

Windows 11 project by Omer Asraf

Hello, I'm Omer Asraf, the new IT Manager of O.A.Y Computing Services.

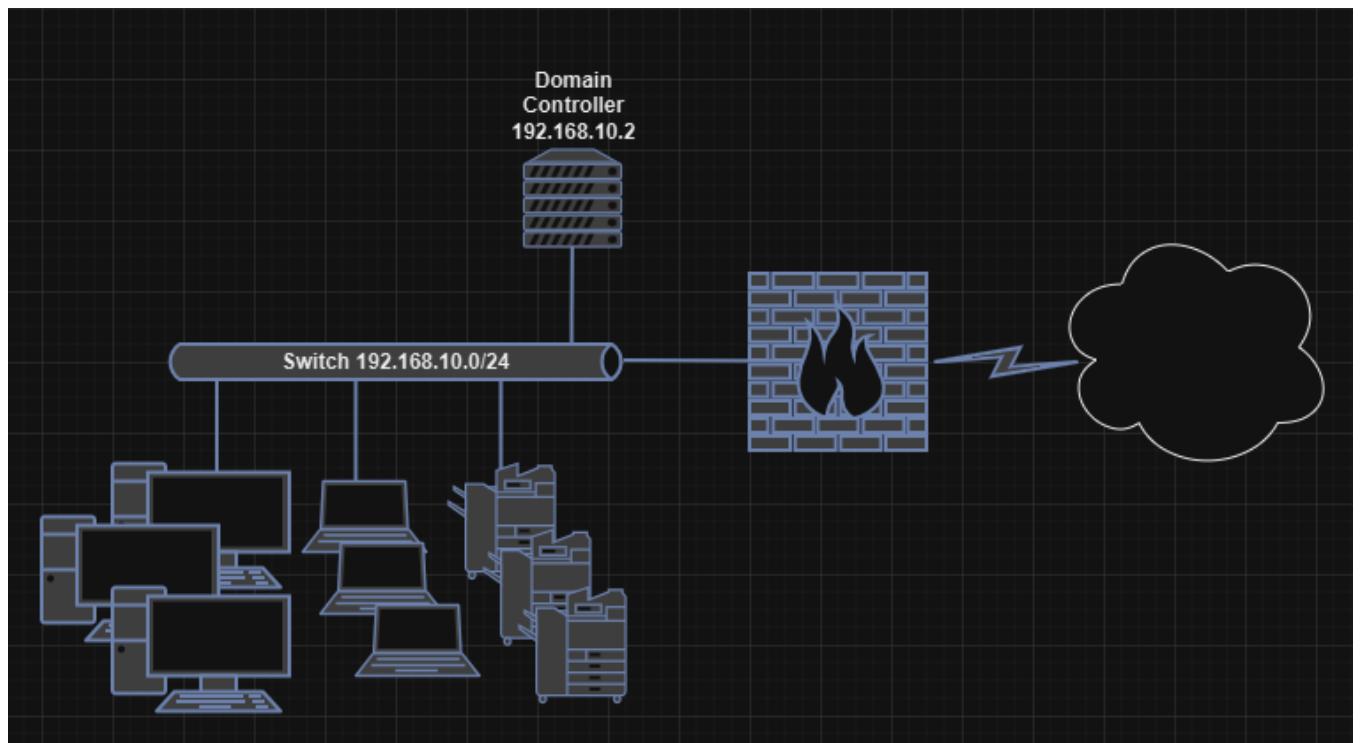
O.A.Y Computing Services is a trusted provider of IT solutions specializing in network management, virtualization, and cloud-based services. The company has built a strong reputation for delivering reliable IT support and consultancy to small and medium-sized businesses across Israel.

O.A.Y founded in 2017 and the offices based in Haifa, Israel.

The company consists of 30 employees including: CEO, managers, IT administrator, maintenance employees, salespeople, logistics workers and accountants.

After I was accepted to the company as its new IT manager, I was asked to upgrade the workstations from windows 10 to windows 11.

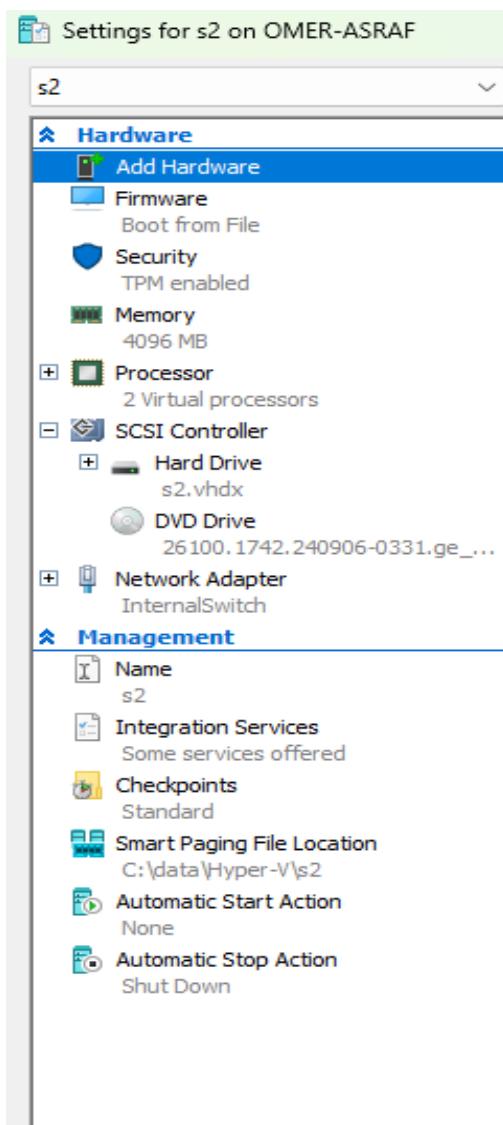
First, this is the network topology:



Now I will present, explain and illustrate how I performed the task step by step.
(according just to the sections of the project in Hebrew).

1. Creating new VM in Hyper-V:

- Configure the VM in the wizard & settings menu according to the following data:
 - a. Hostname: s2
 - b. RAM: 4GB => 512MB to 8GB
 - c. CPU 2
 - d. HDD: Dynamic 55GB
 - e. Network: Internal
 - f. OS: Windows server 2022/25



g. Run the OS installing.

h. Configure local server properties:

The screenshot shows the 'Local Server' properties for the computer 'OAYdc'. The 'PROPERTIES' section displays basic information like computer name, workgroup, and system configuration. The 'EVENTS' section shows a list of recent system events.

PROPERTIES

Computer name	OAYdc	Last installed updates	Never
Workgroup	WORKGROUP	Windows Update	Download updates only, using Windows Update
Microsoft Defender Firewall		Public: On	Microsoft Defender Antivirus
Remote management	Enabled	Feedback & Diagnostics	Real-Time Protection: On
Remote Desktop	Enabled	IE Enhanced Security Configuration	Settings
NIC Teaming	Disabled	Time zone	Off (UTC+02:00) Jerusalem
Ethernet	192.168.10.2, IPv6 enabled	Product ID	Not activated
Azure Arc Management	Disabled		
Remote SSH Access	Disabled		

Operating system version: Microsoft Windows Server 2025 Standard Evaluation
Hardware information: Microsoft Corporation Virtual Machine

EVENTS
All events | 43 total

Server Name	ID	Severity	Source	Log	Date and Time
OAYDC	134	Warning	Microsoft-Windows-Time-Service	System	02/12/2024 04:40:45
OAYDC	134	Warning	Microsoft-Windows-Time-Service	System	02/12/2024 04:40:44
OAYDC	7023	Error	Microsoft-Windows-Service Control Manager	System	02/12/2024 04:40:43
OAYDC	8100	Error	Microsoft-Windows-Security-SD	Application	01/12/2024 10:13:22

j. Add one more admin user for DC.

The screenshot shows the 'Local Users and Groups' section of the Computer Management console. It lists existing users like Administrator, DefaultAccount, Guest, and Omer. The 'Omer Properties' dialog is open, showing that Omer is a member of the Administrators group.

Computer Management (Local)

Local Users and Groups

Name	Full Name	Description
Administrator		Built-in account for administering...
DefaultAcco...		A user account managed by the s...
Guest		Built-in account for guest access t...
Omer	Omer	A user account managed and use...
WDAGUtility...		

Omer Properties

Member of:

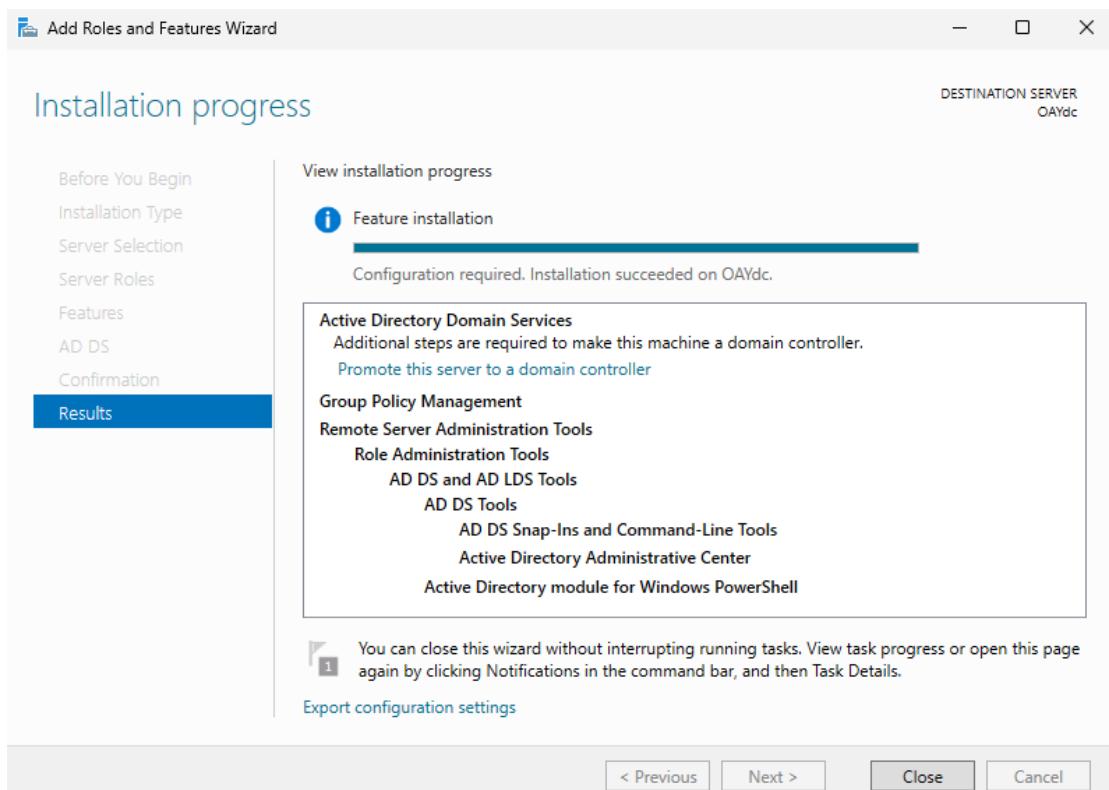
- Administrators

Actions

- Users
- More Actions
- Omer
- More Actions

Promote the VM to a Domain Controller:

a. Install Active Directory Domain Services (AD DS) Role.



- b. Promote the Server to a Domain Controller.
- c. Configure the Domain Controller Options & set DSRM password.
- d. Ensure "oay.mha" is on:

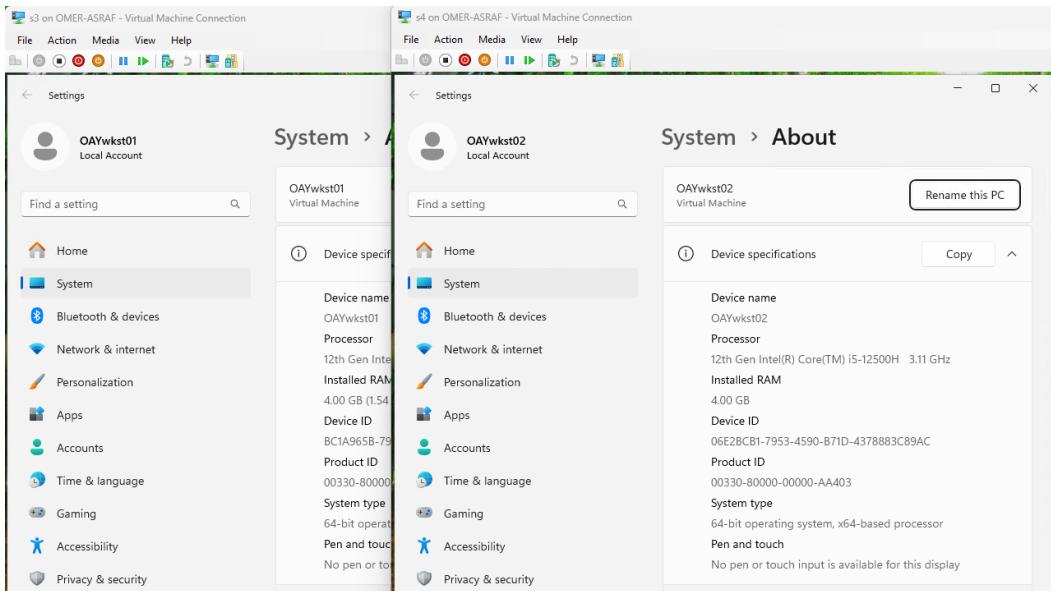
The screenshot shows the 'Server Manager' interface for 'Local Server'. The 'Properties' tab is selected, showing the computer name 'OAYdc' and domain 'oay.mha'. The 'DNS Manager' window is open, displaying the 'Forward Lookup Zones' for the 'OAYdc.oay.mha' zone. It lists several records:

Name	Type	Data	Timestamp
_msdcs	Start of Authority (SOA)	[21], oaydc.oay.mha, host...	static
_sites	Name Server (NS)	oaydc.oay.mha.	static
_tcp	Host (A)	192.168.10.2	01/12/2024 20:00:00
_udp	Host (A)	192.168.10.2	01/12/2024 20:00:00
DomainDnsZones	Host (A)	192.168.10.2	01/12/2024 20:00:00
ForestDnsZones	Host (A)	192.168.10.2	01/12/2024 20:00:00
(same as parent folder)	Host (A)	192.168.10.2	01/12/2024 20:00:00
(same as parent folder)	Host (A)	192.168.10.2	01/12/2024 20:00:00
(same as parent folder)	Host (A)	192.168.10.2	01/12/2024 20:00:00
oaydc	Host (A)	192.168.10.2	01/12/2024 20:00:00

2. 192.168.10.2/24

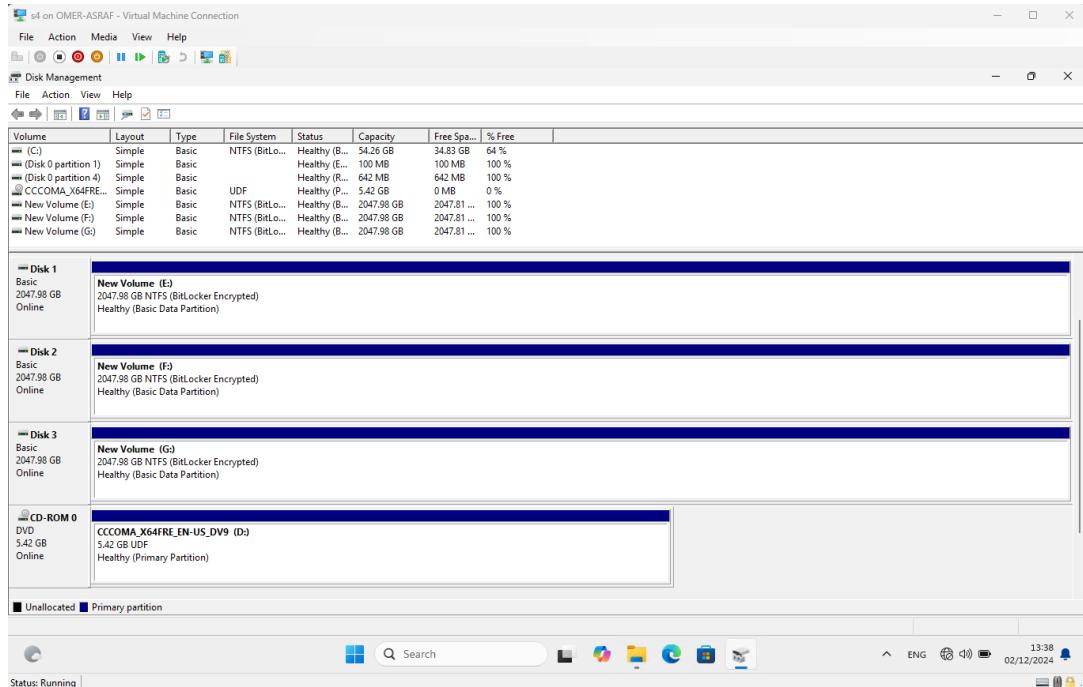
Usable IP range: 192.168.10.1-254 (enough for 30 Computers).

3. VM3 & VM4 with Windows 11 pro: OAYwkst01 & OAYwkst02

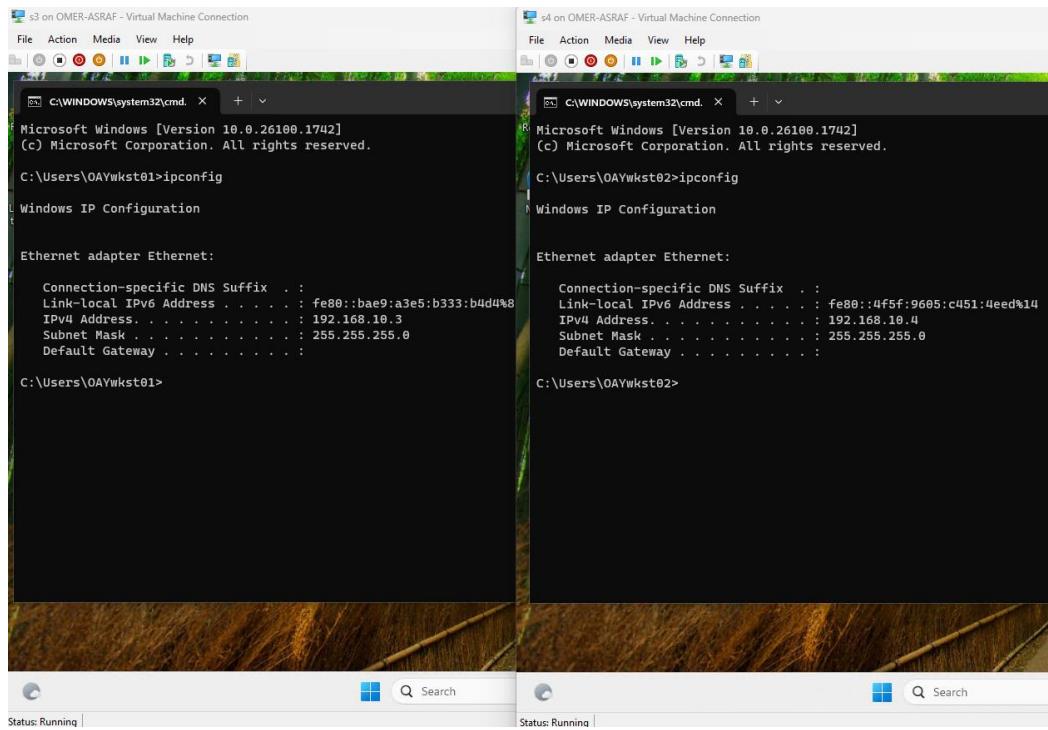


4. Showed in 3rd task.

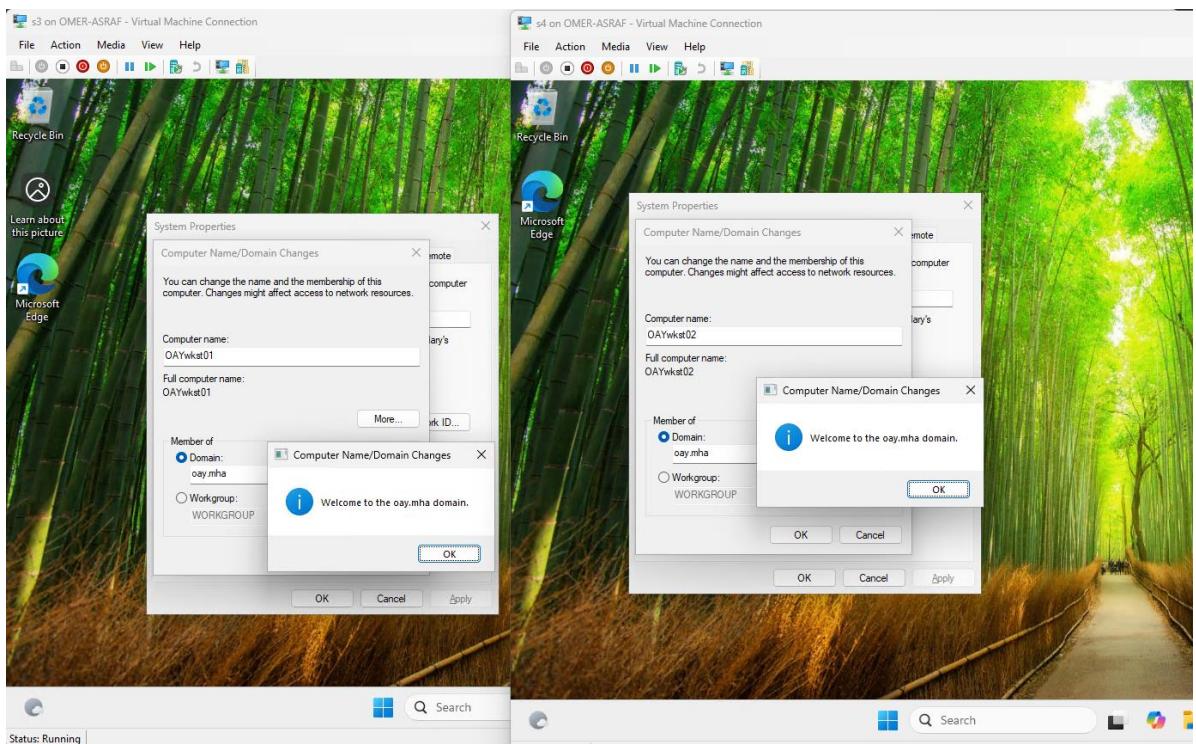
5. S4 settings > SCSI controller > add hard drive (example: s4_disk1.vhdx) > 2048GB > complete wizard > open disk manager > select all disks > create new simple volume > NTFS format > complete wizard.



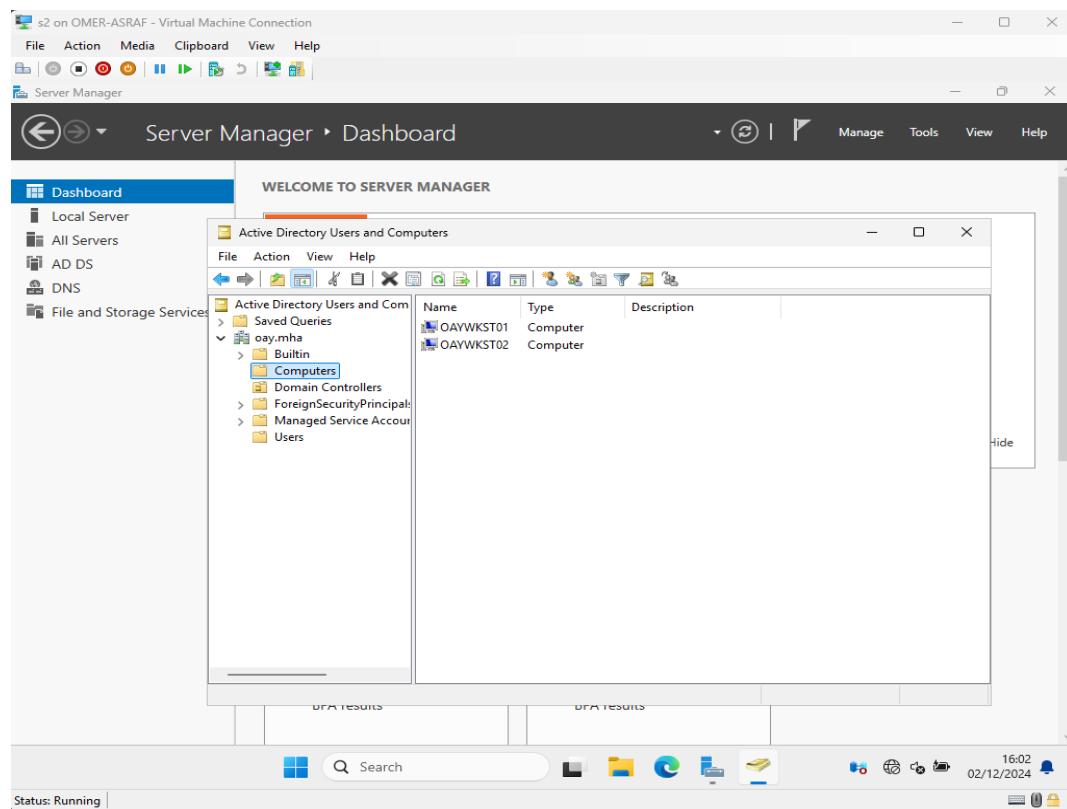
6. Run: ncpa.cpl > Ethernet (properties) > IPV4 (properties) > static > IP configuring.



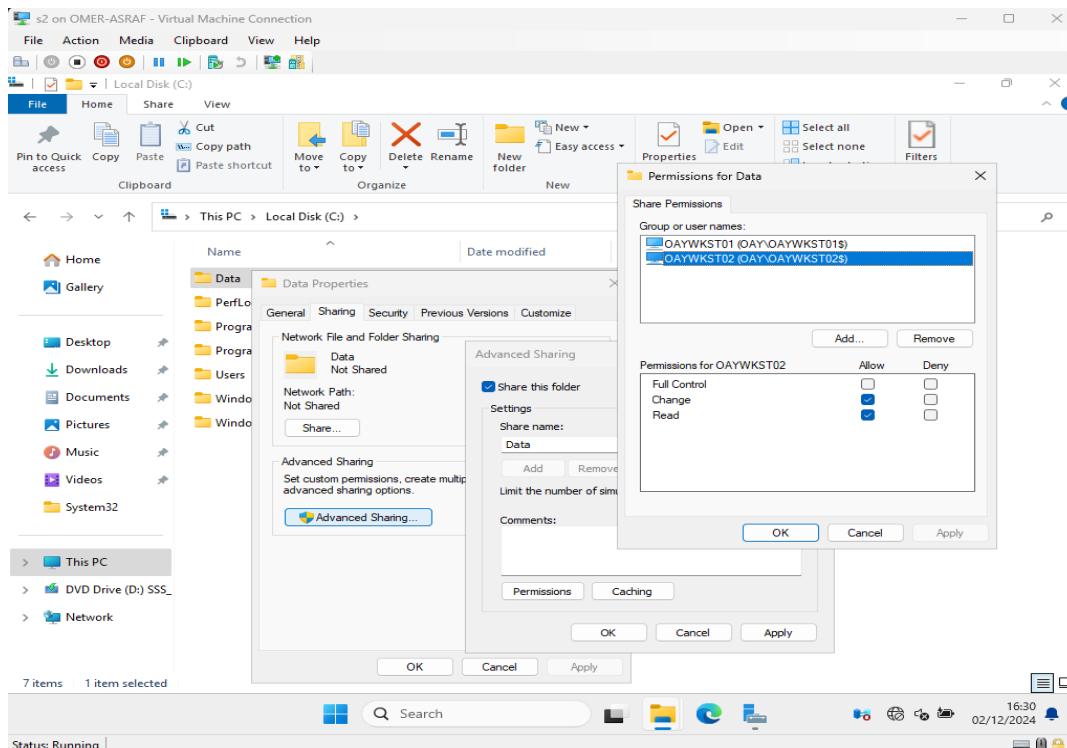
7. In OAYwkst01 & OAYwkst02: open "Run" > sysdm.cpl > change computer name > change to member of domain from workgroup > write "oay.mha" > enter username and password of domain controller.



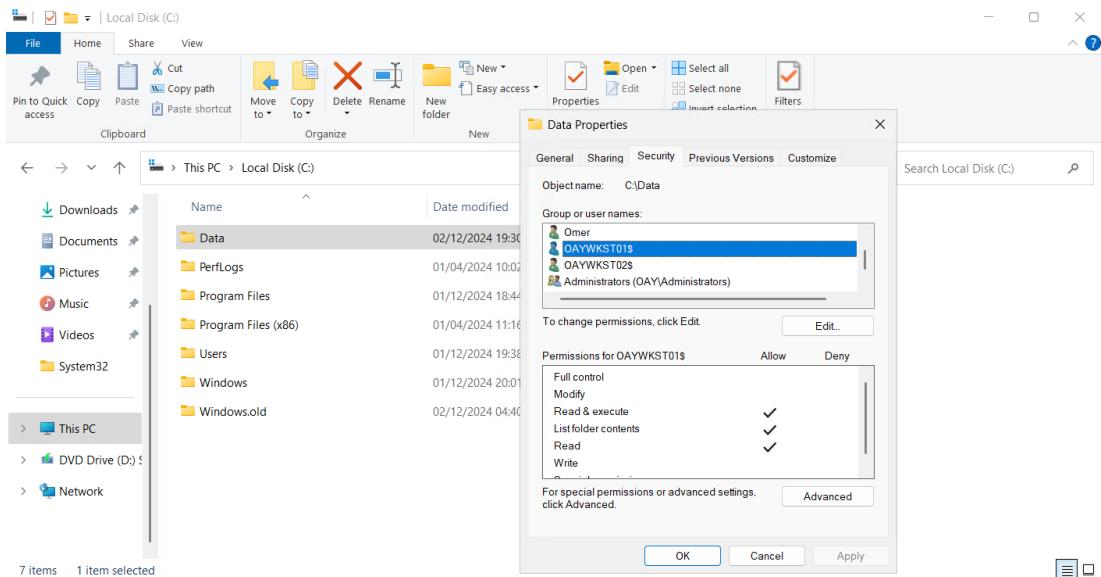
After, log in to oay.mha, entering active directory users and computers and check if my computers appear.



- I created a folder on DC in local disk (C:) calls "Data" > right click and properties > "Sharing" > "Advanced sharing" > tap on "share this folder" and then configure permissions > found and selected OAYwkst01 & 02 and let them read & change only.

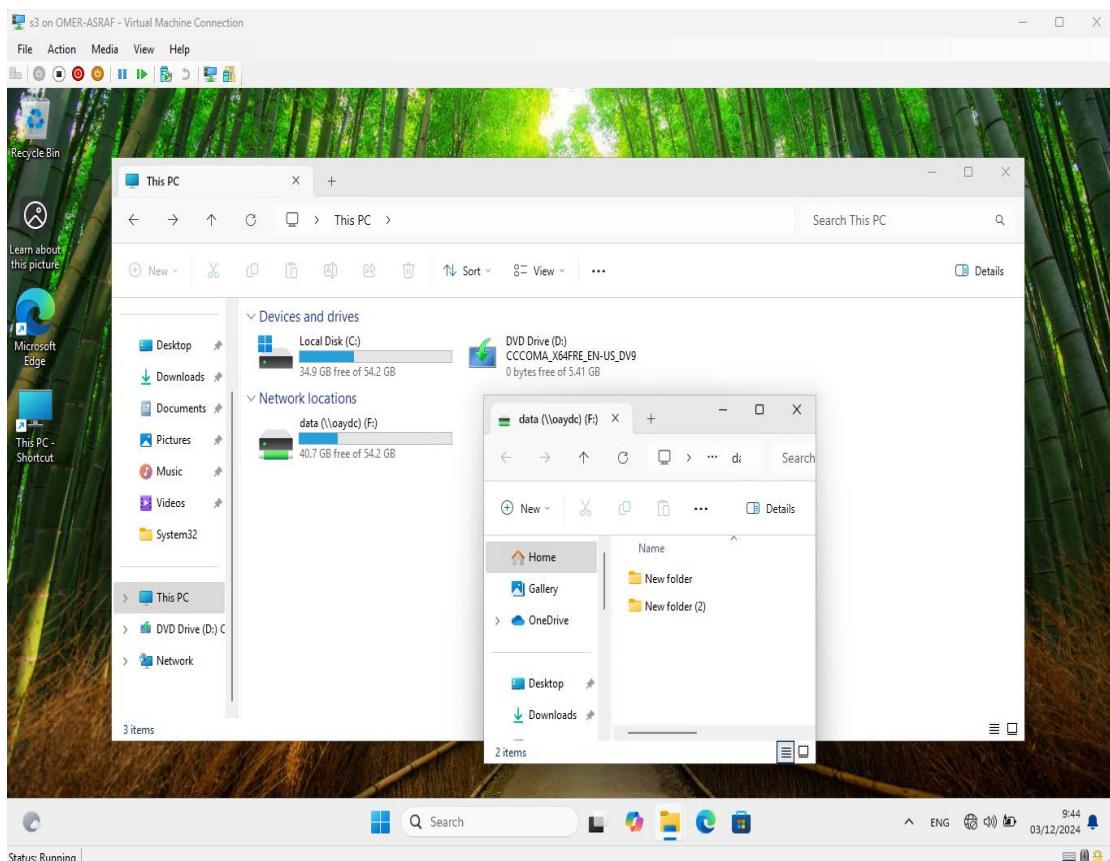


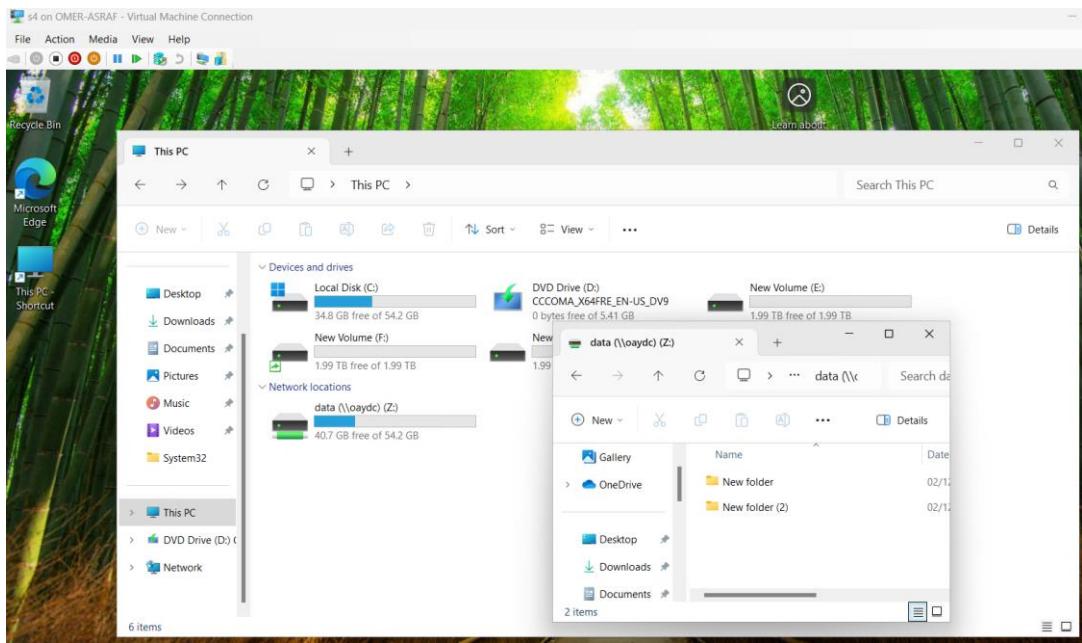
After, I went to "security" tab to check all permissions configured as I want.



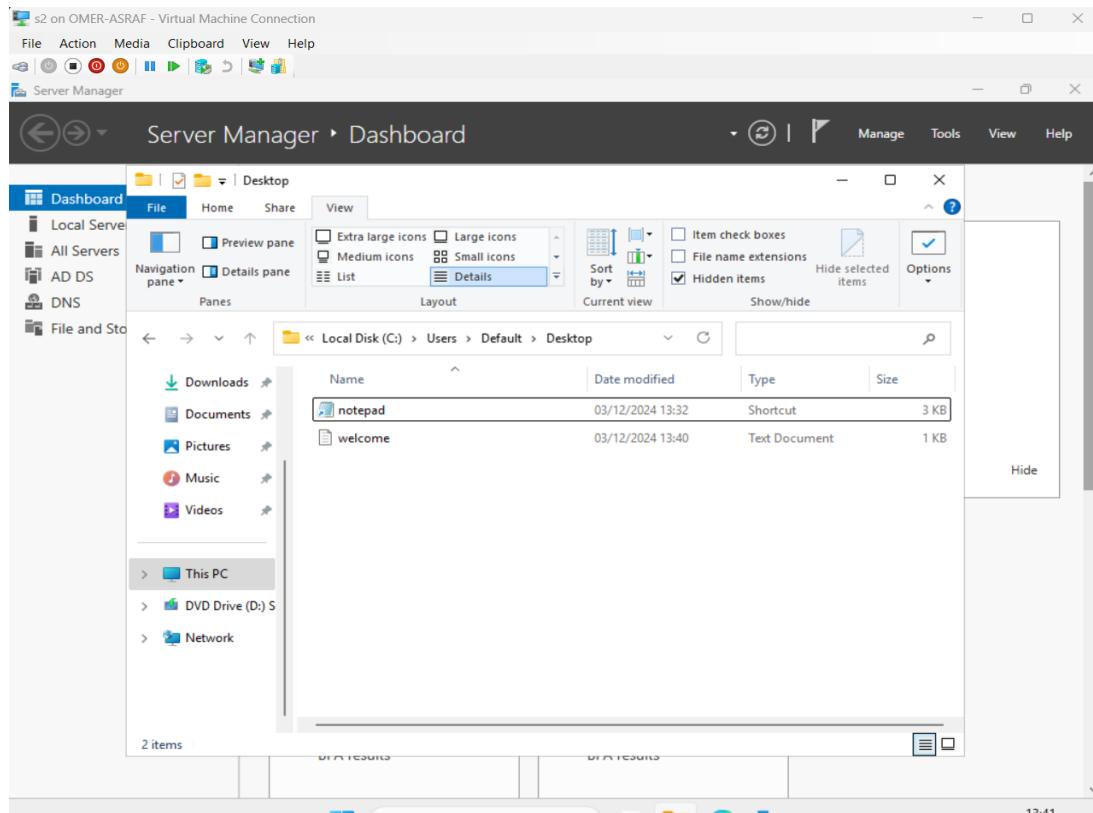
9. In DC I went to File explorer and wrote <\\oaydc\data> > checked wkst01&02 have access to the shared folder in Share & NTFS permissions.

After, opened wkst01 & 02 > This PC > Map network drive > chose drive letter and put the UNC path of shared folder > clicked Finish.

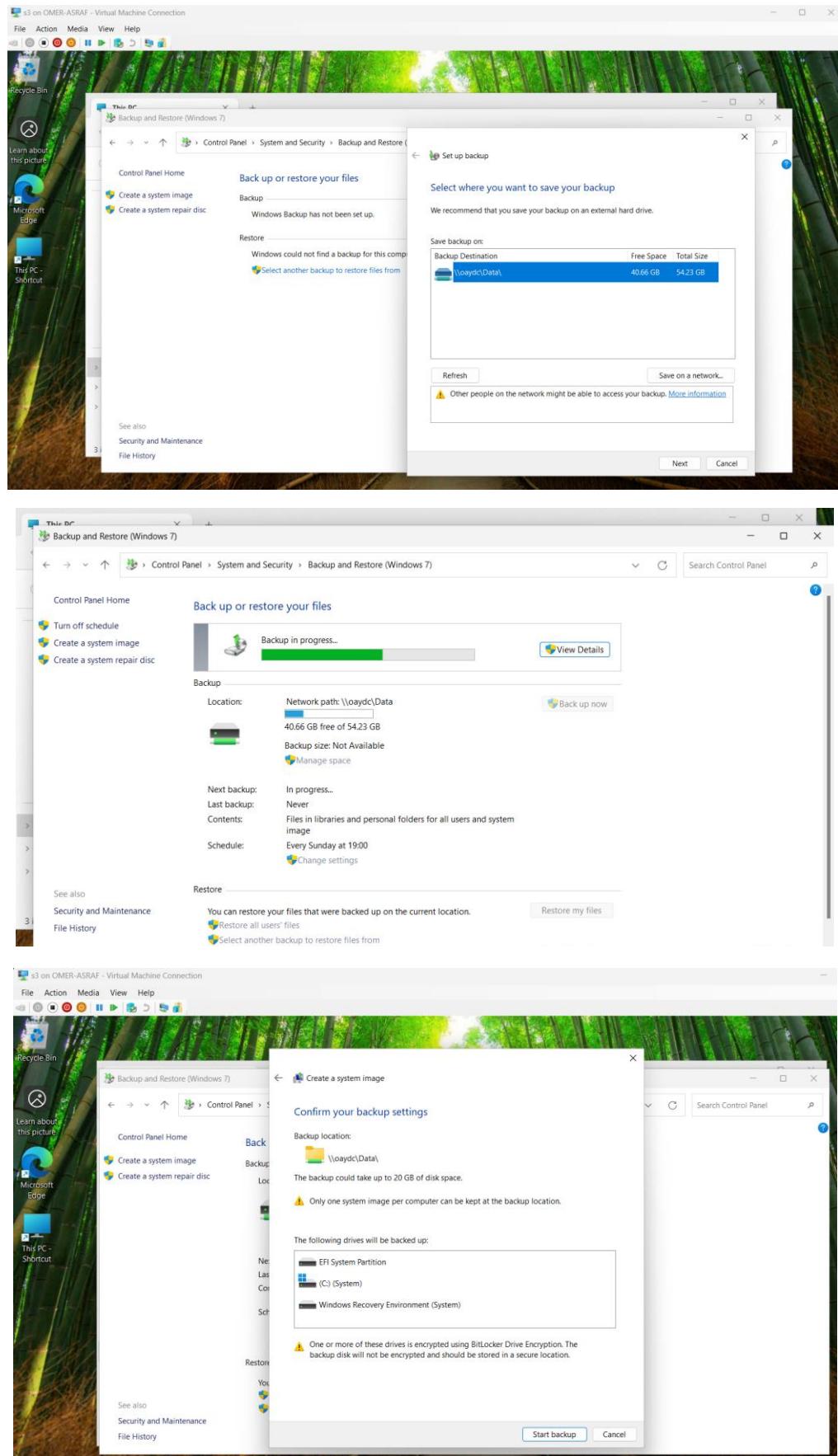




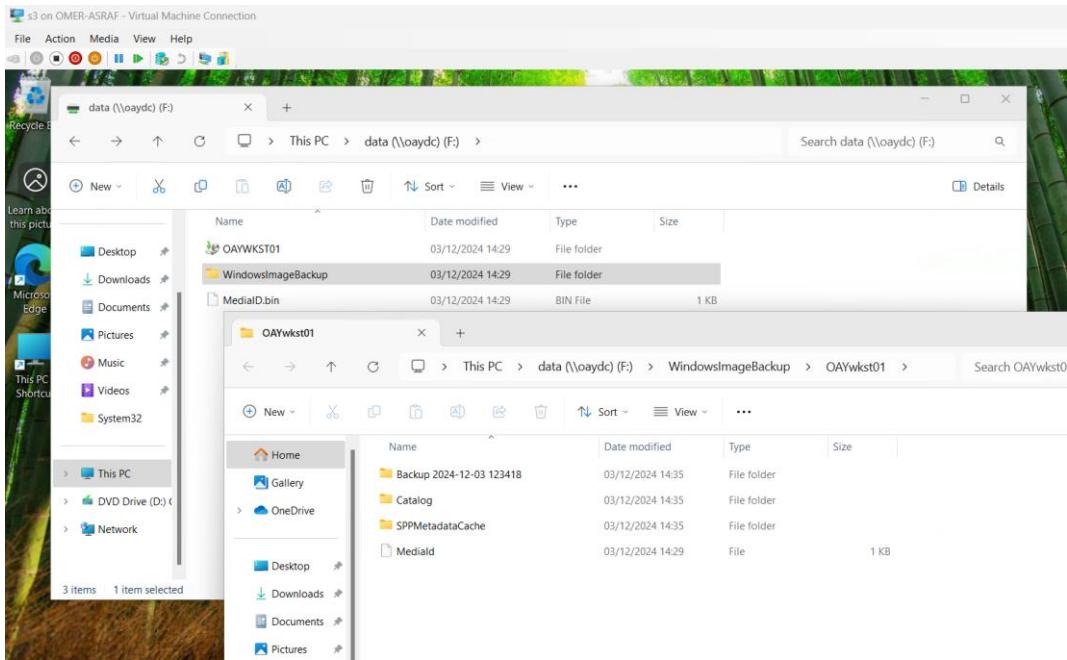
10. On DC desktop I created new shortcut: %windir%\system32\notepad.exe > drag it to <\\c:\\users\\default\\desktop> (after enabled showing hidden items) > opened Notepad and saved Welcome.txt here also: <\\c:\\users\\default\\desktop>



11. I gave OAYwkst01 the write permission to the shared folder > entered Backup and restore in C panel > create a system image > saved on a network location \oaydc\data > select drives > run the start backup.

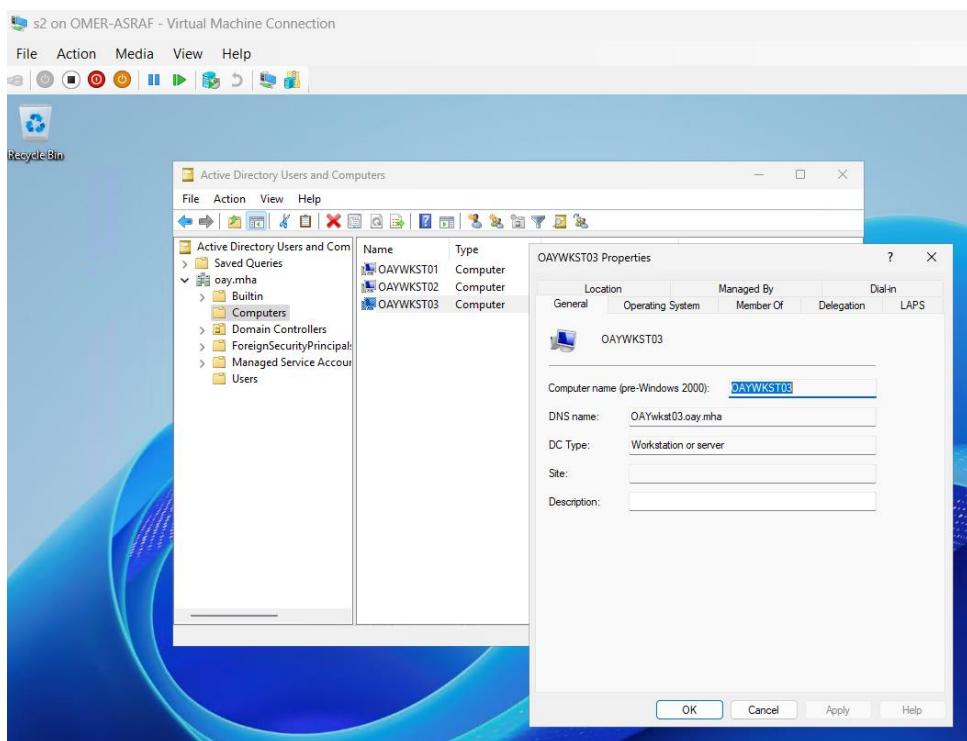


After I went to Drive F (shared folder) and found it's include the image of OAYwkst01.

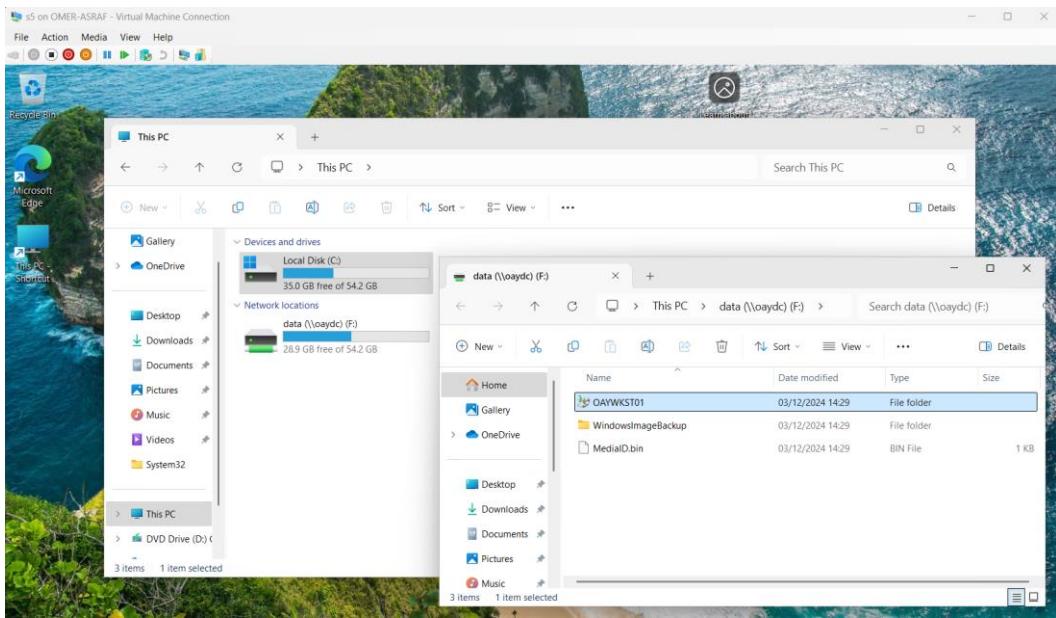


12. I created one more PC it calls OAYwkst03.
13. ncpa.cpl > Ethernet > IPV4 > properties > OAYwkst03 got static IP 192.168.10.5, Subnet mask 255.255.255.0, preferred DNS server 192.168.10.2

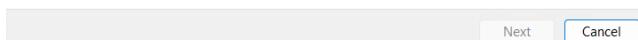
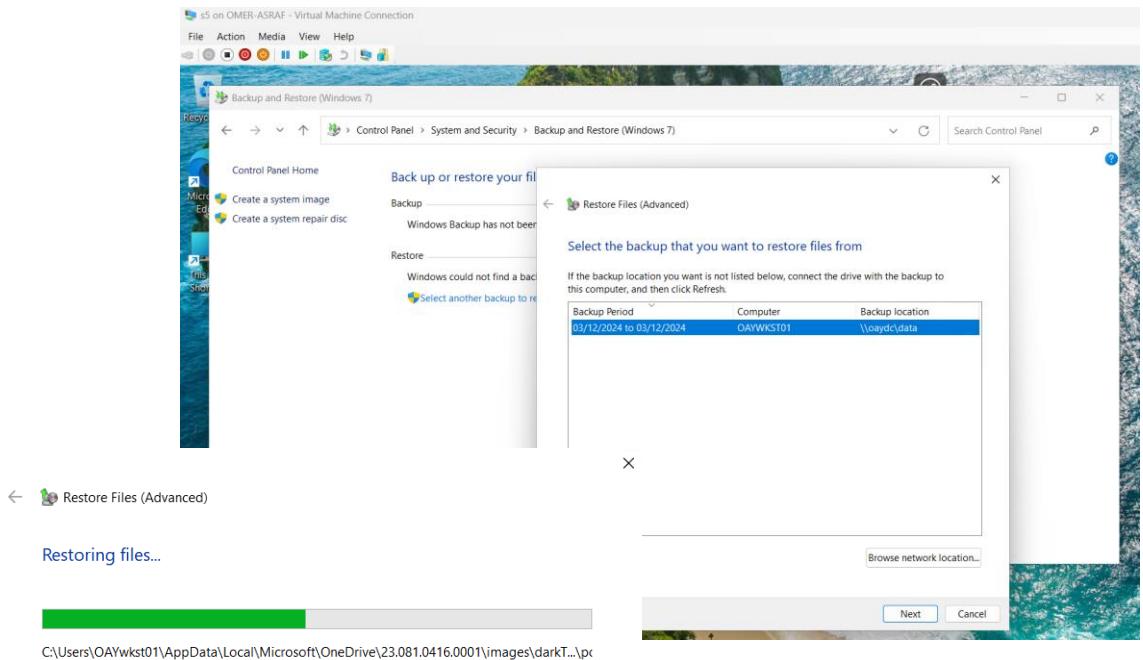
sysdm.cpl > change > member of – domain: oay.mha > user & pass.



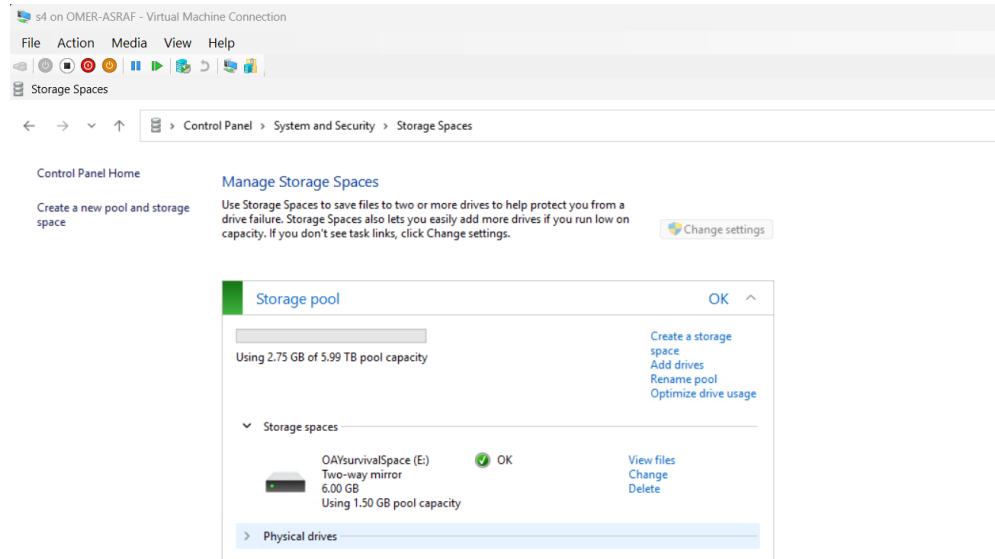
14. Right click on This PC > map network drive > chose \oaydc\data ...



After, I went to C panel > Backup and restore > select another backup to restore files from > browse network locations > \oaydc\data > restoring files until completed.



15. I went to Manage Storage Pool > Create a new pool and storage spaces > selected all my Virtual drives (s4disk1, 2, 3) > clicked create pool > storage space configuration > I chose the name "OAYsurvivalspace" (E:) > two-way mirror (survives the failure of one drive) > chose VD size: 5.99 GB > clicked create storage space > checked it's appear on This PC & Disk Management.



This PC File Action View Help

Control Panel Home Manage Storage Spaces

Create a new pool and storage space Use Storage Spaces to save files to two or more drives to help protect you from a drive failure. Storage Spaces also lets you easily add more drives if you run low on capacity. If you don't see task links, click Change settings.

Storage pool OK

Using 2.75 GB of 5.99 TB pool capacity

Create a storage space Add drives Rename pool Optimize drive usage

Storage spaces

OAYsurvivalspace (E:) OK

Two-way mirror 6.00 GB Using 1.50 GB pool capacity

View files Change Delete

Physical drives

This PC File Action View Help

Devices and drives Local Disk (C): 34.7 GB free of 54.2 GB DVD Drive (D): CCCOMA_X64FRE_EN-US_DV9 0 bytes free of 5.41 GB OAYsurvivalspace (E): 5.84 GB free of 5.87 GB

Network locations data (\oaydc) (Z): 28.7 GB free of 54.2 GB

Computer Management File Action View Help

Computer Management (Local)

Volume	Layout	Type	File System	Status
(C)	Simple	Basic	NTFS (BitLocker Encrypted)	Healthy (Boot, Page File, C)
(Disk 0 partition 1)	Simple	Basic		Healthy (EFI System Partition)
(Disk 0 partition 4)	Simple	Basic		Healthy (Recovery Partition)
CCCOMA X64FRE_EN-US_DV9 (D):	Simple	Basic	UDF	Healthy (Primary Partition)
OAYsurvivalspace ...	Simple	Basic	NTFS	Healthy (Basic Data Partition)

Disk Management Actions

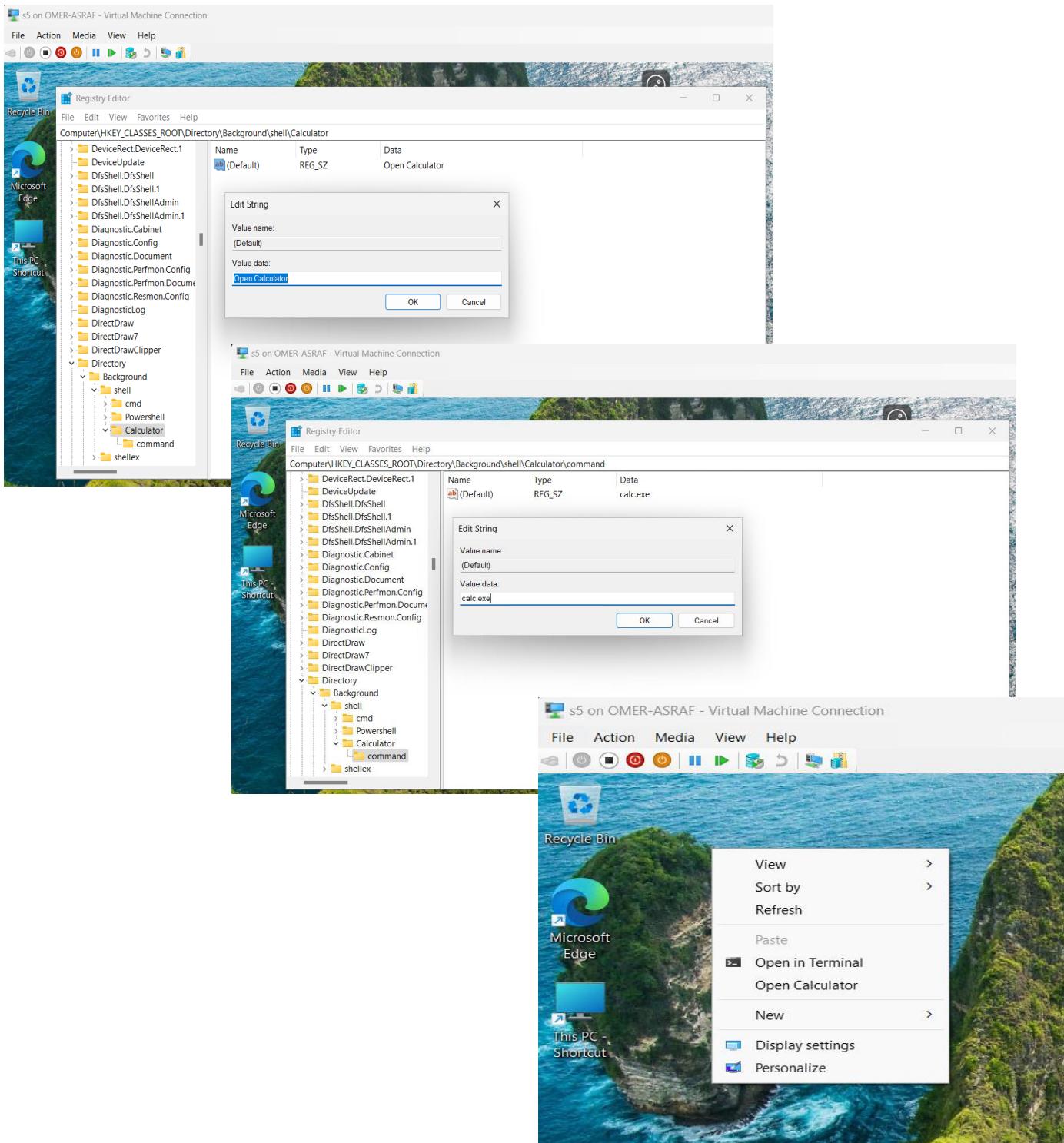
Disk Management More Actions

Disk 0 Basic 54.98 GB Online 100 MB Healthy (EFI System Partition) (C) 54.26 GB NTFS (BitLocker Encrypted) Healthy (Boot, Page File, Crash Dump, BitLocker Encrypted)

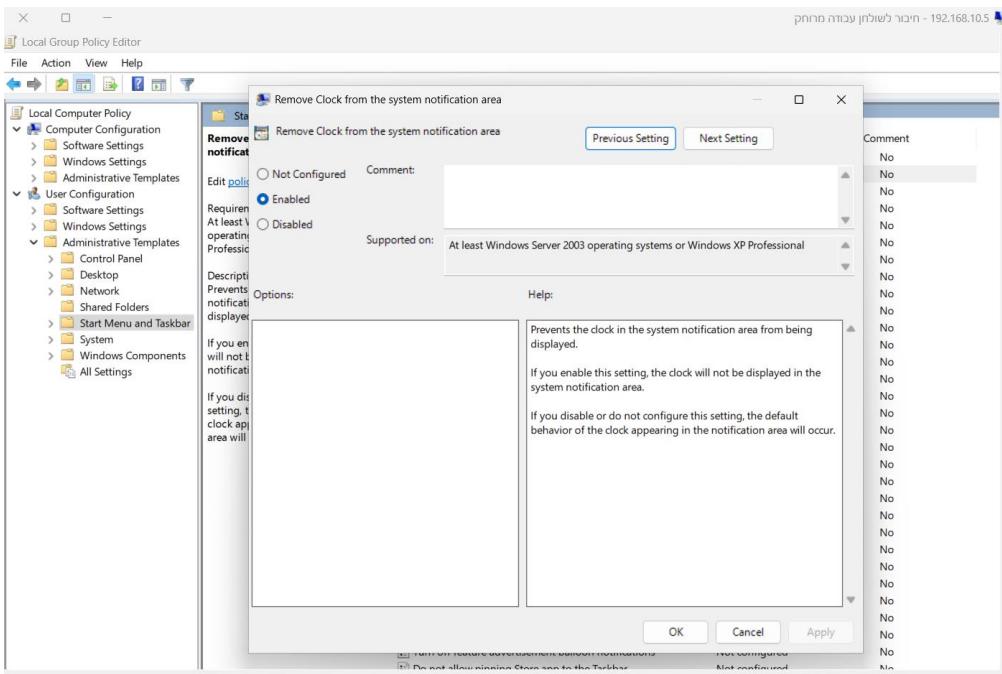
Disk 4 Basic 5.88 GB Online OAYsurvivalspace (E) 5.87 GB NTFS Healthy (Basic Data Partition)

16. Pressed Win + R and typed "regedit" > arrived to:

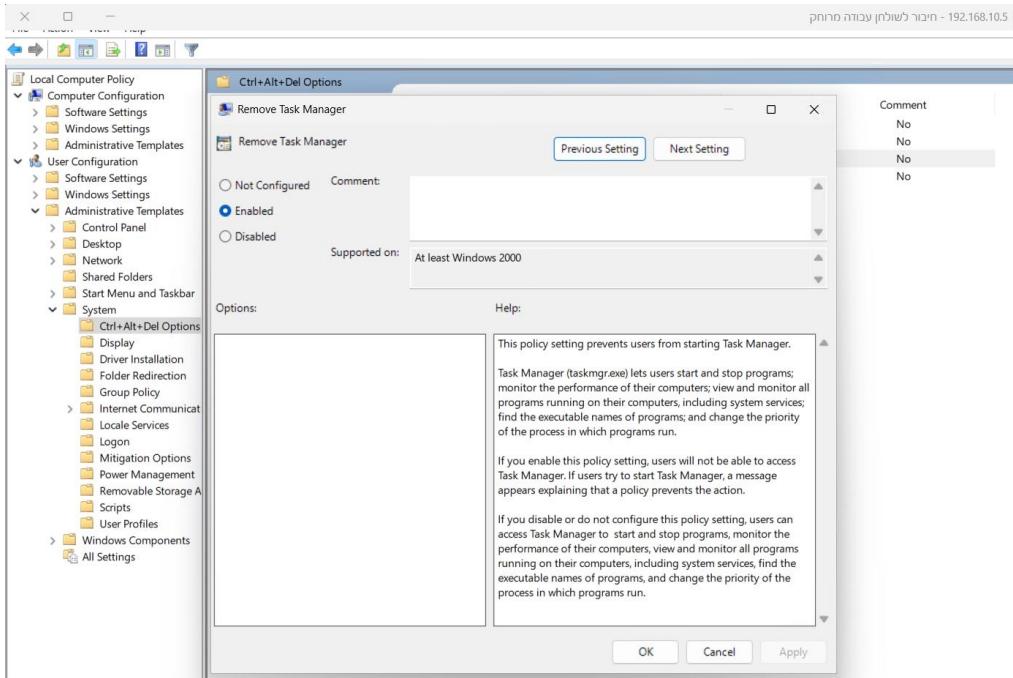
HKEY_CLASSES_ROOT\Directory\Background\shell > right click and opened new key named "Calculator" > Open Default and set "Open calculator" in value data > under calculator key I created one more subkey named "command" and selected it > open "default" and set "calc.exe" > I tried calc.exe in cmd and it worked > after right clicked on desktop > show more options > see the launch option to calculator.



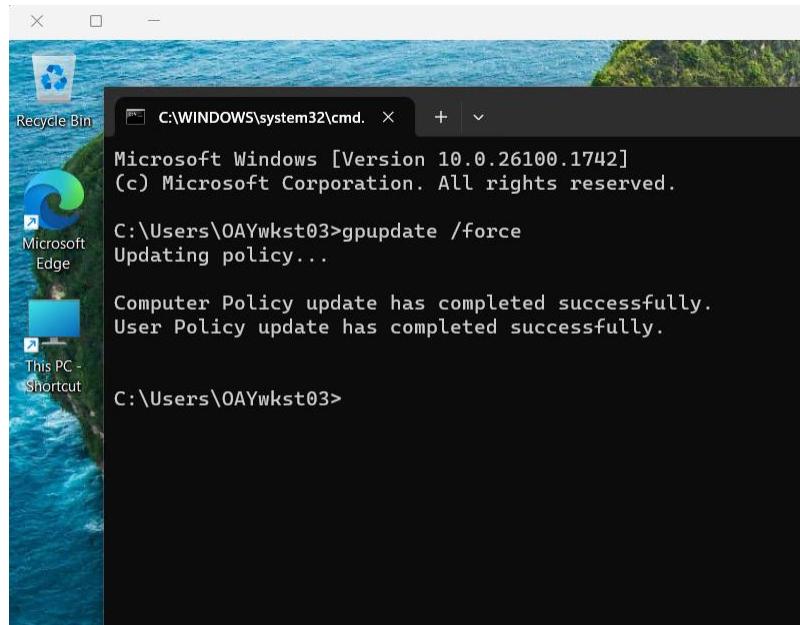
17. In OAYwkst03 I opened a local user named "Test" > Win + R > gpedit.msc > User Configuration > Administrative Templates > Start Menu and Taskbar > Remove Clock from the system notification area > Enabled.



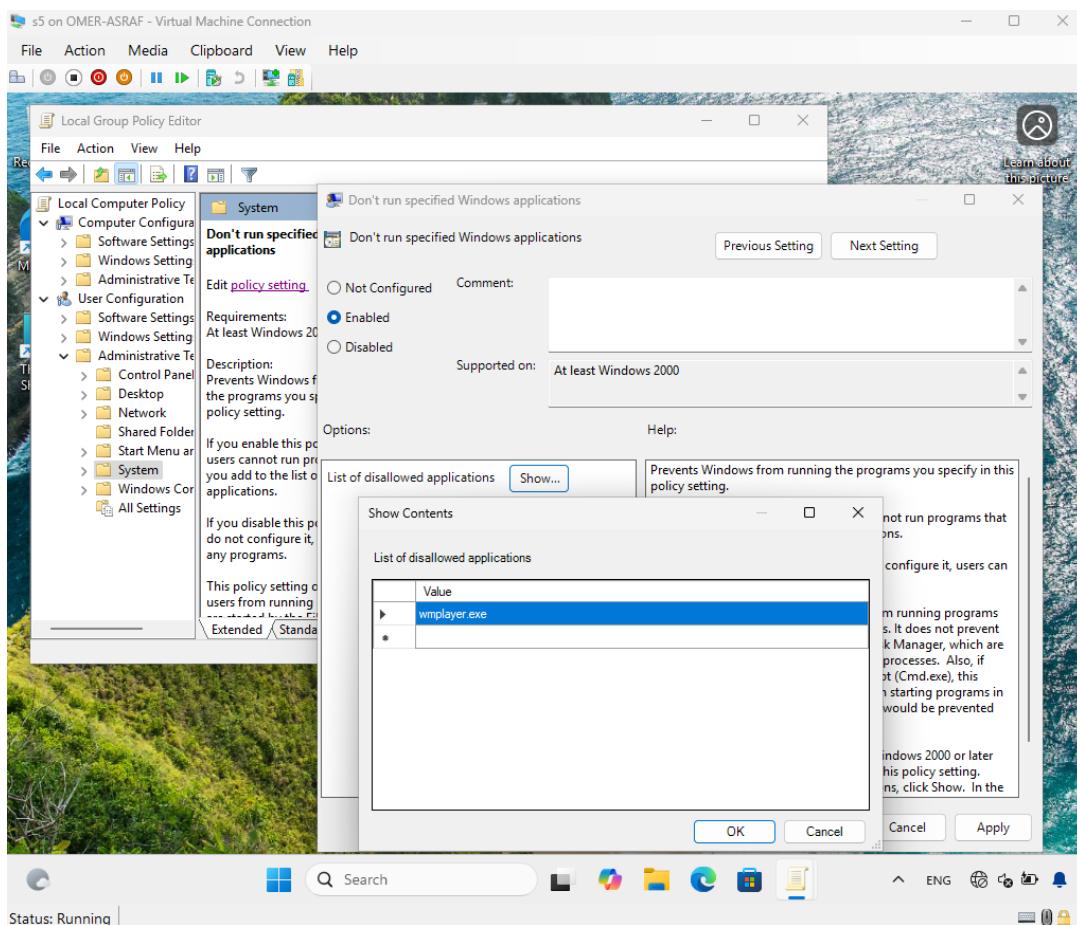
For disabling Task Manager > User configuration > Administrative Templates > System > Ctrl+Alt+Del Options > Remove Task Manager > Enabled.



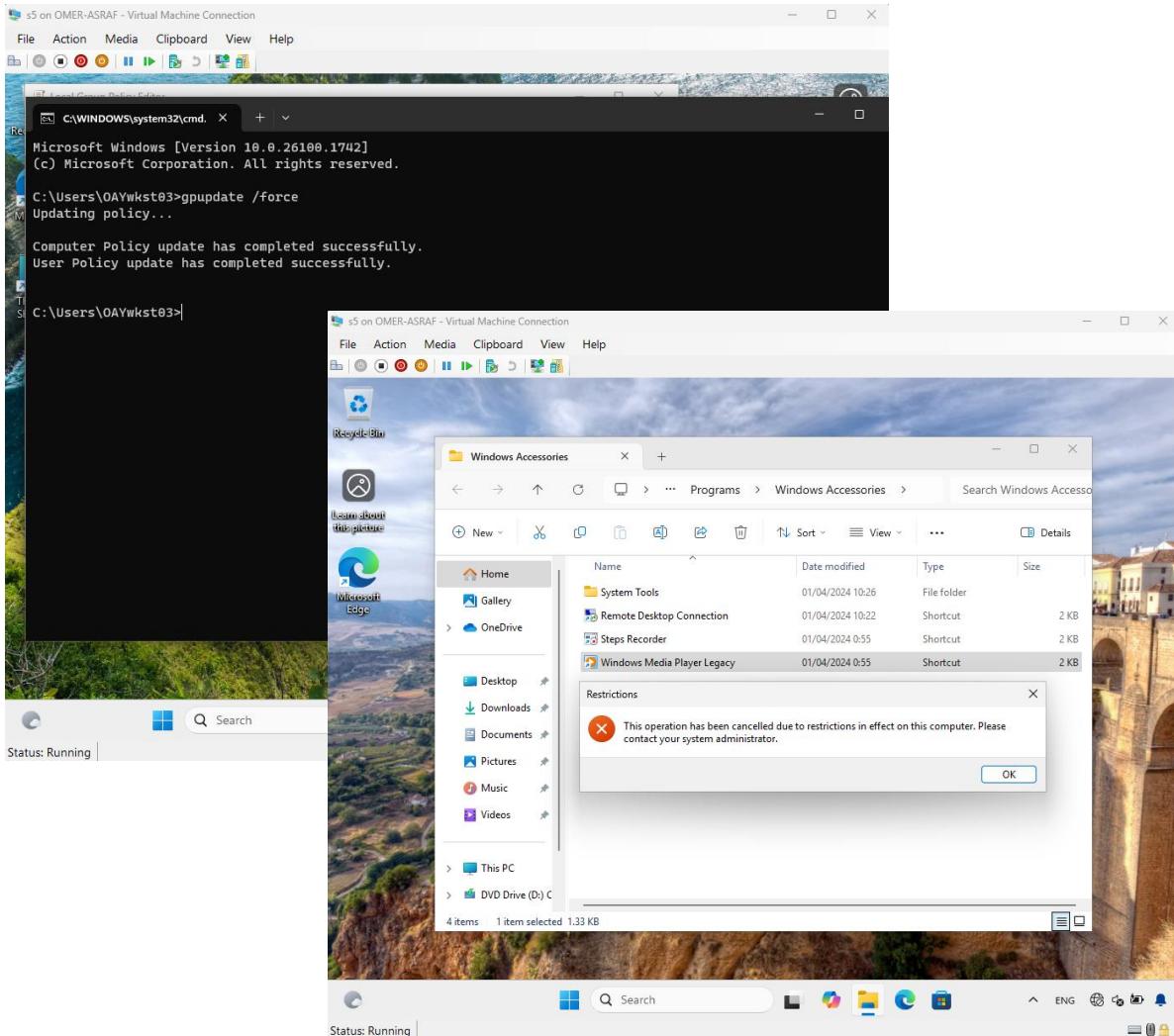
For applying new policies > CMD > gpupdate /force > Restart PC.



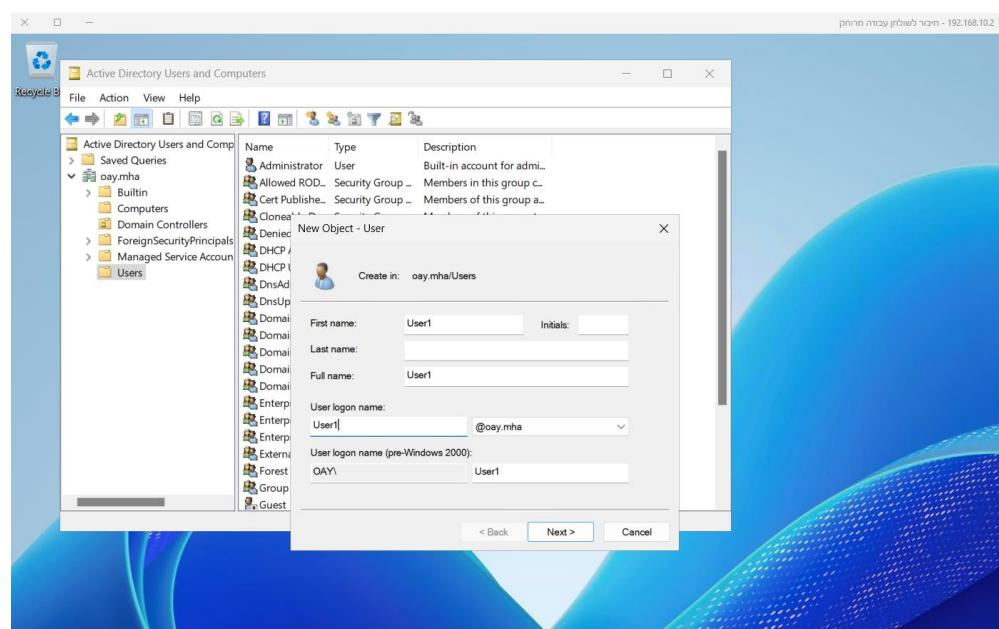
18. Disabling access to VMplayer.exe > in OAYwkst03 – Win + R > gpedit.msc > User configuration > Administrative Templates > System > Don't run specified windows applications > clicked Enabled > Show list > write "wmplayer.exe" > Apply.



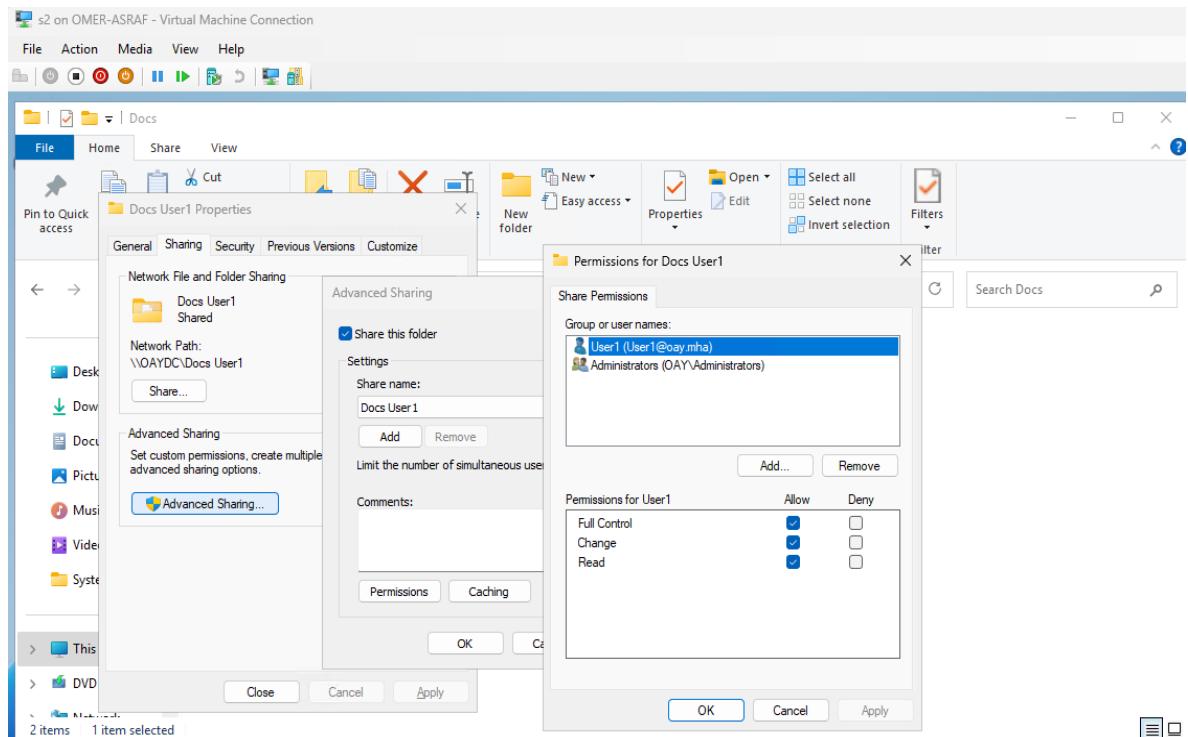
Win + R > CMD > gpupdate /force.



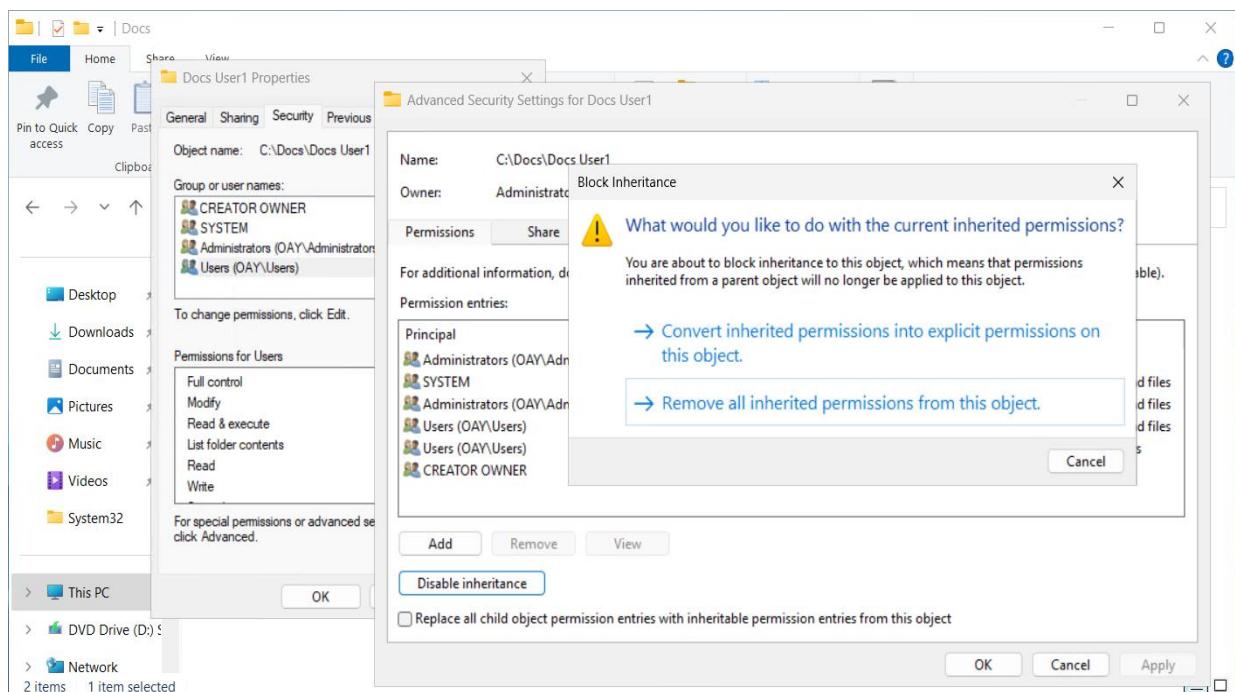
19. dsa.msc > clicked on "oay.mha" > Users > right click > new > user > username & password (double configuration for 2 users).

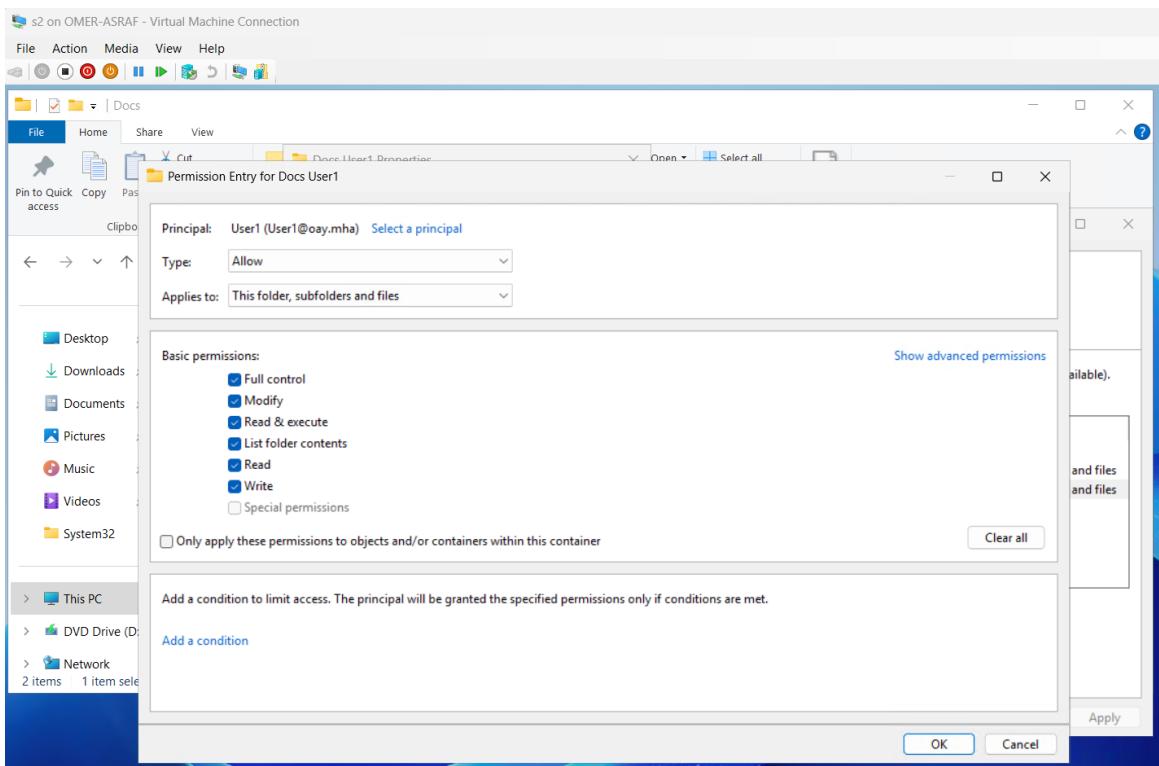


This PC > (C:) > new folder "Docs" > inside "Docs" opened 2 folders (Docs User1 & 2) > right click > properties > Sharing > Advanced sharing > Share this folder > Permissions > found User1 > configured "full control" for User1 > "full control for OAY\Administrators > Remove "Everyone" > Ok (= same process for User2).



Configure NTFS Permissions: Docs User1 > properties > security tab > advance > disable inheritance > remove all permissions except Administrators & System > Add > Select a principal > OAY\User1 > Full control. (Same for OAY\User2).





Checked there is no access for OAY\User 1 to Docs User2.

Checked there is no access for OAY\User2 to Docs User1.

