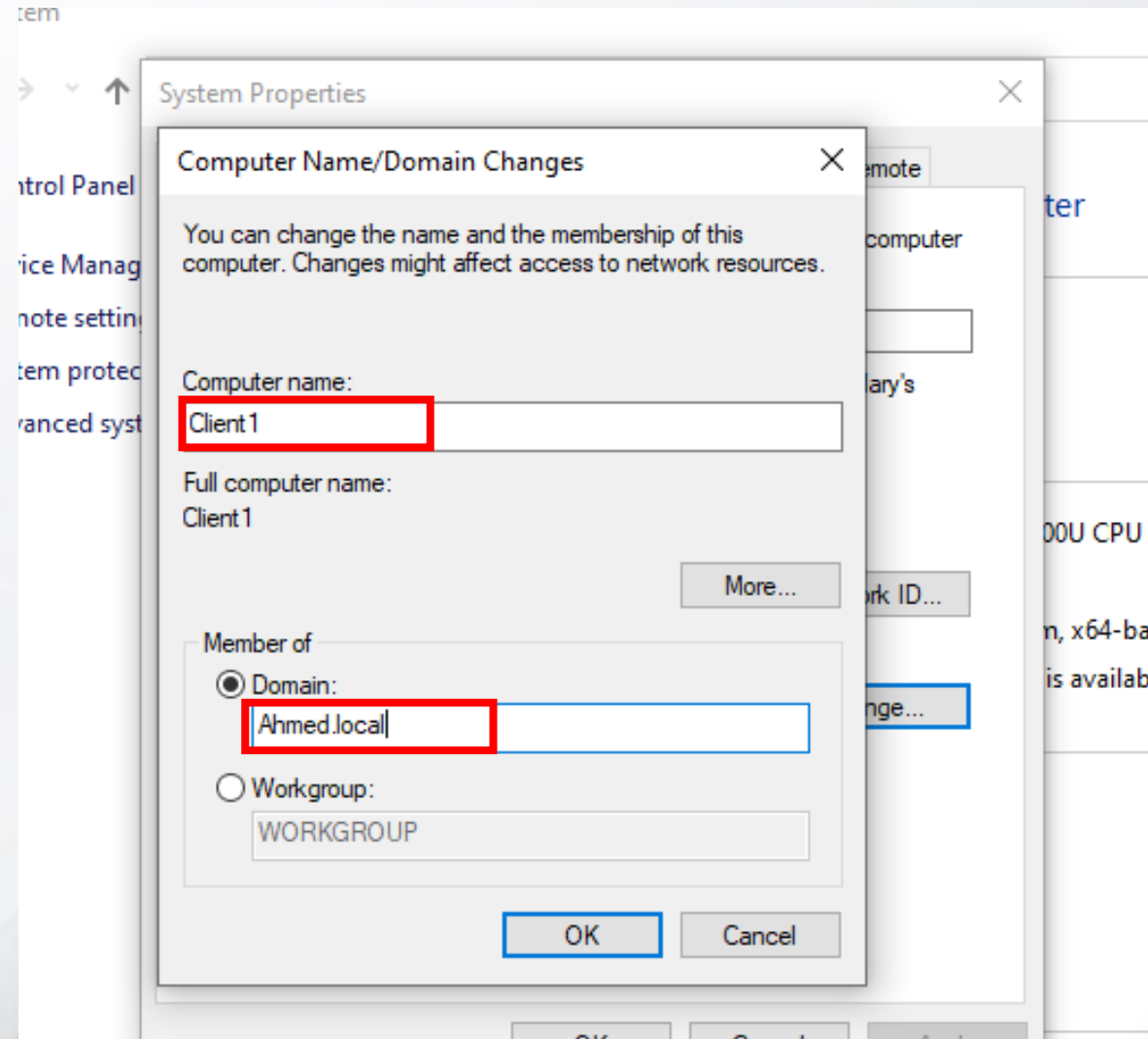
Join Domain

In the System Properties window,
click Change.



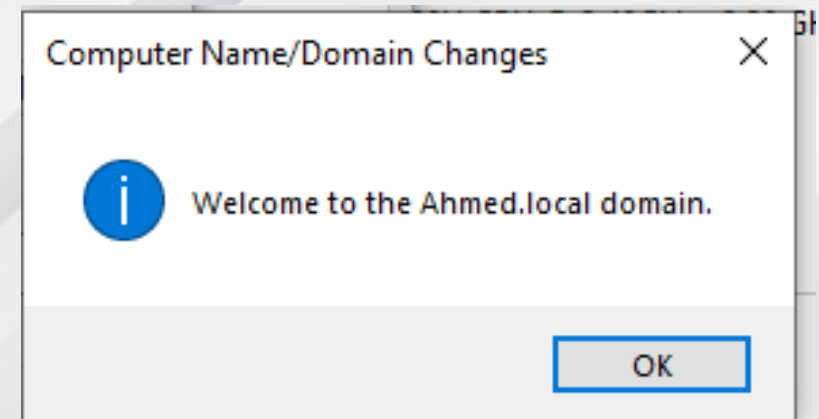
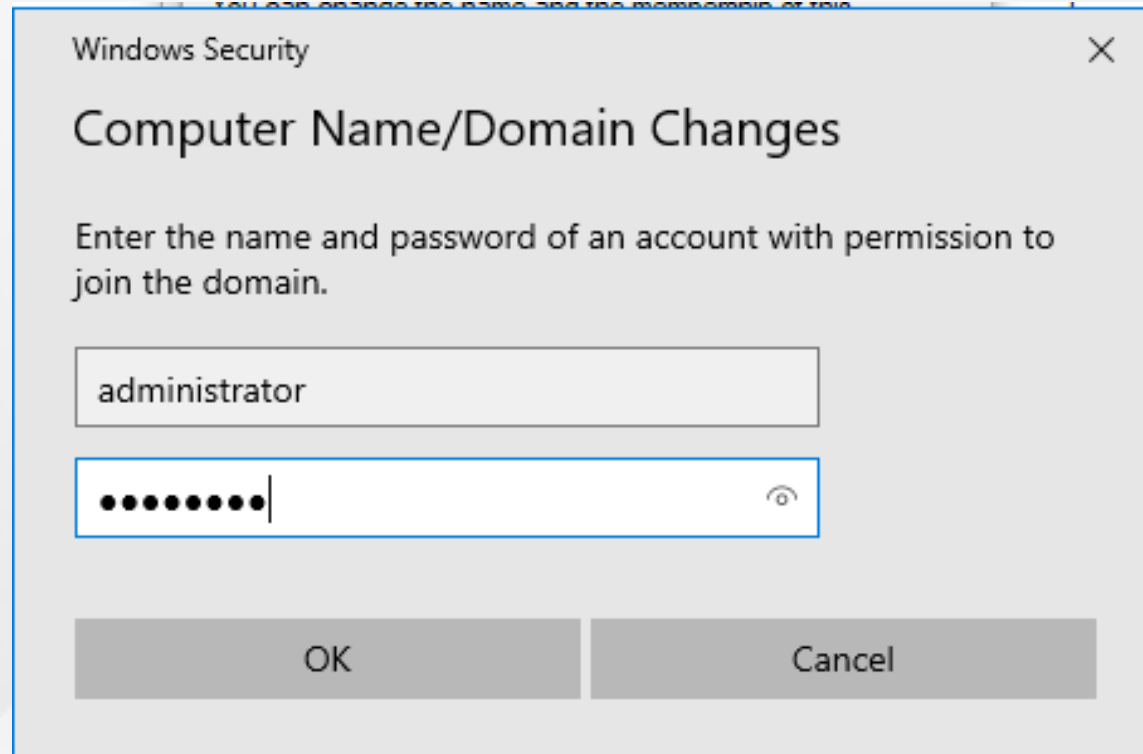
Join Domain

- ✓ Enter the computer name
- ✓ Enter the domain name



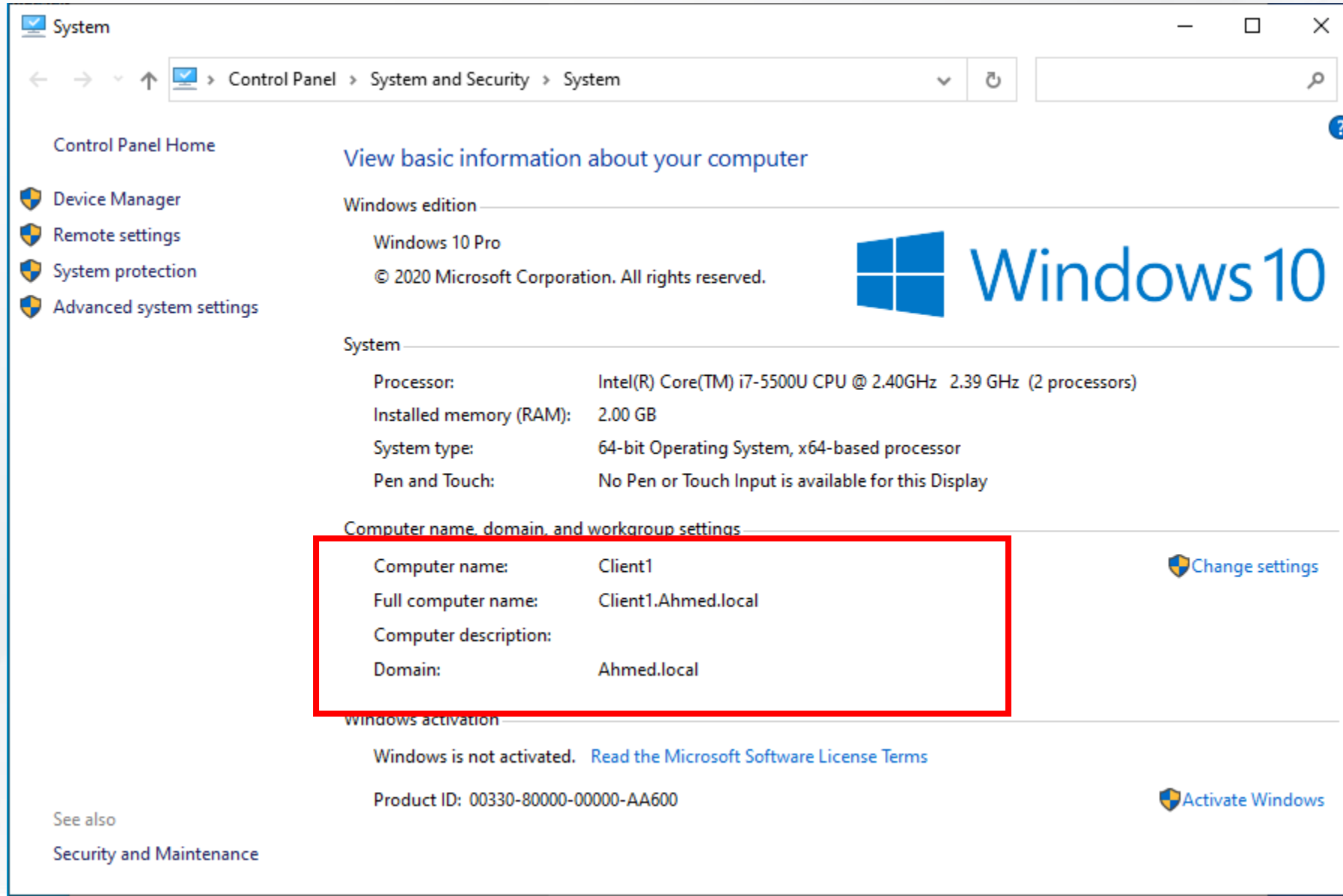
Join Domain

- ✓ A prompt will appear asking for a username and password.



Join Domain

✓ System info



The screenshot shows the Windows 'System' settings window. The breadcrumb path is 'Control Panel > System and Security > System'. The left sidebar lists 'Device Manager', 'Remote settings', 'System protection', and 'Advanced system settings'. The main content area is titled 'View basic information about your computer'. It displays 'Windows edition' as 'Windows 10 Pro' with copyright information. Below this, the 'System' section lists hardware details: 'Processor: Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz 2.39 GHz (2 processors)', 'Installed memory (RAM): 2.00 GB', 'System type: 64-bit Operating System, x64-based processor', and 'Pen and Touch: No Pen or Touch Input is available for this Display'. A red rectangle highlights the 'Computer name, domain, and workgroup settings' section, which shows 'Computer name: Client1', 'Full computer name: Client1.Ahmed.local', 'Computer description:', and 'Domain: Ahmed.local'. To the right of this section is a 'Change settings' link. At the bottom, the 'Windows activation' section states 'Windows is not activated.' with a link to 'Read the Microsoft Software License Terms' and a 'Product ID: 00330-80000-00000-AA600'. An 'Activate Windows' button is also present.

System

Control Panel > System and Security > System

Control Panel Home

View basic information about your computer

Windows edition

Windows 10 Pro

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System

Processor: Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz 2.39 GHz (2 processors)

Installed memory (RAM): 2.00 GB

System type: 64-bit Operating System, x64-based processor

Pen and Touch: No Pen or Touch Input is available for this Display

Computer name, domain, and workgroup settings

Computer name: Client1

Full computer name: Client1.Ahmed.local

Computer description:

Domain: Ahmed.local

Change settings

Windows activation

Windows is not activated. [Read the Microsoft Software License Terms](#)

Product ID: 00330-80000-00000-AA600

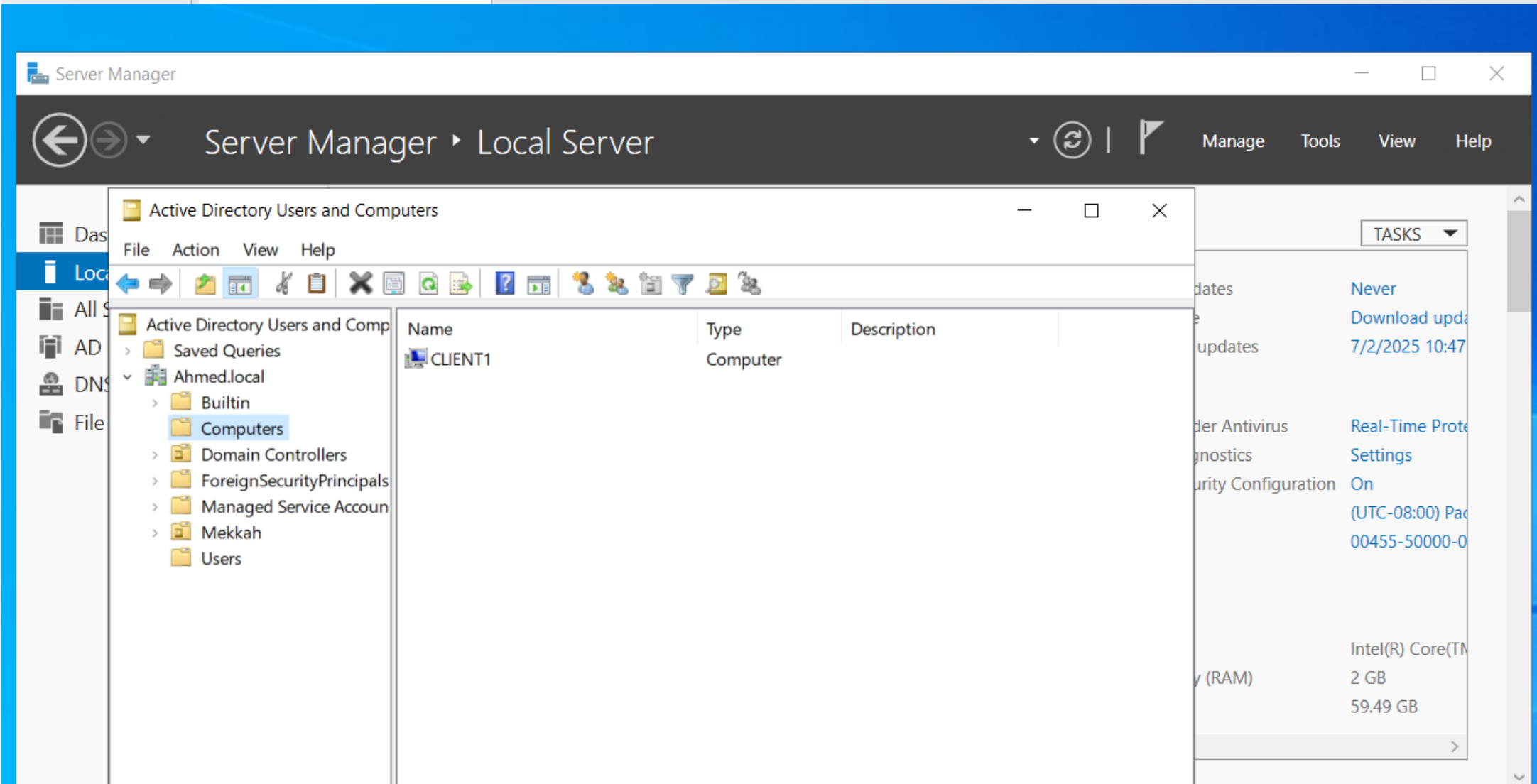
Activate Windows

See also

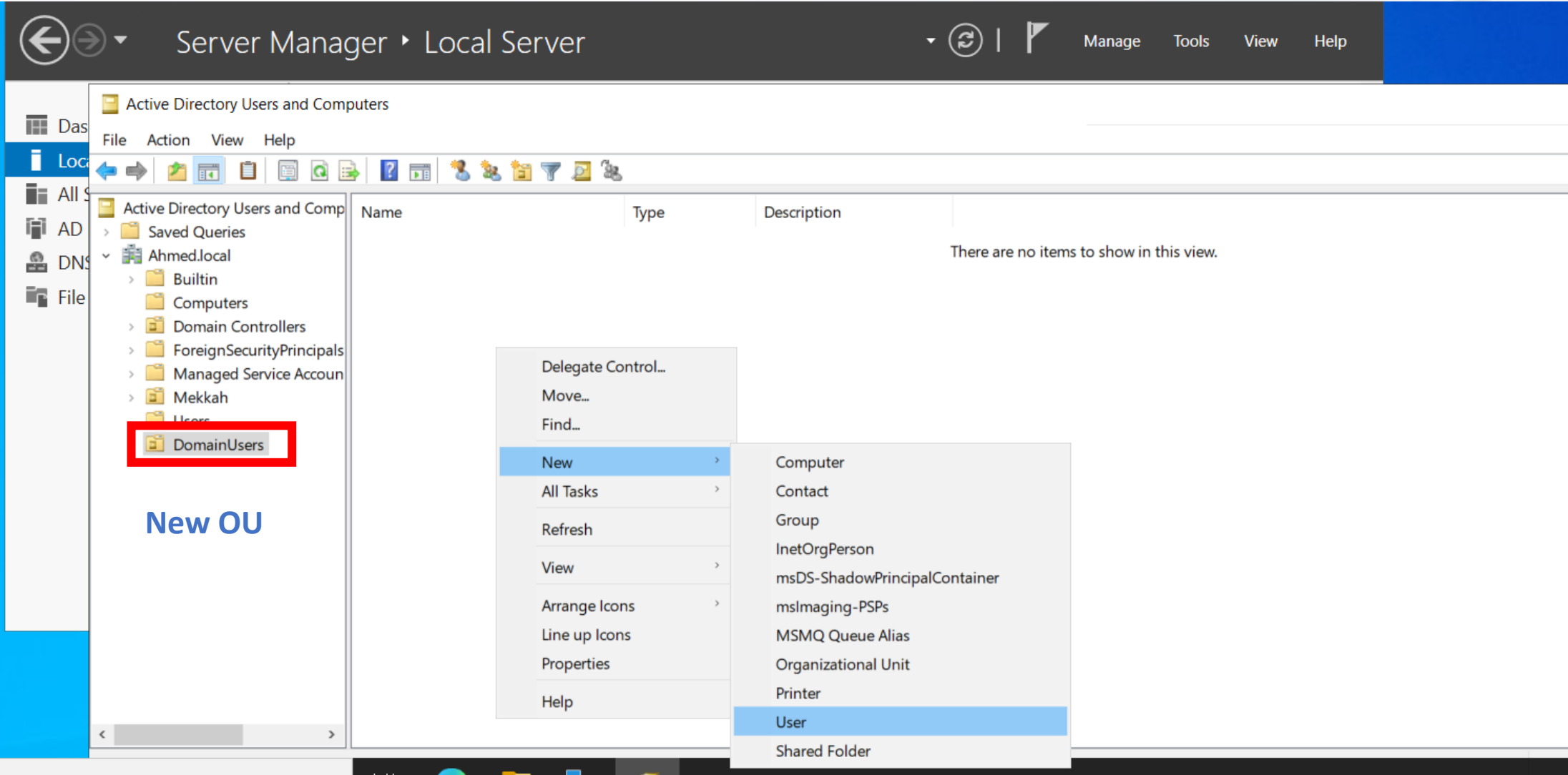
Security and Maintenance

Join Domain

Computers in DC



Create Domain User



Create Domain User

New Object - User

 Create in: Ahmed.local/DomainUsers

First name:

user

Initials:

Last name:

1

Full name:

user 1

User logon name:

user1

@Ahmed.local

User logon name (pre-Windows 2000):

AHMED\

user1

< Back

Next >

Cancel



New Object - User

 Create in: Ahmed.local/DomainUsers

Password:

.....

Confirm

.....

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

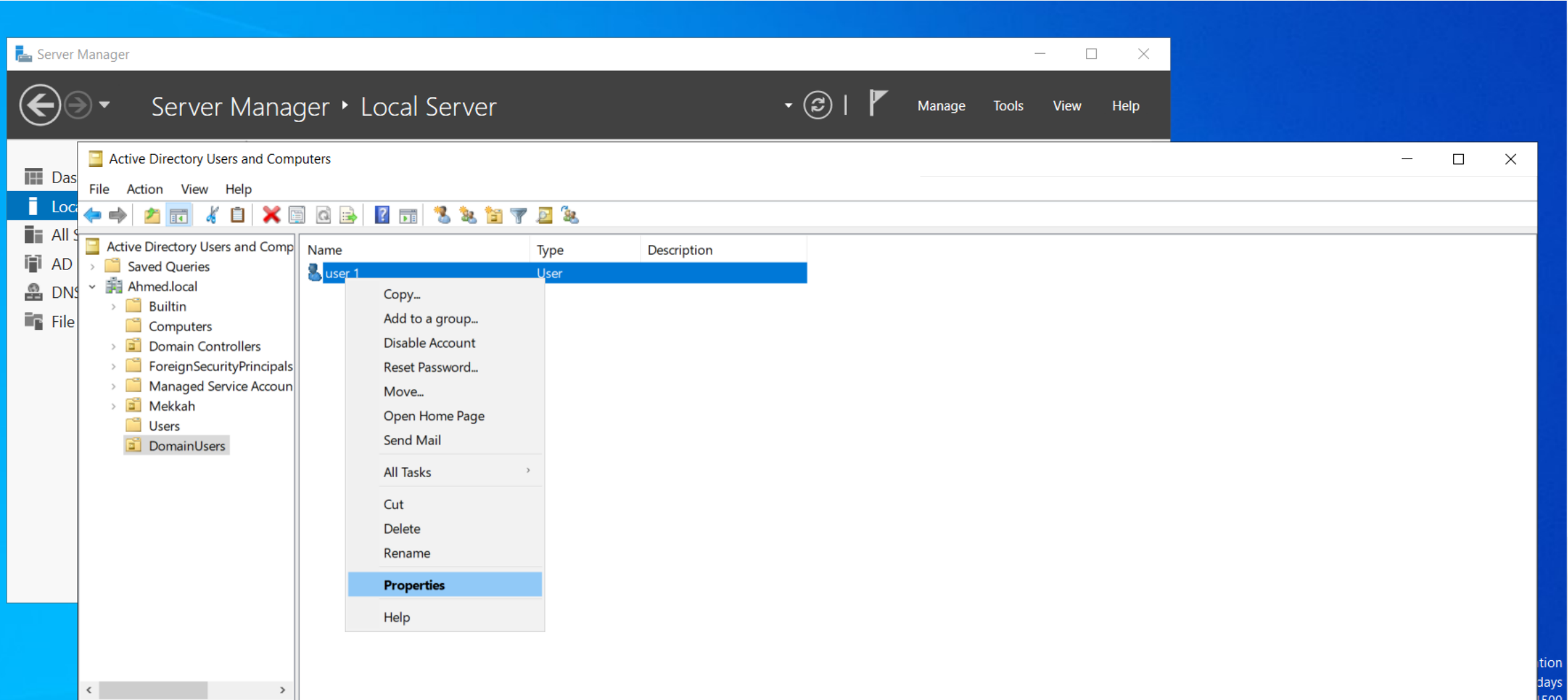
☐ Account is disabled

< Back

Next >

Cancel

Create Domain User



Create Domain User

user 1 Properties

Member Of

Dial-in

Environment

Sessions

Remote control

Remote Desktop Services Profile

COM+

General

Address

Account

Profile

Telephones

Organization

User login name:

user1

@Ahmed.local

User login name (pre-Windows 2000):

AHMED\

user1

Logon Hours...

Log On To...

☐ Unlock account

Account options:

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

☐ Store password using reversible encryption

Account expires

☒ Never

☐ End of:

Monday , August 4, 2025

OK

Cancel

Apply

Help

MIDOCEAN
UNIVERSITY

Logon Hours for user 1

12 • 2 • 4 • 6 • 8 • 10 • 12 • 2 • 4 • 6 • 8 • 10 • 12

All	12	2	4	6	8	10	12	2	4	6	8	10	12
Sunday	■	■	■	■	■	■	■	■	■	■	■	■	■
Monday	■	■	■	■	■	■	■	■	■	■	■	■	■
Tuesday	■	■	■	■	■	■	■	■	■	■	■	■	■
Wednesday	■	■	■	■	■	■	■	■	■	■	■	■	■
Thursday	■	■	■	■	■	■	■	■	■	■	■	■	■
Friday	■	■	■	■	■	■	■	■	■	■	■	■	■
Saturday	■	■	■	■	■	■	■	■	■	■	■	■	■

☒ Logon Permitted
☐ Logon Denied

OK Cancel

Sunday through Saturday from 12:00 AM to 12:00 AM

MIDOCEAN
UNIVERSITY

Logon Hours for user 1

☐ All day ☒ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

	12	2	4	6	8	10	12	2	4	6	8	10	12
All													
Sunday													
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													

☐ Logon Permitted
☒ Logon Denied

OK Cancel

Sunday from 12:00 AM to 12:00 AM

Create Domain User

Login To

user 1 Properties

Member Of

Dial-in

Environment

Sessions

Remote control

Remote Desktop Services Profile

COM+

General

Address

Account

Profile

Telephones

Organization

User logon name:

user1

@Ahmed.local

User logon name (pre-Windows 2000):

AHMED\

user1

Logon Hours...

Log On To...

☐ Unlock account

Account options:

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

☐ Store password using reversible encryption

Account expires

☒ Never

☐ End of: Monday , August 4, 2025

OK

Cancel

Apply

Help

user 1 Properties

Member Of

Dial-in

Environment

Sessions

Logon Workstations

In Computer name, type the computer's NetBIOS or Domain Name System (DNS) name.

This user can log on to:

☐ All computers

☒ The following computers

Computer name:

PC1

Add

Edit

Remove

OK

Cancel

OK

Cancel

Apply

Help

User account Properties

- **Logon Hours...**: This button, when clicked, allows an administrator to define the specific hours and days of the week when the "user1" account is permitted to log on to the network. If the user attempts to log in outside these specified hours, their login will be denied. This is a security feature to restrict access.

- **Log On To...**: This button allows an administrator to specify which computers or workstations the "user1" account is allowed to log on to. This provides a more granular control over where a user can access network resources. For example, you might restrict a user to only log on to specific department computers.

user 1 Properties

Member Of: Remote control, Remote Desktop Services Profile, COM+
General, Address, Account, Profile, Telephones, Organization

User logon name: user1 @Ahmed.local

User logon name (pre-Windows 2000): AHMED\ user1

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☐ User must change password at next logon
- ☐ User cannot change password
- ☐ Password never expires
- ☐ Store password using reversible encryption

Account expires:

- ☒ Never
- ☐ End of: Monday, August 4, 2025

OK Cancel Apply Help

User account Properties

- ☐ **Unlock account:** This checkbox, when selected, will unlock the user account. An account can become locked for various reasons, such as too many failed login attempts (often due to incorrect passwords).
- ☐ **Account expires:** This section determines if and when the user account will become inactive.
 - **Never:** If "Never" is selected, the account will remain active indefinitely unless manually disabled or deleted by an administrator.
 - **End of:** If "End of:" is selected, you can specify a particular date (e.g., "Monday, August 4, 2025" as shown in the image). On and after this date, the user account will automatically expire and the user will no longer be able to log in. This is commonly used for temporary accounts, contractors, or interns.

user 1 Properties

Member Of: Remote control, Dial-in, Environment, Sessions, Remote Desktop Services Profile, COM+, General, Address, Account, Profile, Telephones, Organization

User logon name: user1 @Ahmed.local

User logon name (pre-Windows 2000): AHMED\ user1

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☐ User must change password at next logon
- ☐ User cannot change password
- ☐ Password never expires
- ☐ Store password using reversible encryption

Account expires:

☒ Never

☐ End of: Monday, August 4, 2025

OK Cancel Apply Help

User account Properties

"Account options":

- ☐ User must change password at next logon:

Explanation: When this option is checked, the user ("user1" in this case) will be prompted to change their password the very next time they successfully log in. They will not be able to proceed until they have set a new password.

- ☐ User cannot change password:

Explanation: If this option is checked, the user ("user1") will be prevented from changing their own password. Only an administrator will be able to modify their password.

user 1 Properties

Member Of: Remote control: Remote Desktop Services Profile: Sessions: COM+

General: Address: Account: Profile: Telephones: Organization:

User logon name: user1 @Ahmed.local

User logon name (pre-Windows 2000): AHMED\ user1

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☒ User must change password at next logon
- ☐ User cannot change password
- ☐ Password never expires
- ☐ Store password using reversible encryption

Account expires:

☒ Never

☐ End of: Monday , August 4, 2025

OK Cancel Apply Help

User account Properties

"Account options":

☐ Password never expires:

Explanation: When this option is checked, the password for "user1" will not be subject to any password expiration policies set at the domain or local level. The user will not be prompted to change their password after a certain period (e.g., 42 days),

☐ Store password using reversible encryption:

Explanation: If this option is checked, the password for "user1" is stored in a way that allows it to be easily decrypted (reversed back to its original plain text). Normally, passwords are stored using one-way hashing algorithms, which makes it virtually impossible to reverse-engineer the original password from the stored hash.

user 1 Properties

Member Of	Dial-in	Environment	Sessions
Remote control	Remote Desktop	Services Profile	COM+
General	Address	Account	Profile
		Telephones	Organization

User login name:
 @Ahmed.local

User login name (pre-Windows 2000):

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☐ User must change password at next logon
- ☐ User cannot change password
- ☒ Password never expires
- ☐ Store password using reversible encryption

Account expires

☒ Never

☐ End of:

OK Cancel Apply Help

User account Properties

"Account options":

☐ Account is disabled:

•**Explanation:** When this option is checked, the user account is made inactive and cannot be used to log on to the network or access resources. Even if the password is correct, login attempts will fail.

☐ Smart card is required for interactive logon:

•**Explanation:** If this option is checked, the user must possess and use a physical smart card (along with a PIN) to log on interactively to a computer or the network. A regular username and password combination alone will not suffice.

☐ Account is sensitive and cannot be delegated:

•**Explanation:** When this option is checked, it prevents the delegation of authentication for this specific user account. In Active Directory, delegation allows a service running on one computer to impersonate a user on another computer (e.g., a web server accessing a database on behalf of a user). If this option is set, the user's credentials cannot be "forwarded" or delegated.

user 1 Properties

Member Of	Dial-in	Environment	Sessions
Remote control	Remote Desktop Services Profile	COM+	
General	Address	Account	Profile
Telephones	Organization		

User logon name:
user1 @Ahmed.local

User logon name (pre-Windows 2000):
AHMED\ user1

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☐ Account is disabled
- ☐ Smart card is required for interactive logon
- ☐ Account is sensitive and cannot be delegated
- ☐ Use only Kerberos DES encryption types for this account

Account expires

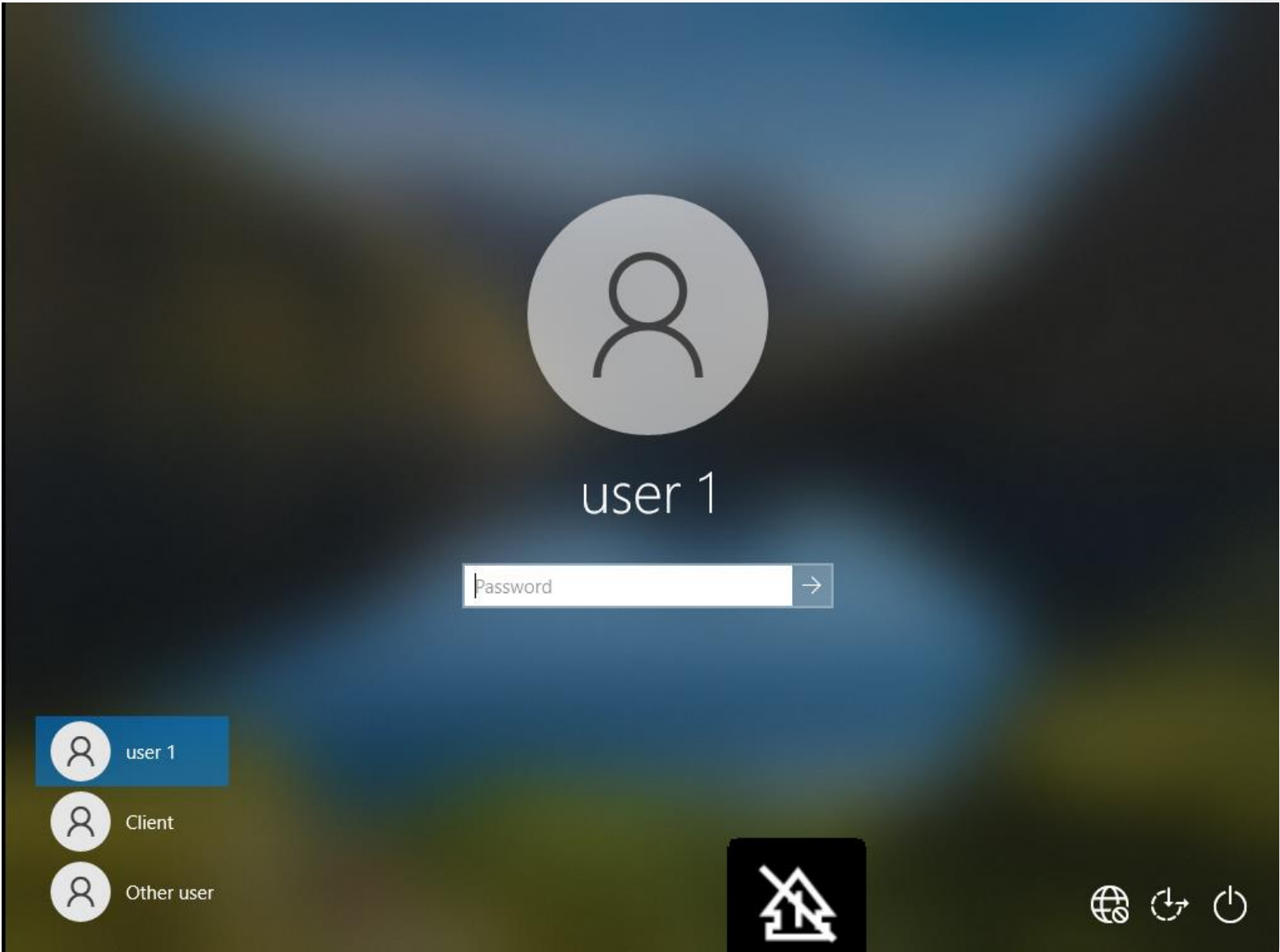
☒ Never

☐ End of: Monday , August 4, 2025

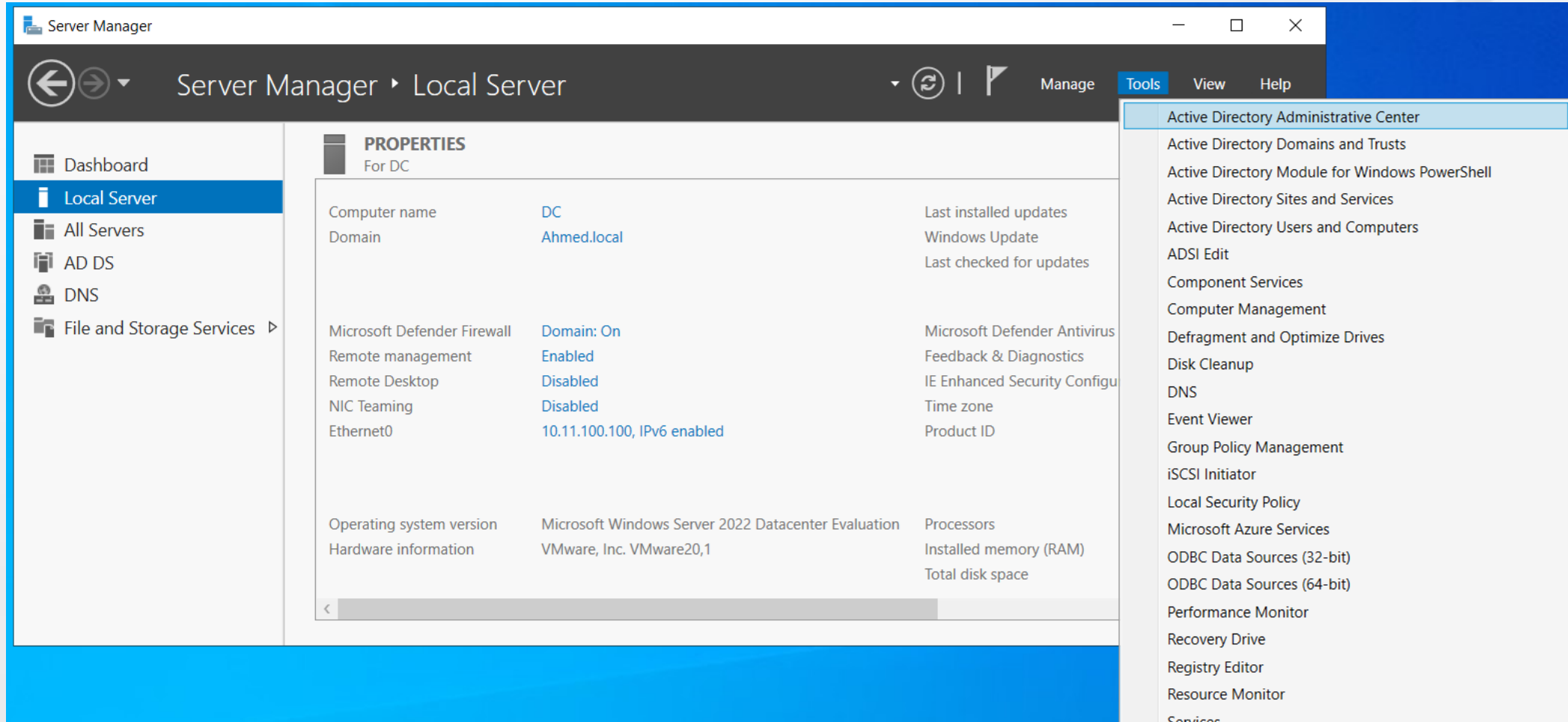
OK Cancel Apply Help

Create Domain User

Login



Create new user new way



The screenshot shows the Windows Server Manager interface. The left sidebar contains navigation links: Dashboard, Local Server (selected), All Servers, AD DS, DNS, and File and Storage Services. The main area displays the 'PROPERTIES For DC' for the local server 'Ahmed.local'. The 'Tools' menu is open, showing a list of administrative tools.

Server Manager | Server Manager ▸ Local Server | Manage | **Tools** | View | Help

Tools

- Active Directory Administrative Center
- Active Directory Domains and Trusts
- Active Directory Module for Windows PowerShell
- Active Directory Sites and Services
- Active Directory Users and Computers
- ADSI Edit
- Component Services
- Computer Management
- Defragment and Optimize Drives
- Disk Cleanup
- DNS
- Event Viewer
- Group Policy Management
- iSCSI Initiator
- Local Security Policy
- Microsoft Azure Services
- ODBC Data Sources (32-bit)
- ODBC Data Sources (64-bit)
- Performance Monitor
- Recovery Drive
- Registry Editor
- Resource Monitor
- Services

PROPERTIES For DC

Computer name	DC	Last installed updates
Domain	Ahmed.local	Windows Update
		Last checked for updates
Microsoft Defender Firewall	Domain: On	Microsoft Defender Antivirus
Remote management	Enabled	Feedback & Diagnostics
Remote Desktop	Disabled	IE Enhanced Security Configur
NIC Teaming	Disabled	Time zone
Ethernet0	10.11.100.100, IPv6 enabled	Product ID
Operating system version	Microsoft Windows Server 2022 Datacenter Evaluation	Processors
Hardware information	VMware, Inc. VMware20,1	Installed memory (RAM)
		Total disk space

Create new user new way

The screenshot displays the Active Directory Administrative Center (ADAC) web interface. The title bar shows "Active Directory Administrative Center". The breadcrumb navigation indicates "Active Directory Administrative Center > Overview". The left sidebar contains a navigation menu with "Overview" selected, and links to "Ahmed (local)", "Dynamic Access Control", and "Global Search". The main content area is titled "WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER" and features a "LEARN MORE" section with links to learn about ADAC, use the PowerShell module, find answers on the forum, deploy Dynamic Access Control, and get a Microsoft Solution Accelerator. Below this, there are sections for "RESET PASSWORD" and "GLOBAL SEARCH". The "RESET PASSWORD" section includes fields for "User name:" (with a placeholder "Domain\UserName"), "Password:", and "Confirm password:", along with checkboxes for "User must change password at next log on" and "Unlock account". The "GLOBAL SEARCH" section has a "Search" input field and a "Scope" dropdown menu set to "Ahmed (local)". The bottom of the interface shows a "WINDOWS POWERSHELL HISTORY" section.

Active Directory Administrative Center

Active Directory Administrative Center > Overview

Manage Help

Active Directory...

Overview

Ahmed (local)

Dynamic Access Control

Global Search

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

LEARN MORE

Learn more about Active Directory Administrative Center

Use Active Directory Administrative Center to manage IT tasks

Use Active Directory module for Windows PowerShell

Find answers on Active Directory Forum

Deploy Dynamic Access Control

Get Microsoft Solution Accelerator to help configure Dynamic Access Control

Deploy Authentication Policies and Silos

DYNAMIC ACCESS CONTROL

AZURE ACTIVE DIRECTORY

RESET PASSWORD

User name: Domain\UserName

Password:

Confirm password:

☒ User must change password at next log on

☐ Unlock account

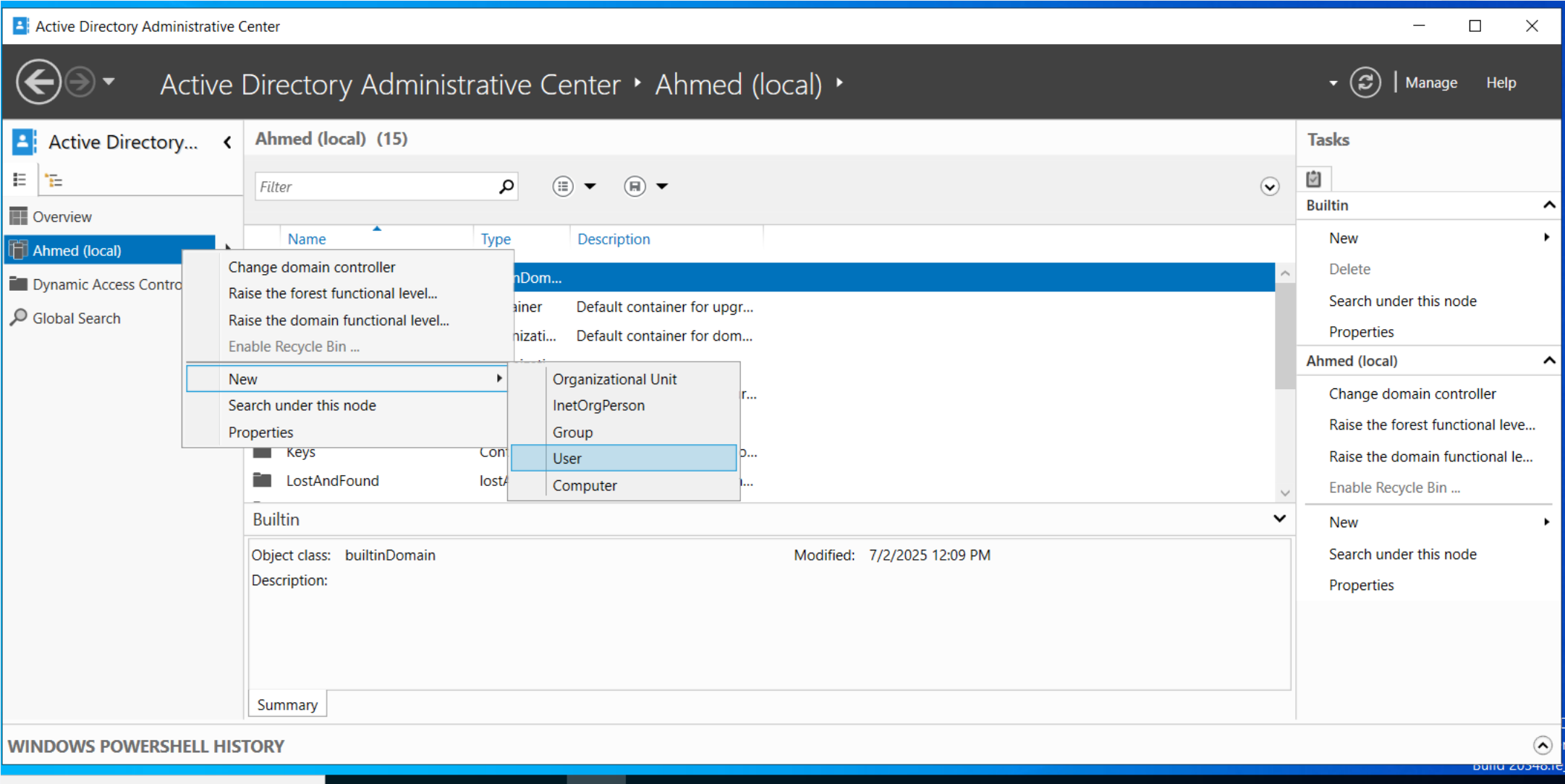
GLOBAL SEARCH

Search

Scope: Ahmed (local)

WINDOWS POWERSHELL HISTORY

Create new user new way



Create new user new way



Create User: user2 2

TASKS ▾ SECTIONS ▾

- Account
- Organization
- Member Of
- Password Settings
- Profile

Account

First name: user2

Middle initials:

Last name: 2

Full name: * user2 2

User UPN login: user2 @ Ahmed.local ▾

User SamAccountName lo... Ahmed * user2

Password: *****

Confirm password: *****

Create in: DC=Ahmed,DC=local [Change...](#)

☒ Protect from accidental deletion

[Log on hours...](#) [Log on to...](#)

Account expires: ☒ Never ☐ End of

Password options:

☒ User must change password at next log on

☐ Other password options

☐ Microsoft Passport or smart card is required for interactive log on

☐ Password never expires

☐ User cannot change password

Encryption options: ▾

Other options: ▾

Organization

Display name: user2 2

Office:

E-mail:

Web page:

Job title:

Department:

Company:

Manager:

Edit... Clear

Direct reports:

[Other web pages...](#)

More Information

Create new user new way

Windows 10 | Windows Server 2022

Create User: user 2

TASKS | SECTIONS

Account

Organization

Member Of

Password Settings

Profile

Account

First name: user

Middle initials:

Last name: 2

Full name: * user 2

User UPN logon: @

User SamAccountName lo... Ahmed *

Password: *****

Confirm password: *****

Create in: DC=Ahmed,DC=local [Change...](#)

Account expires: ☒ Never ☐ End of

Password options:

- ☒ User must change password at next log on
- ☐ Other password options
 - ☐ Microsoft Passport or smart card is required for interactive log on
 - ☐ Password never expires
 - ☐ User cannot change password

Encryption options:

Other options:

Job title:

Department:

Company:

Manager: [Edit...](#) [Clear](#)

Direct reports:

OK Cancel

Find in this column

Ahmed

Find in this column

Builtin

Computers

Domain Controllers

DomainUsers

ForeignSecurityPrincipals

Keys

LostAndFound

Managed Service Accounts

Mekkah

NTDS Quotas

Find in this column

No results found.

Create new user new way



user 1

TASKS ▼

SECTIONS ▼

- Account
- Organization
- Member Of
- Password Settings
- Profile
- Extensions

Account

First name:

user

Middle initials:

Last name:

1

Full name:

* user 1

User UPN login:

user1

@

Ahmed.local

User SamAccountName lo...

Ahmed

*

user1

☐ Protect from accidental deletion

Log on hours...

Log on to...

Account expires:

☒ Never

☐ End of

Password options:

☐ User must change password at next log on

☐ Other password options

☐ Microsoft Passport or smart card is required for interactive log on

☐ Password never expires

☐ User cannot change password

Encryption options:

Other options:

Organization

Display name:

user 1

Office:

E-mail:

Web page:

Phone numbers:

Job title:

Department:

Company:

Manager:

Edit...

Clear

Direct reports:

Add...

Other web pages...

More Information

OK

Cancel

Create new user new wav



user 1

TASKS ▼

SECTIONS ▼

- Account
- Organization
- Member Of
- Password Settings
- Profile
- Extensions

Account

First name: user

Middle initials:

Last name: 1

Full name: * user 1

User UPN login: user1 @ Ahmed.local ▼

User SamAccountName lo... Ahmed * user1

☐ Protect from accidental deletion

Account expires: ☒ Never ☐ End of

Password options: ▲

☐ User must change password at next log on

☐ Other password options

☐ Microsoft Passport or smart card is required for interactive log on

☐ Password never expires

☐ User cannot change password

Encryption options: ▼

Other options: ▼

Modified:	7/5/2025 7:17:13 AM
Created:	7/5/2025 7:09:35 AM
Object class:	User
Canonical name:	Ahmed.local/DomainUsers/user 1
Last log on:	7/5/2025 7:17:13 AM
Last bad log on:	<Not Set>
Log on count:	1
Bad password count:	0

Update sequence numbers (USN):	
Current:	32836
Original:	32829
User account control:	0x200
GUID:	d46c0055-023a-4eef-94e8-02122354e609
SID:	S-1-5-21-2232773109-657501147-861782746-1106
Password last set:	7/5/2025 7:09:35 AM
Password expiration:	8/16/2025 7:09:35 AM (in 42 days)

OK Cancel

Create new user new way



←

→

Active Directory Administrative Center ▶ Ahmed (local) ▶ DomainUsers

Active Directory...

Overview

Ahmed (local)

DomainUsers

Dynamic Access Control

Global Search

DomainUsers (2)

Filter

Name	Type	Description
user 1	User	
user 2	User	

user 1

User login: user1

E-mail:

Modified: 7/5/2025 7:17 AM

Description:

Expiration: <Never>

Last log on: 7/5/2025 7:17 AM

Tasks

user 1

Reset password...

View resultant password sett

Add to group...

Disable

Delete

Move...

Properties

DomainUsers

New

Delete

Move...

Search under this node

Properties

Restore Deleted user

Restore Deleted user

Active Directory Administrative Center

Active Directory Administrative Center

Active Directory...

Overview

Ahmed (local)

Dom

Dynam

Global

Change domain controller

Raise the forest functional level...

Raise the domain functional level...

Enable Recycle Bin ...

New

Search under this node

Properties

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

Learn more about Active Directory Administrative Center

Use Active Directory Administrative Center to manage IT tasks

Use Active Directory module for Windows PowerShell

Find answers on Active Directory Forum

Deploy Dynamic Access Control

Get Microsoft Solution Accelerator to help configure Dynamic Access Control

Deploy Authentication Policies and Silos

AZURE
ACTIVE
DIRECTORY

RESET PASSWORD

User name: Domain\UserName

Password:

Confirm password:

☒ User must change password at next log on

☐ Unlock account

Apply Clear

GLOBAL SEARCH

Search

Scope: Ahmed (local)

Raise Domain and Forest Function Level

Active Directory Administrative Center

Active Directory Administrative Center

Manage Help

Active Directory...

CONTENT

Overview

Ahmed (local)

Dom

Dynam

Global

Change domain controller
Raise the forest functional level...
Raise the domain functional level...
Enable Recycle Bin ...

New
Search under this node
Properties

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

Learn more about Active Directory Administrative Center

Use Active Directory Administrative Center to manage IT tasks

Use Active Directory module for Windows PowerShell

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Deploy Dynamic Access Control

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Deploy Authentication Policies and Silos

AZURE
ACTIVE
DIRECTORY

RESET PASSWORD

User name:
Password:
Confirm password:
☒ User must change password at next log on
☐ Unlock account

Apply Clear

GLOBAL SEARCH

Search
Scope:

WINDOWS POWERSHELL HISTORY

Raise Domain and Forest Function Level

Active Directory Administrative Center

Active Directory Administrative Center

Manage Help

Active Directory...



Overview

Ahmed (local)

DomainUsers

Dynamic Access Control

Global Search

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

LEARN MORE

Learn more about Active Directory Administrative Center

Use Active Directory

Use Active Directory

Find answers on A

Deploy Dynamic A

Get Microsoft Solu

Deploy Authentica

DYNAMIC
ACCESS
CONTROL

AZURE
ACTIVE
DIRECTORY

Raise Domain Functional Level

Domain Name: Ahmed.local

Current domain functional level: Windows Server 2008

Select an available domain functional level:

Windows Server 2008 R2

Windows Server 2008 R2

Windows Server 2012

Windows Server 2012 R2

Windows Server 2016

RESET PASSWORD

User name:

Password:

Confirm password:

☒ User must change password

☐ Unlock account

Raise Domain Functional Level



This change affects the entire domain. After you raise the domain functional level, it is possible that you may not be able to reverse it.

OK

Cancel

WINDOWS POWERSHELL HISTORY

Raise Domain and Forest Function Level

Active Directory Administrative Center

Active Directory Administrative Center ▸ Overview

Manage Help

Active Directory...

Overview

Ahmed (local)

Domain

Dynamic A

Global Sea

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...

- New
- Search under this node
- Properties

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

Learn more about Active Directory Administrative Center

Use Active Directory

Use Active Directory

Find answers on A

Deploy Dynamic A

Get Microsoft Solu

Deploy Authentica

AZURE
ACTIVE
DIRECTORY

Raise Forest Functional Level

Forest Name: Ahmed.local

Current forest functional level: Windows Server 2008

Select an available forest functional level:

Windows Server 2008 R2

⚠ After you raise the forest functional level, it is possible that you may not be able to reverse it. For more information about forest functional levels, click Help.

OK Cancel Help

RESET PASSWORD

User name:
Password:
Confirm password:
☒ User must change password
☐ Unlock account

GLOBAL SEARCH

Raise Forest Functional Level



This change affects the entire forest. After you raise the forest functional level, it is possible that you may not be able to reverse it.

OK

Cancel

WINDOWS POWERSHELL HISTORY

Type here to search

5:42 AM
7/6/2025

Raise Domain and Forest Function Level

Active Directory Administrative Center

Active Directory Administrative Center ▸ Overview

Manage Help

Active Directory...



Overview

Ahmed (local)

Dom

Dynam

Global

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...
- New
- Search under this node
- Properties

WELCOME TO ACTIVE DIRECTORY ADMINISTRATIVE CENTER

Learn more about Active Directory Administrative Center

[Use Active Directory Administrative Center to manage IT tasks](#)

[Use Active Directory module for Windows PowerShell](#)

[Find answers on Active Directory Forum](#)

[Deploy Dynamic Access Control](#)

[Get Microsoft Solution Accelerator to help configure Dynamic Access Control](#)

[Deploy Authentication Policies and Silos](#)

AZURE
ACTIVE
DIRECTORY

RESET PASSWORD

User name:

Password:

Confirm password:

☒ User must change password at next log on

☐ Unlock account

Apply Clear

GLOBAL SEARCH

Search

Scope:

WINDOWS POWERSHELL HISTORY

Type here to search



Raise Domain and Forest Function Level



Active Directory Administrative Center

Active Directory Administrative Center ▶ Ahmed (local) ▶ Deleted Objects

Manage Help

Active Directory... < Deleted Objects (1)

Overview

Ahmed (local) ▶ Deleted Objects DomainUsers

Dynamic Access Control ▶

Global Search

Filter

Find in this column

Builtin

Computers

Deleted Objects

Domain Controllers

DomainUsers

ForeignSecurityPrincipals

Keys

LostAndFound

Managed Service Accounts

Mekkah

NTDS Quotas

Program Data

System

Deleted

Last known password

Type

Description

Tasks

Deleted Objects

New

Delete

Search under this node

Properties

WINDOWS POWERSHELL HISTORY

Raise Domain and Forest Function Level



Active Directory Administrative Center

Active Directory Administrative Center ▶ Ahmed (local) ▶ Deleted Objects

Manage Help

Active Directory... <

Deleted Objects (1)

Filter

Name	When Deleted	Last known pa...	Type	Description
user 2	7/6/2025 5:45:...	OU=DomainUs...	User	

Restore

Restore To...

Locate Parent

Properties

Tasks

user 2

Restore

Restore To...

Locate Parent

Properties

Deleted Objects

New

Delete

Search under this node

Properties

user 2

User logon: user2

Expiration: <Never>

E-mail:

Last log on: <Not Set>

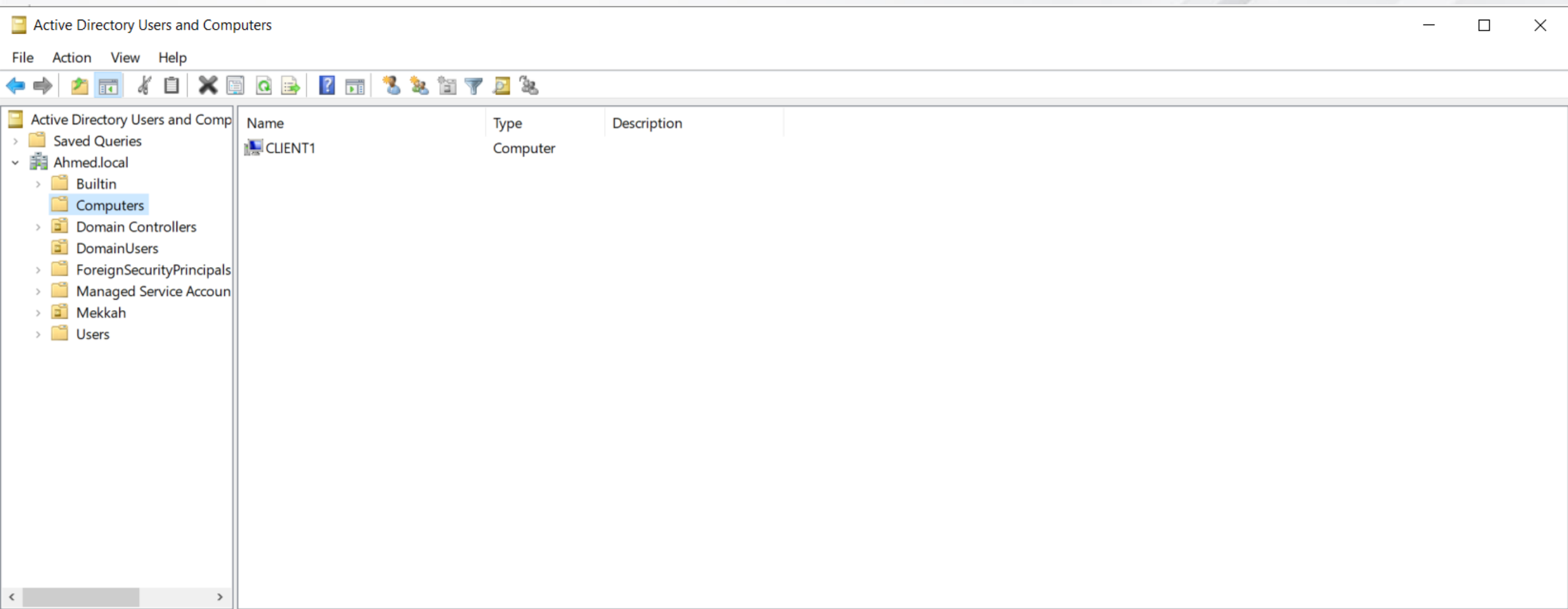
Modified: 7/6/2025 5:45 AM

Description:

Summary

Computer Account

Computer Account is created automatically when a computer join the domain



Remote Management

Connect the Domain to the Internet

Windows Server 2022 - VMware Workstation

FileEditViewVMTabsHelp

CutCtrl+XCopyCtrl+CPasteCtrl+VVirtual Network Editor...Preferences...Ctrl+P

Dashboard

ManageToolsViewHelp

Dashboard

Local ServerAll ServersAD DNSFile and Storage Services

Active Directory Users and Computers

Active Directory Users and Comp

Saved QueriesAhmed.localComputersDomain ControllersDomainUsersForeignSecurityPrincipalsManaged Service AccountMekkahUsers

Name	Type	Description
CLIENT1	Computer	

Remote Management

- 1- Click NAT settings
- 2- Click DHCP settings

Virtual Network Editor

Name	Type	External Connection	Host Connection	DHCP	Subnet Address
VMnet1	Host-only	-	Connected	Enabled	192.168.131.0
VMnet8	NAT	NAT	Connected	Enabled	192.168.78.0

Add Network... Remove Network Rename Network...

VMnet Information

☐ Bridged (connect VMs directly to the external network)

Bridged to: Automatic Settings...

☒ NAT (shared host's IP address with VMs) NAT Settings...

☐ Host-only (connect VMs internally in a private network)

☒ Connect a host virtual adapter to this network

Host virtual adapter name: VMware Network Adapter VMnet8

☒ Use local DHCP service to distribute IP address to VMs DHCP Settings...

Subnet IP: Subnet mask:

⚠ Administrator privileges are required to modify the network configuration. Change Settings

Restore Defaults Import... Export... OK Cancel Apply Help

Remote Management

From NAT settings

Get Gateway IP

NAT Settings

Network: vmnet8

Subnet IP: 192.168.78.0

Subnet mask: 255.255.255.0

Gateway IP: 192 . 168 . 78 . 2

Port Forwarding

Host Port	Type	Virtual Machine IP Address	Description
-----------	------	----------------------------	-------------

Add...

Remove

Properties

Advanced

☒ Allow active FTP

☒ Allow any Organizationally Unique Identifier

UDP timeout (in seconds): 30

Config port: 0

☐ Enable IPv6

IPv6 prefix: fd15:4ba5:5a2b:1008::/64

DNS Settings...

NetBIOS Settings...

OK

Cancel

Help

Remote Management

From DHCP settings

Get IP Range

DHCP Settings

Network:vmnet8

Subnet IP:192.168.78.0

Subnet mask:255.255.255.0

Starting IP address:

192 . 168 . 78 . 128

Ending IP address:

192 . 168 . 78 . 254

Broadcast address:192.168.78.255

Days:0

Hours:0

Minutes:30

Default lease time:

Max lease time:

0

0

2

0

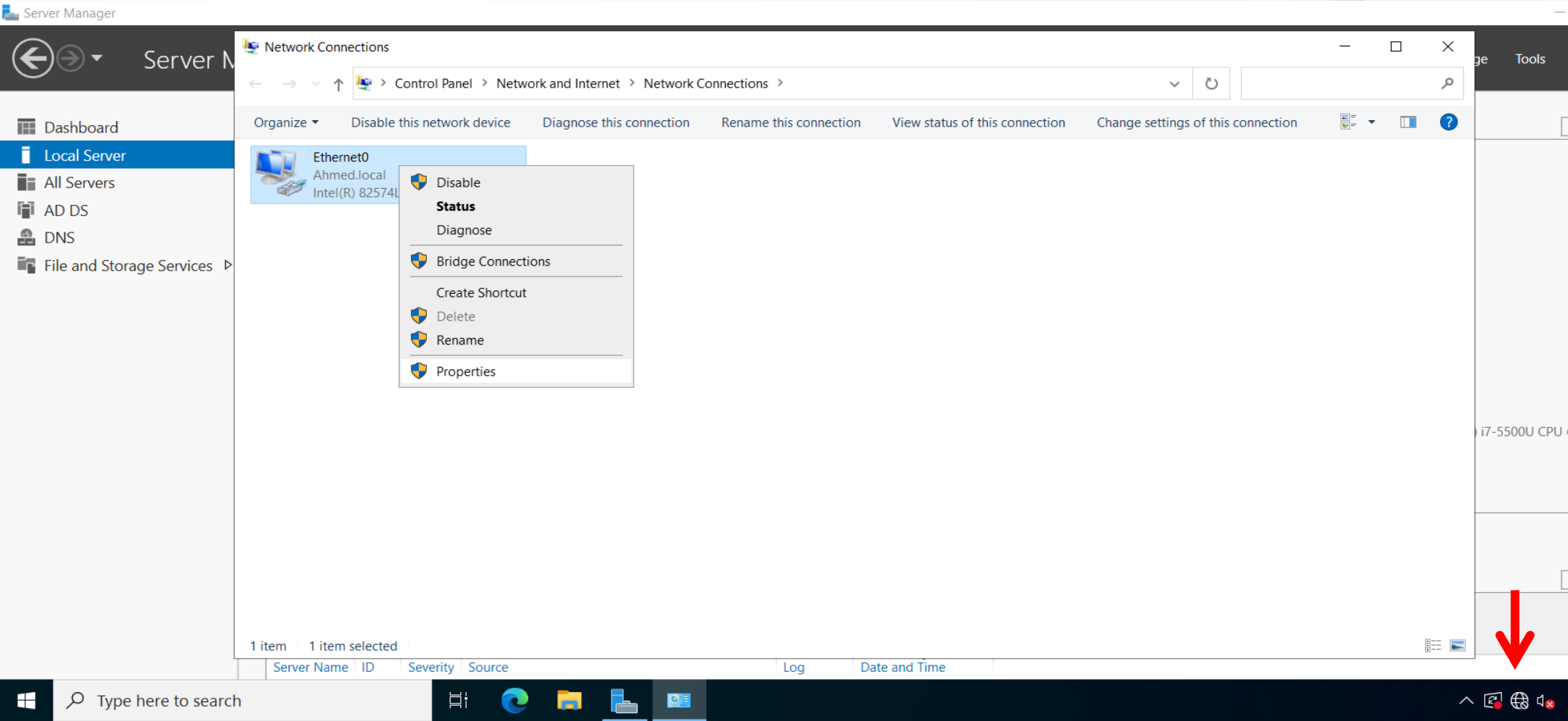
OK

Cancel

Help

Remote Management

Change DC IP

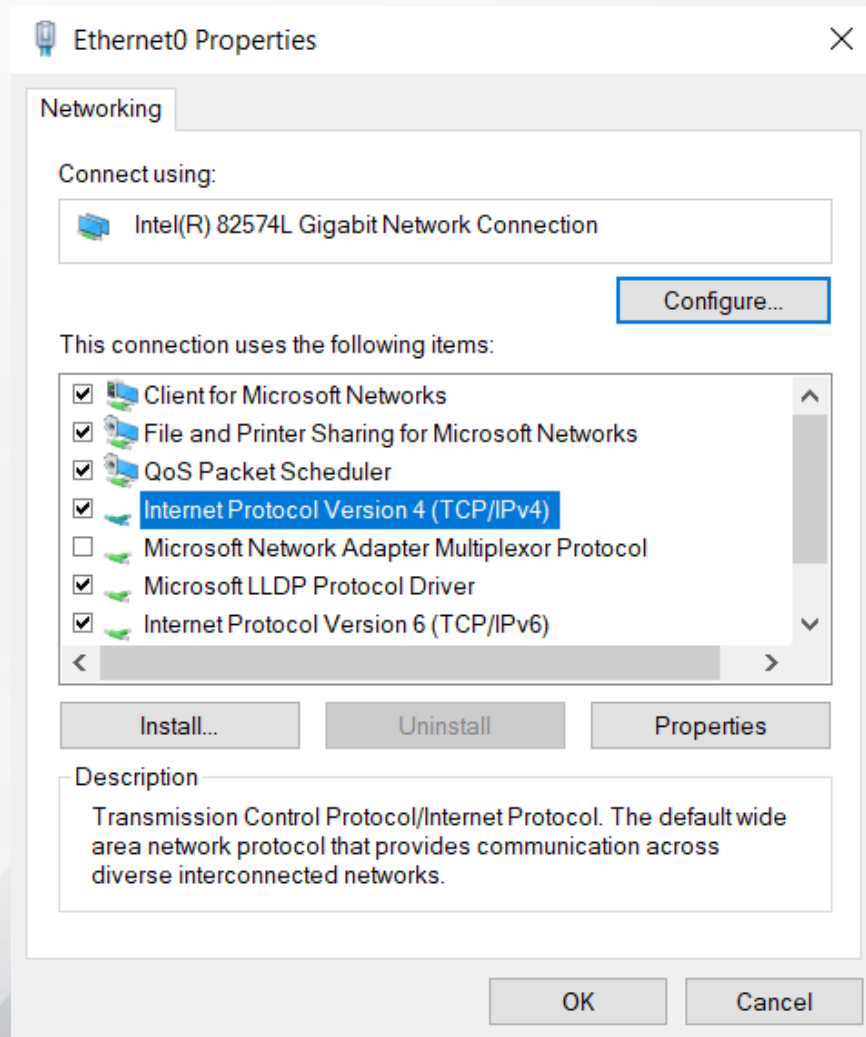


Remote Management

Change DC IP

- ☐ IP avoid IP range of NAT
- ☐ Gateway Value

- ☐ Do the Same with Client



Ethernet0 Properties

Networking

Connect using:

Intel(R) 82574L Gigabit Network Connection

Configure...

This connection uses the following items:

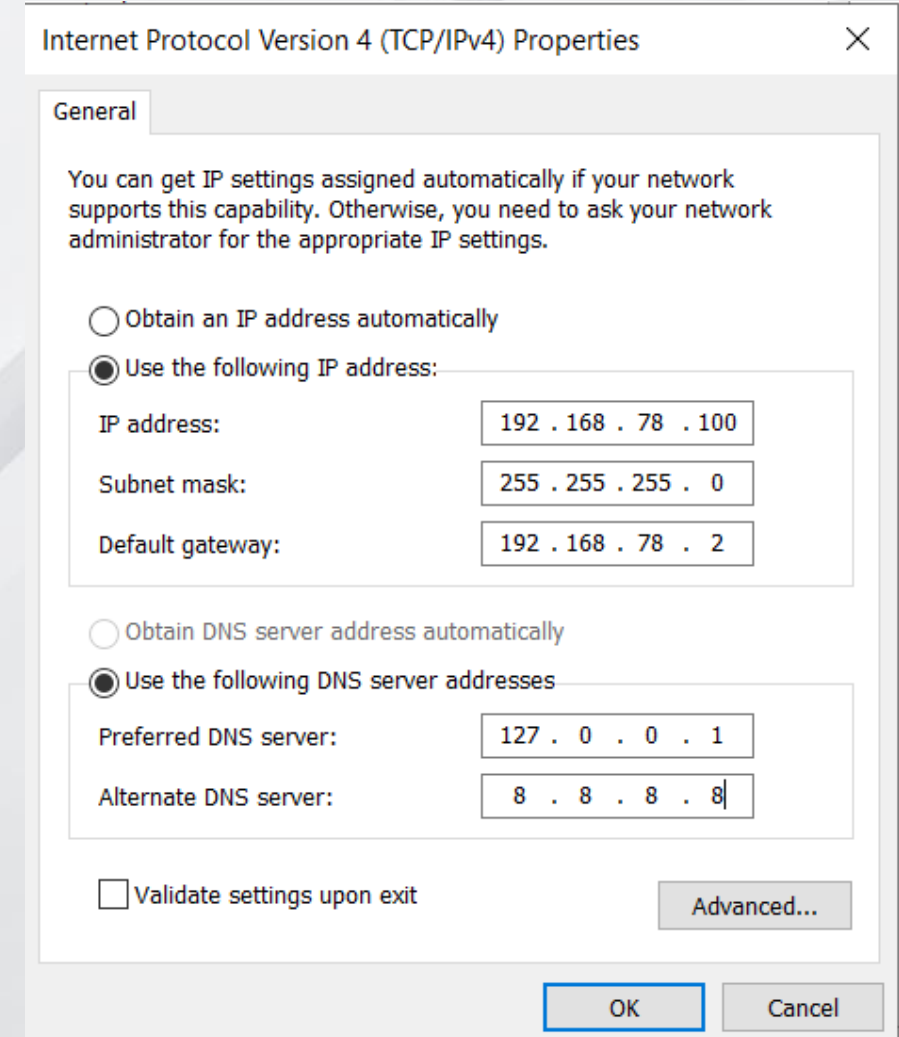
- ☒ Client for Microsoft Networks
- ☒ File and Printer Sharing for Microsoft Networks
- ☒ QoS Packet Scheduler
- ☒ Internet Protocol Version 4 (TCP/IPv4)
- ☐ Microsoft Network Adapter Multiplexor Protocol
- ☒ Microsoft LLDP Protocol Driver
- ☒ Internet Protocol Version 6 (TCP/IPv6)

Install... Uninstall Properties

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

OK Cancel



Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 192 . 168 . 78 . 100

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 78 . 2

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses

Preferred DNS server: 127 . 0 . 0 . 1

Alternate DNS server: 8 . 8 . 8 . 8

☐ Validate settings upon exit

Advanced...

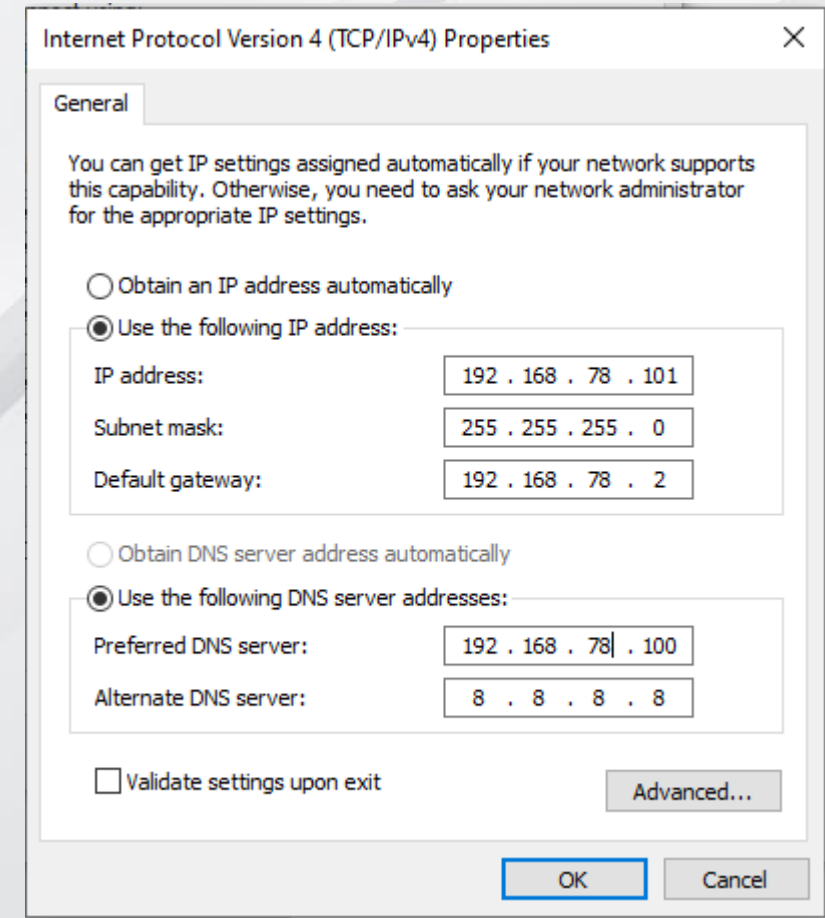
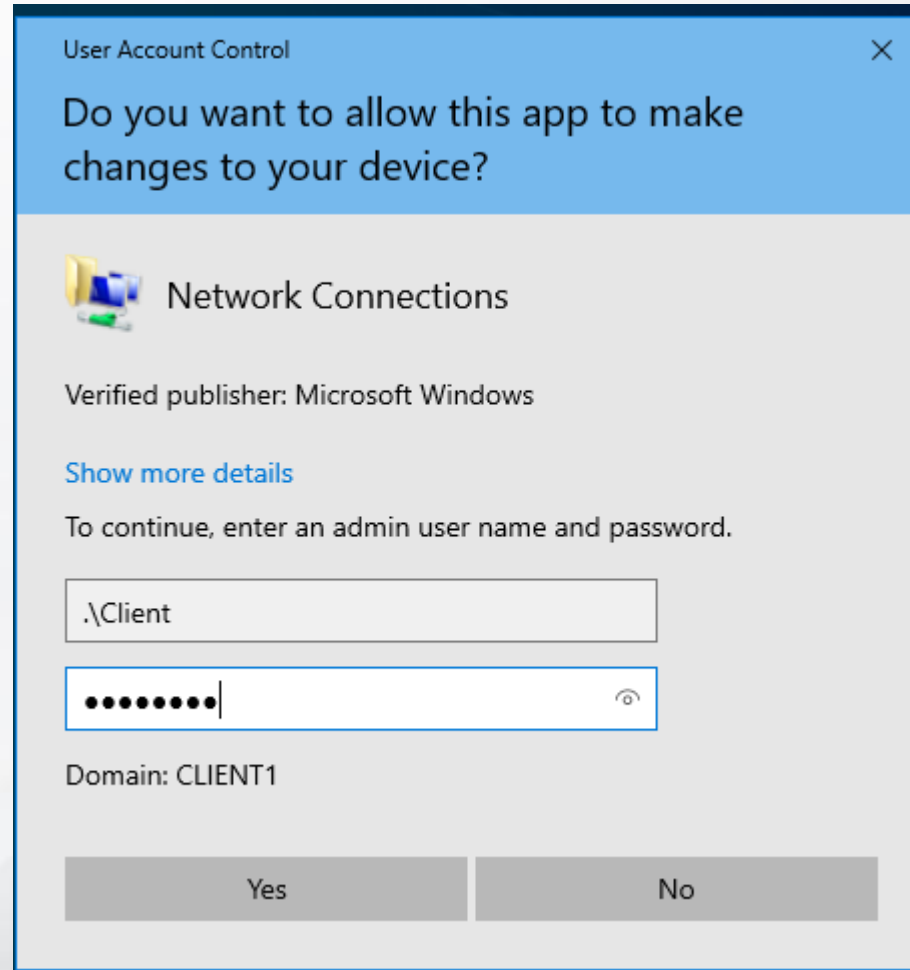
OK Cancel

Remote Management

Change client IP

- ☐ IP avoid IP range of NAT
- ☐ Gateway Value

- ☐ .\Client



Remote Management



Enable Remote Desktop

Server Manager

Server Manager ▸ Local Server

Manage Tools View Help

Dashboard

Local Server

All Servers

AD DS

DNS

File and Storage Services ▸

PROPERTIES

For DC

TASKS ▾

Computer name	DC	Last installed updates	Never
Domain	Ahmed.local	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Today at 1:18 PM
Microsoft Defender Firewall	Domain: On	Microsoft Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00) Pacific Time (US & Canada)
Ethernet0	192.168.78.100	Product ID	00455-50000-00001-AA311 (activated)
Operating system version	Microsoft Windows Server 2022 Datacenter Evaluation	Processors	Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz, Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz
Hardware information	VMware, Inc. VMWare20,1	Installed memory (RAM)	2 GB
		Total disk space	59.49 GB

EVENTS

All events | 91 total

TASKS ▾

Filter 🔍

⌵ ⌵ ⌵

⌵

Server Name	ID	Severity	Source	Log	Date and Time
-------------	----	----------	--------	-----	---------------

Windows Taskbar

Type here to search

Taskbar icons: File Explorer, Edge, Task Manager, etc.

System tray: 2:15 PM 7/6/2025

Remote Management

System Properties

Computer Name

Hardware

Advanced

Remote

Remote Assistance

☐ Allow Remote Assistance connections to this computer

Advanced...

Remote Desktop

Choose an option, and then specify who can connect.

☐ Don't allow remote connections to this computer

☒ Allow remote connections to this computer

☒ Allow connections only from computers running Remote Desktop with Network Level Authentication (recommended)

[Help me choose](#)

Select Users...

OK

Cancel

Apply

Remote Management



Disable Firewall

Server Manager

Server Manager ▸ Local Server

Manage Tools View Help

Dashboard

Local Server

All Servers

AD DS

DNS

File and Storage Services ▸

PROPERTIES

For DC

TASKS ▾

Computer name	DC	Last installed updates	Never
Domain	Ahmed.local	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Today at 1:18 PM
Microsoft Defender Firewall	Domain: On	Microsoft Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00) Pacific Time (US & Canada)
Ethernet0	192.168.78.100	Product ID	00455-50000-00001-AA311 (activated)
Operating system version	Microsoft Windows Server 2022 Datacenter Evaluation	Processors	Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz, Intel(R) Core(TM) i7-5500U CPU @ 2.40GHz
Hardware information	VMware, Inc. VMWare20,1	Installed memory (RAM)	2 GB
		Total disk space	59.49 GB

EVENTS

All events | 91 total

TASKS ▾

Filter 🔍

⌵ ⌵ ⌵

⌵

Server Name	ID	Severity	Source	Log	Date and Time
-------------	----	----------	--------	-----	---------------

Windows

Type here to search

Taskbar icons

2:15 PM 7/6/2025

Remote Management

Disable Firewall

 **Domain network** (active)

Firewall is off.

Turn on

 **Private network**

Firewall is off.

Turn on

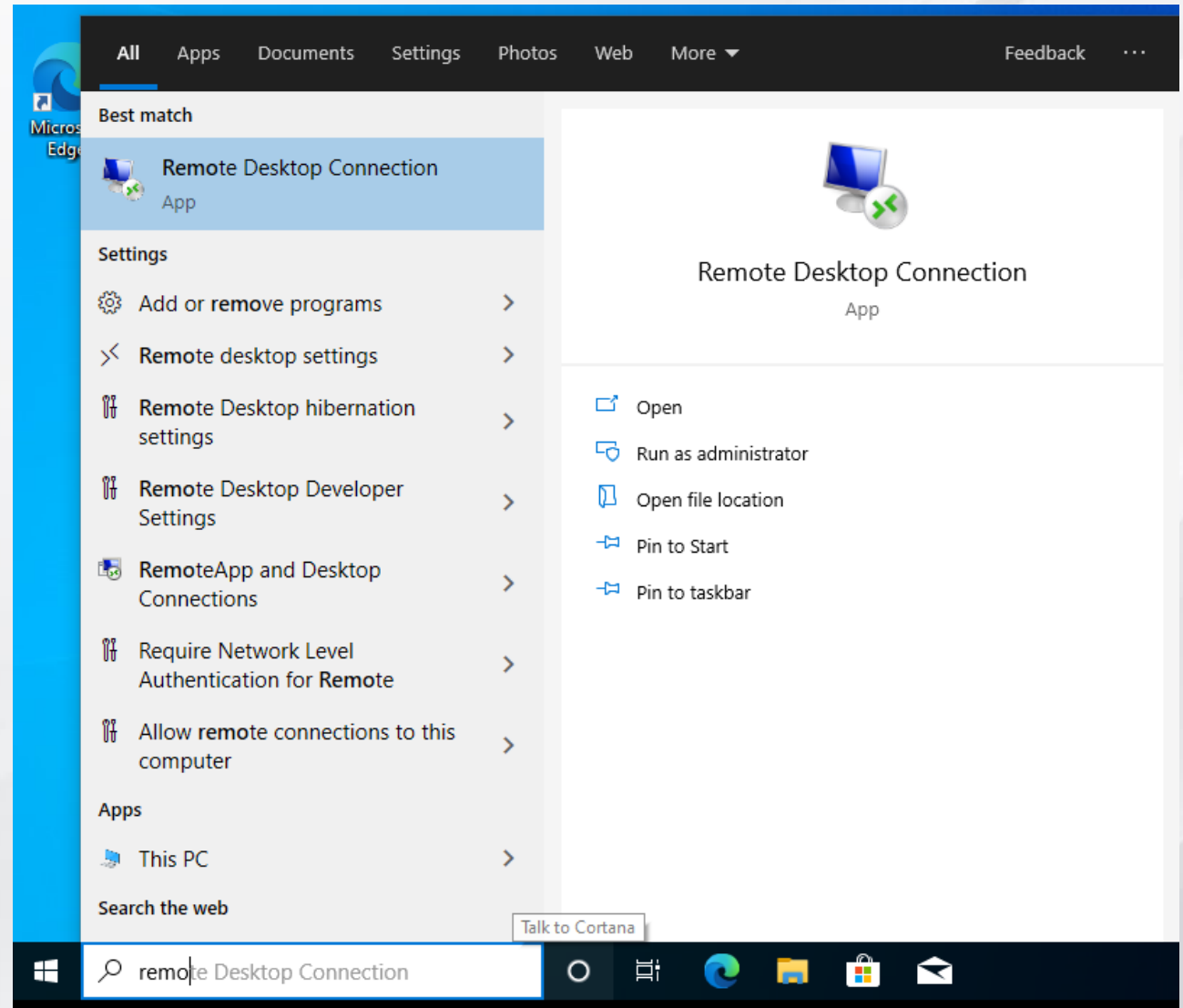
 **Public network**

Firewall is off.

Turn on

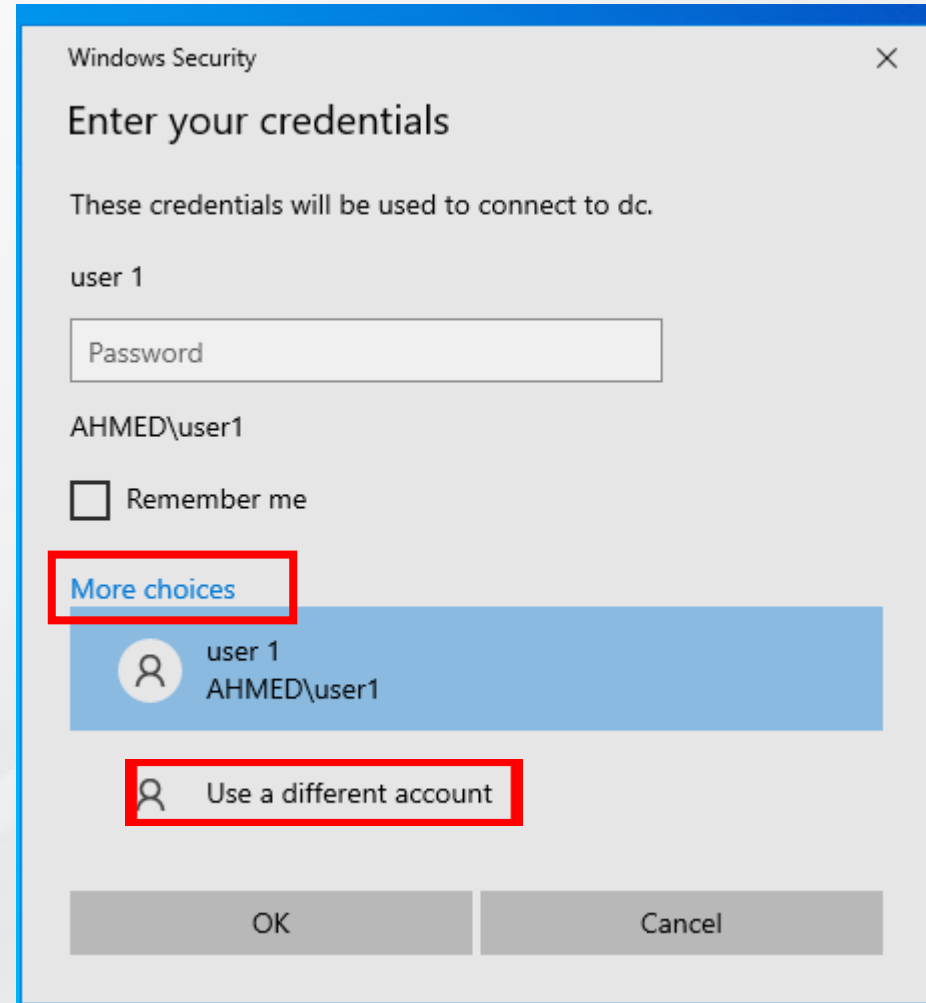
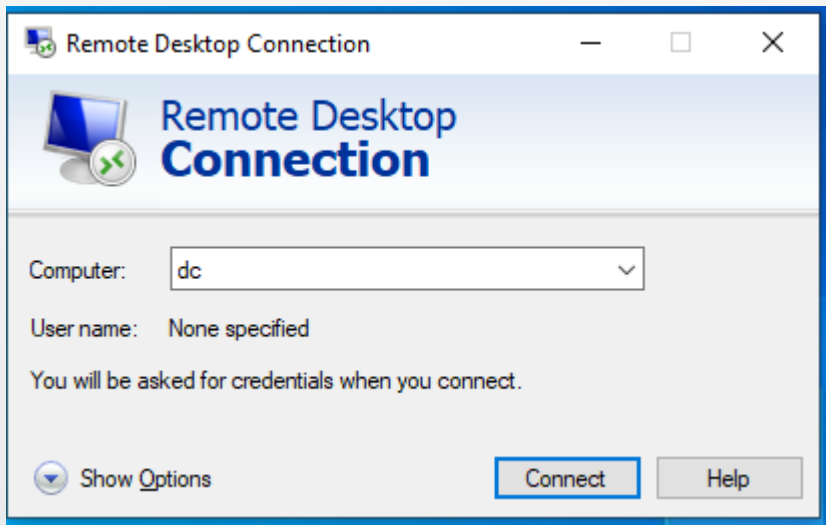
Remote Management

Enable Remote Management in Client

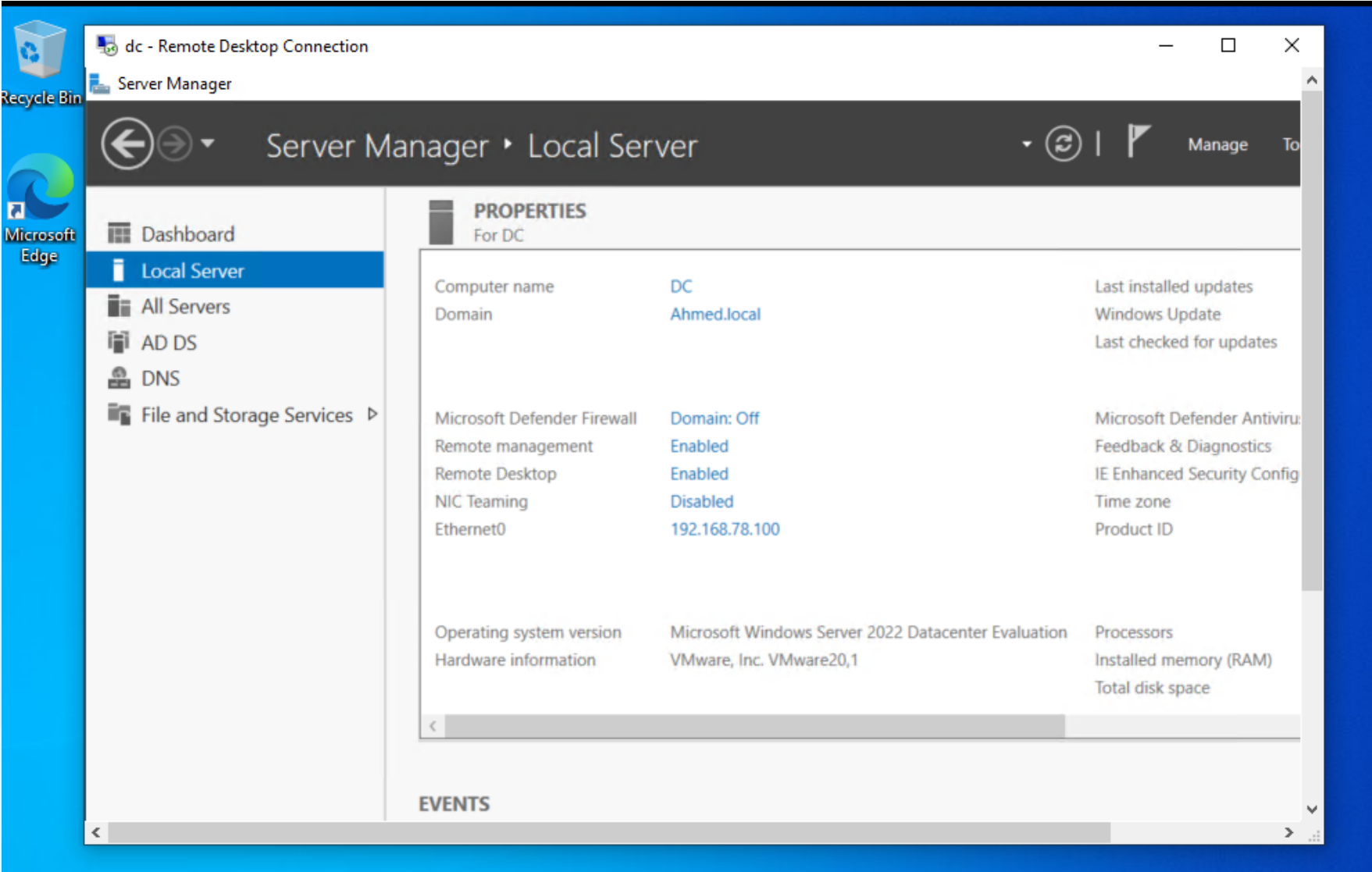


Remote Management

Must login with the Administrator



Remote Management





Thank You