

## Microsoft Server Pilot project assignment – Graded C

In this scenario, I am to create the computer server infrastructure from scratch based on a Microsoft Active Directory structure for two merging companies, Travelling Nerds and Nerdy People. Travelling Nerds based in Kongsvinger and Nerdy People based in Bodø have their own already existing departments and employees in their region. I will take their departments and employees in account when creating the Microsoft based network structure and apply the proper permissions and appropriate environment for each department. I have been given a list of requirements for this structure and will document the setup and of the necessary environment according the requirements.

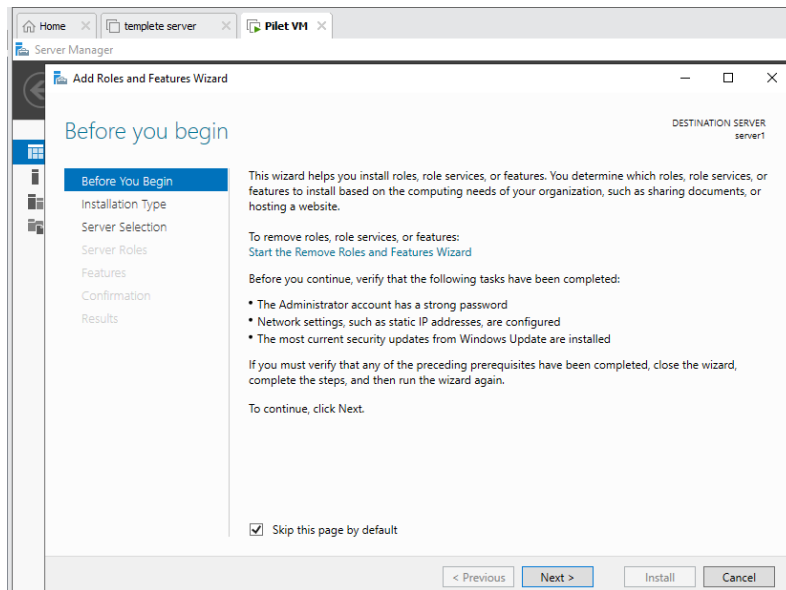
*Table of ip addresses for simple reference navigation*

Server1	192.168.154.152 and 127.0.0.1
Server2	192.168.154.147
Server3	192.168.154.167 and later changed to 192.168.154.128
Client	192.168.154.200 (DHCP)

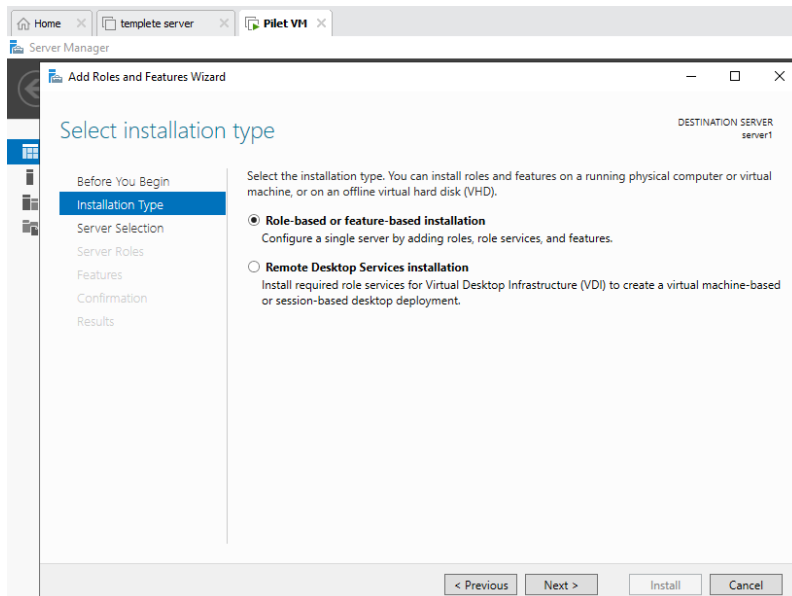
*(If you are wondering why my ip addresses are not sequential, it is because I simply use the ip addresses I have been automatically given. I had to delete and reinstall some vms in the process, that might affect future addresses)*

For starting this scenario, I start up my first server and changed the server computer name to Server1.

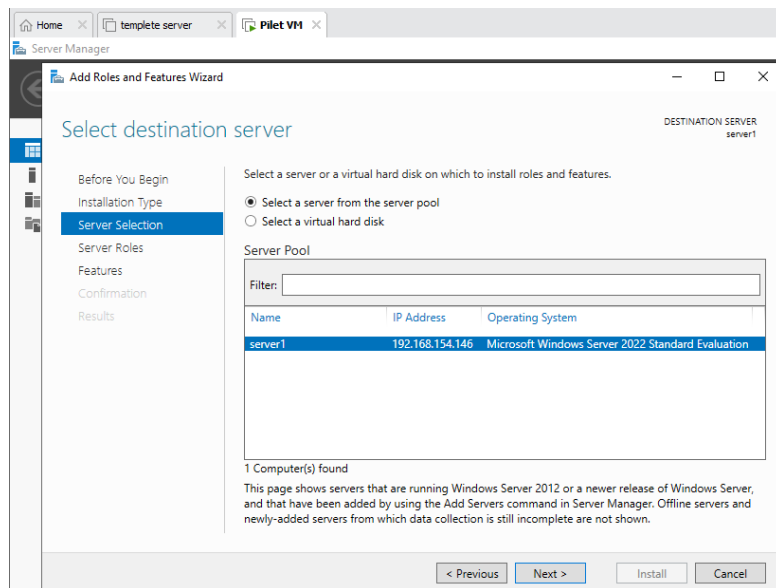
For server1, I start by installing AD DS which will provide me with many useful features. I click on “Add roles and features”



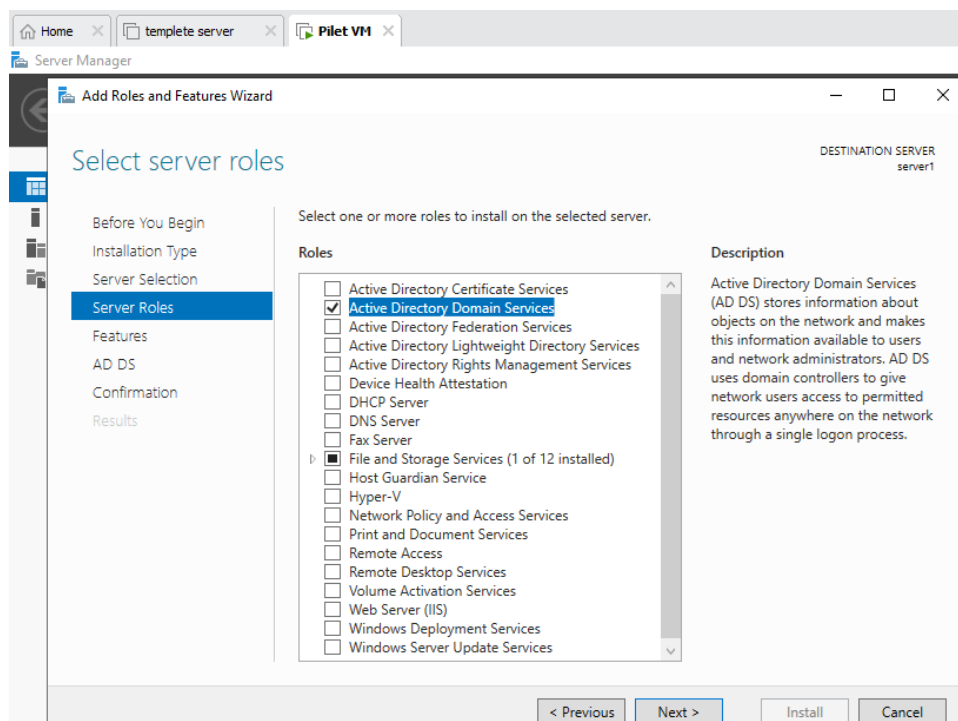
Next I check off “Role Based or Feature based installation”



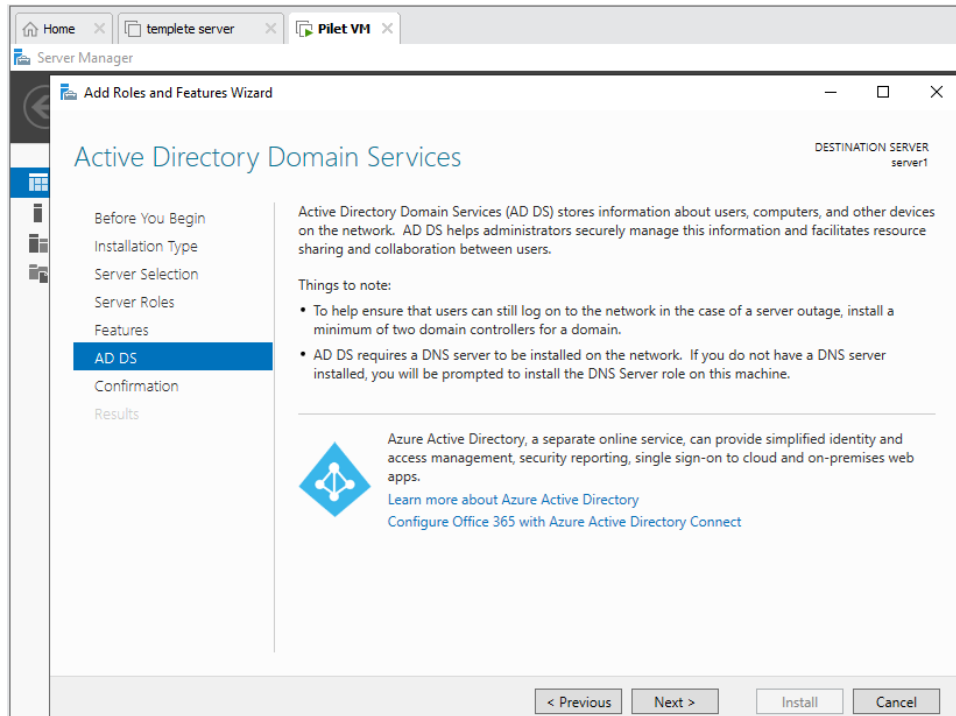
I select the server available, which is my renamed server “server1”.



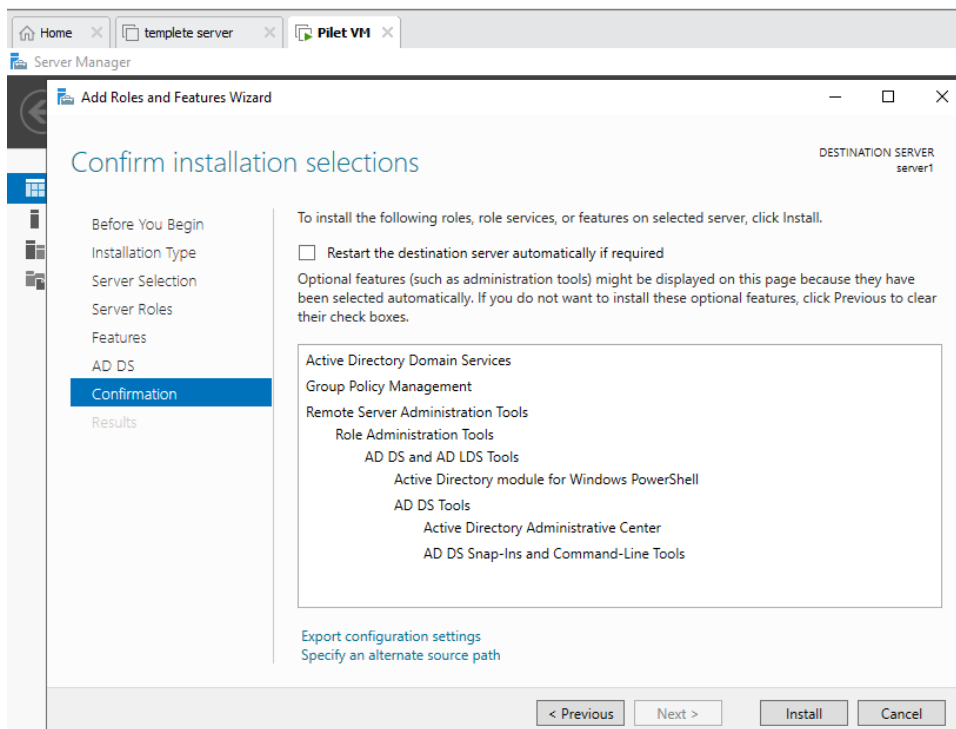
I now select only the “Active Directory Domain Services” and click next. It will inform me of the features I will install and I accept, click next.



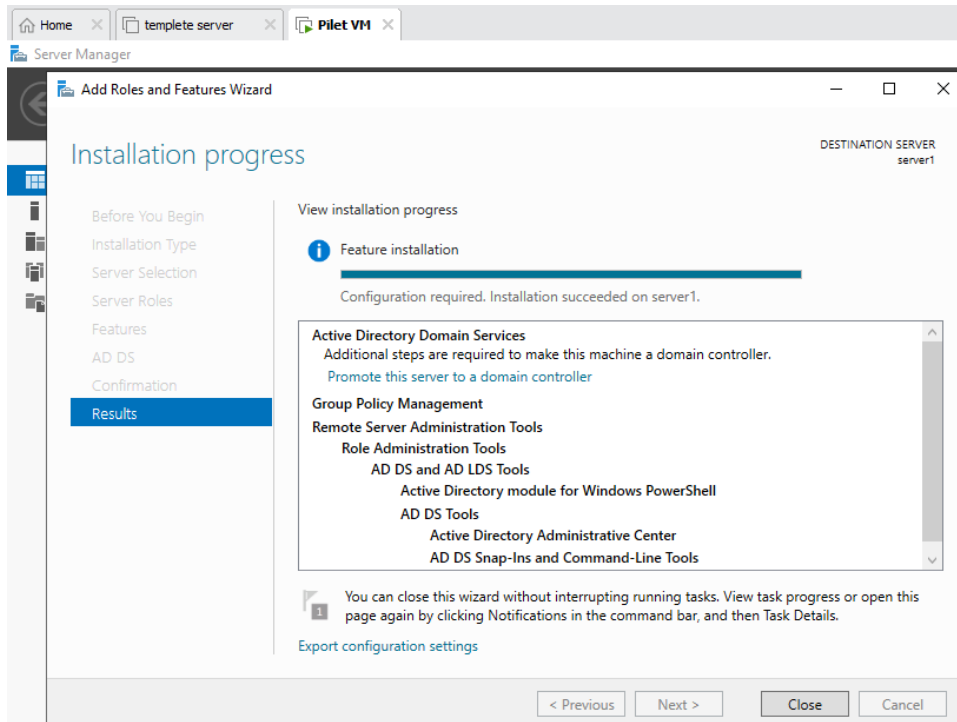
I again accept the features I am installing and click next.



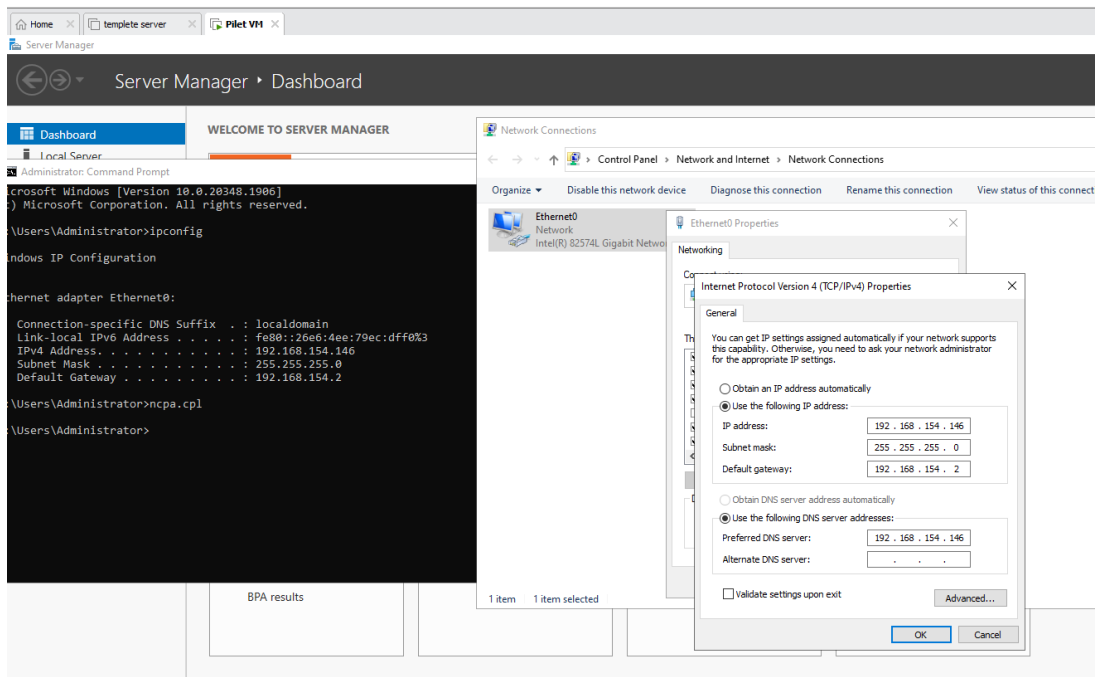
I confirm the installing selections and click install.



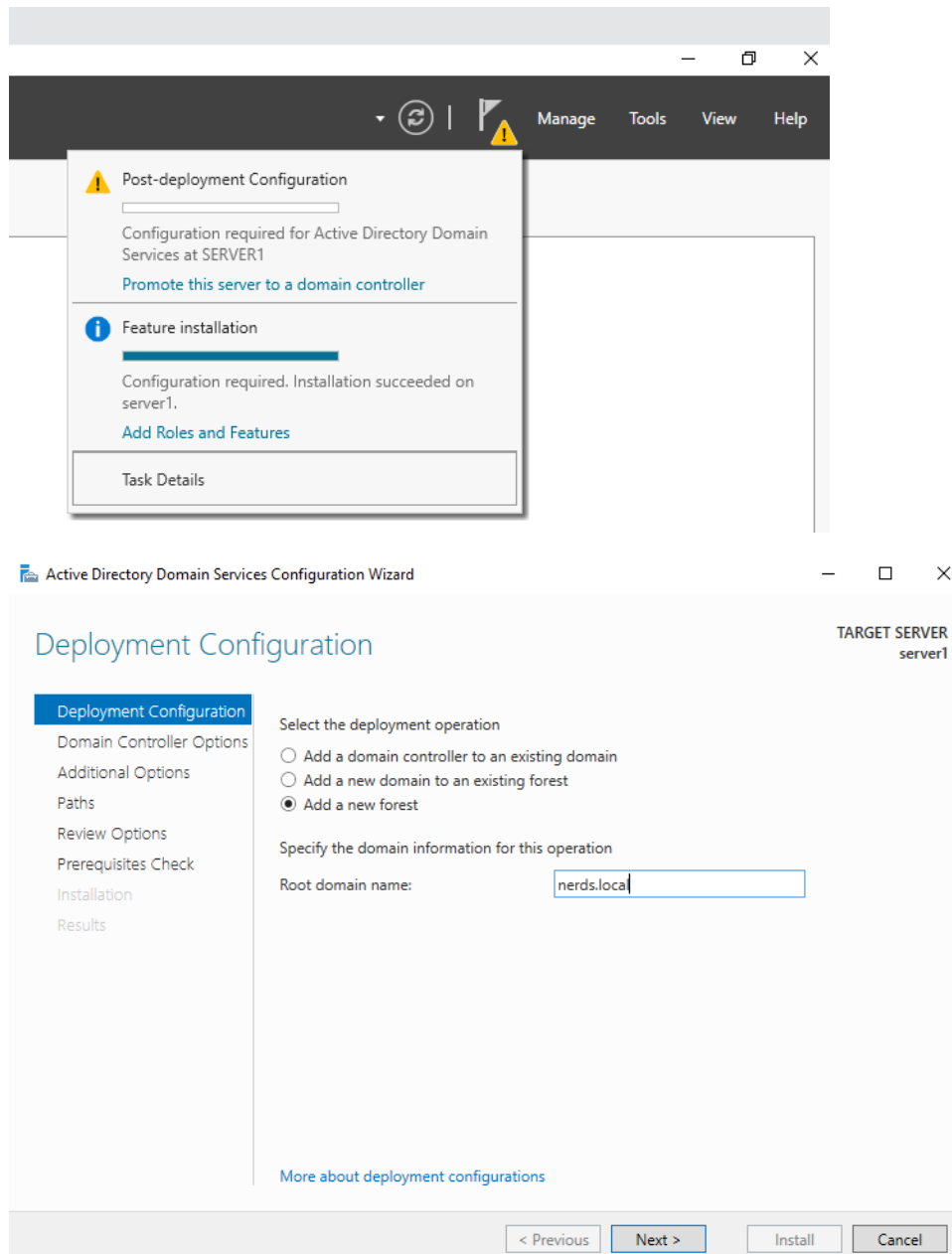
Installation finished, I close it tab.



Next step is to set the static ip address settings to our server. I do that by typing “ipconfig” in command prompt, it will display information on my ip. I then type “ncpa.cpl” to open network settings. I open properties on “Internet protocol version 4” to set my static addresses. I fill in the information by copying what my settings says in command prompt. That includes IPv4 address, subnet mask, default gateway, and lastly I set preferred DNS server as my own IP address.



Now that IPs are set, last step is to promote server to domain controller, where I add a new forest. I will choose my root domain name to be “nerds.local”. In reference to our two companies, Travelling Nerds and Nerdy People.



Next we select the default “Windows Server 2016” as forest and domain functional level, along with a private password.

Active Directory Domain Services Configuration Wizard

Domain Controller Options

TARGET SERVER  
server1

Deployment Configuration  
Domain Controller Options  
DNS Options  
Additional Options  
Paths  
Review Options  
Prerequisites Check  
Installation  
Results

Select functional level of the new forest and root domain

Forest functional level: Windows Server 2016

Domain functional level: Windows Server 2016

Specify domain controller capabilities

☒ Domain Name System (DNS) server

☒ Global Catalog (GC)

☐ Read only domain controller (RODC)

Type the Directory Services Restore Mode (DSRM) password

Password: .....

Confirm password: .....

[More about domain controller options](#)

< Previous Next > Install Cancel

DNS Options

TARGET SERVER  
server1

A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found... [Show more](#) X

Deployment Configuration  
Domain Controller Options  
DNS Options  
Additional Options  
Paths  
Review Options  
Prerequisites Check  
Installation  
Results

Specify DNS delegation options

☐ Create DNS delegation

[More about DNS delegation](#)

< Previous Next > Install Cancel

We have been given “nerds” as netbios domain as I approve.

Active Directory Domain Services Configuration Wizard

Additional Options

TARGET SERVER  
server1

Deployment Configuration  
Domain Controller Options  
DNS Options  
Additional Options  
Paths  
Review Options  
Prerequisites Check  
Installation  
Results

Verify the NetBIOS name assigned to the domain and change it if necessary

The NetBIOS domain name:

[More about additional options](#)

< Previous Next > Install Cancel

Active Directory Domain Services Configuration Wizard

Paths

TARGET SERVER  
server1

Deployment Configuration  
Domain Controller Options  
DNS Options  
Additional Options  
Paths  
Review Options  
Prerequisites Check  
Installation  
Results

Specify the location of the AD DS database, log files, and SYSVOL

Database folder:  ...

Log files folder:  ...

SYSVOL folder:  ...

[More about Active Directory paths](#)

< Previous Next > Install Cancel



## Review Options

TARGET SERVER  
server1

- Deployment Configuration
- Domain Controller Options
  - DNS Options
- Additional Options
- Paths
- Review Options**
- Prerequisites Check
- Installation
- Results

Review your selections:

Configure this server as the first Active Directory domain controller in a new forest.

The new domain name is "travellingnerds.com". This is also the name of the new forest.

The NetBIOS name of the domain: TRAVELLINGNERDS

Forest Functional Level: Windows Server 2016

Domain Functional Level: Windows Server 2016

Additional Options:

Global catalog: Yes

DNS Server: Yes

Create DNS Delegation: No

These settings can be exported to a Windows PowerShell script to automate additional installations

[View script](#)[More about installation options](#)

&lt; Previous

Next &gt;

Install

Cancel

We have now reviewed our install and approve it. We finish the installation of AD DS by clicking install. Then wait.

## Prerequisites Check

TARGET SERVER  
server1

✓ All prerequisite checks passed successfully. Click 'Install' to begin installation.

[Show more](#)

✕

- Deployment Configuration
- Domain Controller Options
  - DNS Options
- Additional Options
- Paths
- Review Options
- Prerequisites Check**
- Installation
- Results

Prerequisites need to be validated before Active Directory Domain Services is installed on this computer

[Rerun prerequisites check](#)

View results

cryptography algorithms when establishing security channel sessions.

For more information about this setting, see Knowledge Base article 942564 (<http://go.microsoft.com/fwlink/?LinkId=104751>).

⚠ A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain "travellingnerds.com". Otherwise, no action is required.

ℹ Prerequisites Check Completed

✓ All prerequisite checks passed successfully. Click 'Install' to begin installation.

⚠ If you click Install, the server automatically reboots at the end of the promotion operation.

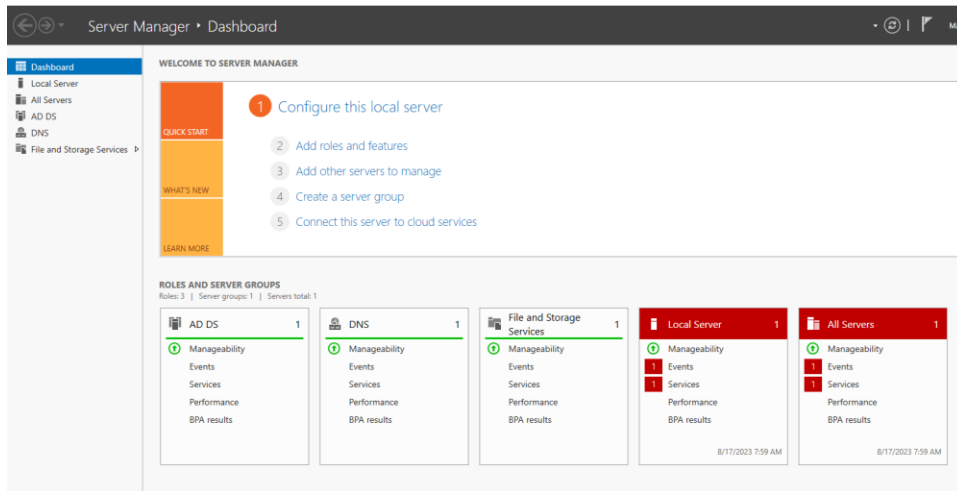
[More about prerequisites](#)

&lt; Previous

Next &gt;

Install

Cancel



Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.20348.1906]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping nerds.local

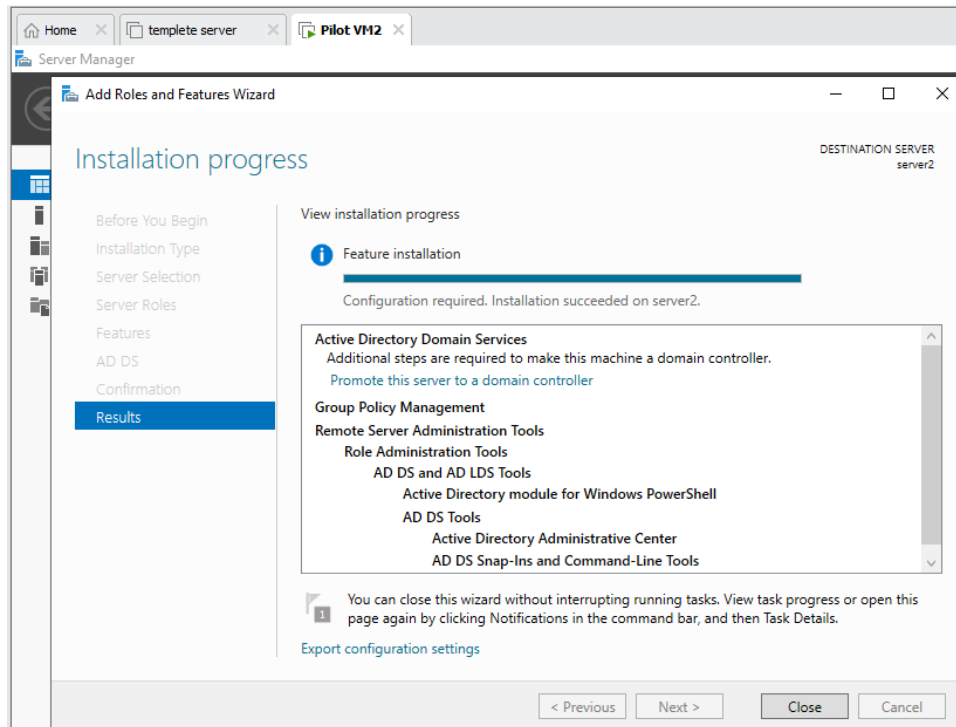
Pinging nerds.local [192.168.154.152] with 32 bytes of data:
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.152:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Done, I have installed and proved connectivity by pinging nerds.local on server1. I will now install a second domain controller in an existing domain for **redundancy and fault tolerance purposes**. This is for in case of a potential shutdown of server1. Server2 will be there to pick up for server1. (Allen, 2023)

Installing AD DS on server 2 – follow the same steps for installation as server1. But this time, after installing the AD DS roles, we will set the static ip preferred DNS server ip to the ip of the server1.



We test the connectivity from server2 to the ip of server1. Then we test the connectivity of nerds.local. They both were a success.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.1906]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping 192.168.154.152

Pinging 192.168.154.152 with 32 bytes of data:
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.152:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>ping nerds.local

Pinging nerds.local [192.168.154.152] with 32 bytes of data:
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.152:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Now we add the domain controller of server 2 to an existing domain and choose “nerds.local” as the existing domain. We also supply credentials of an administrator account that has permission to install domain controllers. In this case I choose the account nerd/administrator.

Active Directory Domain Services Configuration Wizard

Deployment Configuration

TARGET SERVER  
server2

Deployment Configuration

Domain Controller Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Select the deployment operation

- ☒ Add a domain controller to an existing domain
- ☐ Add a new domain to an existing forest
- ☐ Add a new forest

Specify the domain information for this operation

Domain:

Supply the credentials to perform this operation

nerds\administrator

[More about deployment configurations](#)

Settings

We select our existing server “server1.nerds.local”

Active Directory Domain Services Configuration Wizard

Additional Options

TARGET SERVER  
server2

Deployment Configuration

Domain Controller Options

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Specify Install From Media (IFM) Options

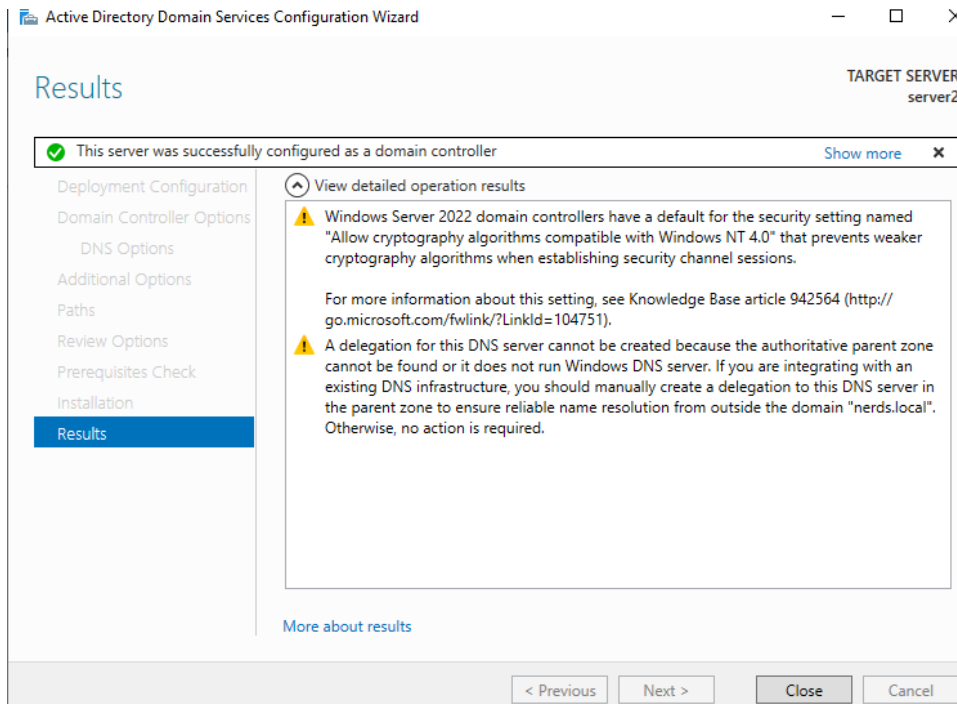
☐ Install from media

Specify additional replication options

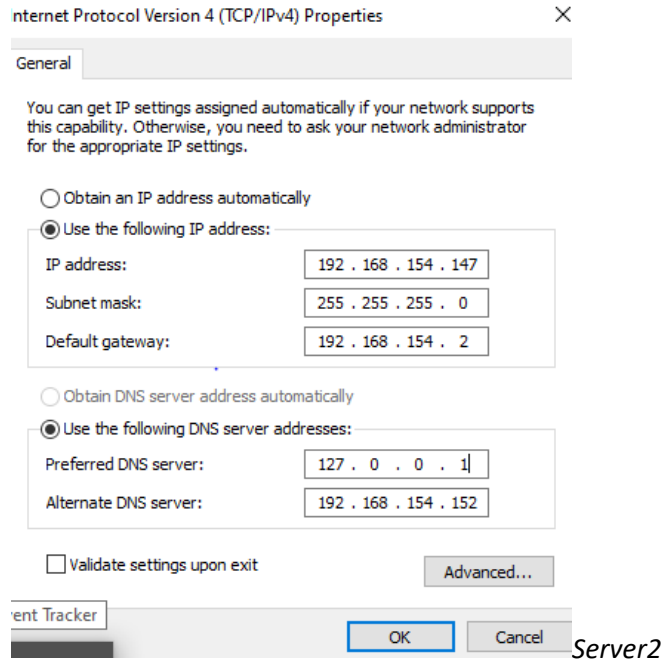
Replicate from:

[More about additional options](#)

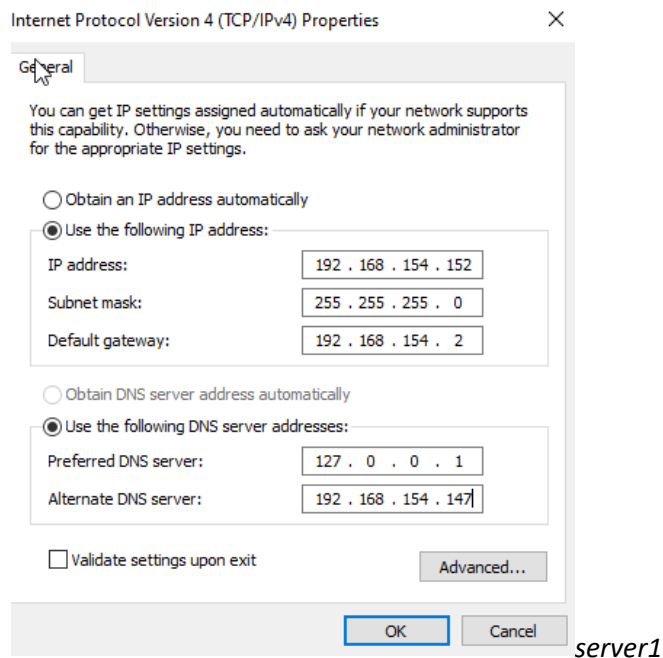
The install was a success, we close it down and restart the systems.



If we now take a look at the IP properties of server1 and 2, we have been given "127.0.0.1" which is an IP for localhost. This is recommended so we are using it. Using server 2, we are now setting the preferred dns server to "127.0.0.1" and set the alternative DNS server to the ip of server1. (bauldung, 2023)



We do the same from server1. Setting the preferred dns server to “127.0.0.1” and set the alternative DNS server to the ip of server2. The DNS server alternatives are now pointing to each other.



We test the connectivity on both servers and it were a success for both.

```

C:\Users\Administrator.NERDS>ping 192.168.154.152

Pinging 192.168.154.152 with 32 bytes of data:
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128
Reply from 192.168.154.152: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.152:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator.NERDS>ping nerds.local

Pinging nerds.local [192.168.154.147] with 32 bytes of data:
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.147:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator.NERDS>

```

Server2

```

C:\Users\Administrator>ping 192.168.154.147

Pinging 192.168.154.147 with 32 bytes of data:
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.154.147:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>ping nerds.local

Pinging nerds.local [192.168.154.147] with 32 bytes of data:
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time<1ms TTL=128
Reply from 192.168.154.147: bytes=32 time=1ms TTL=128

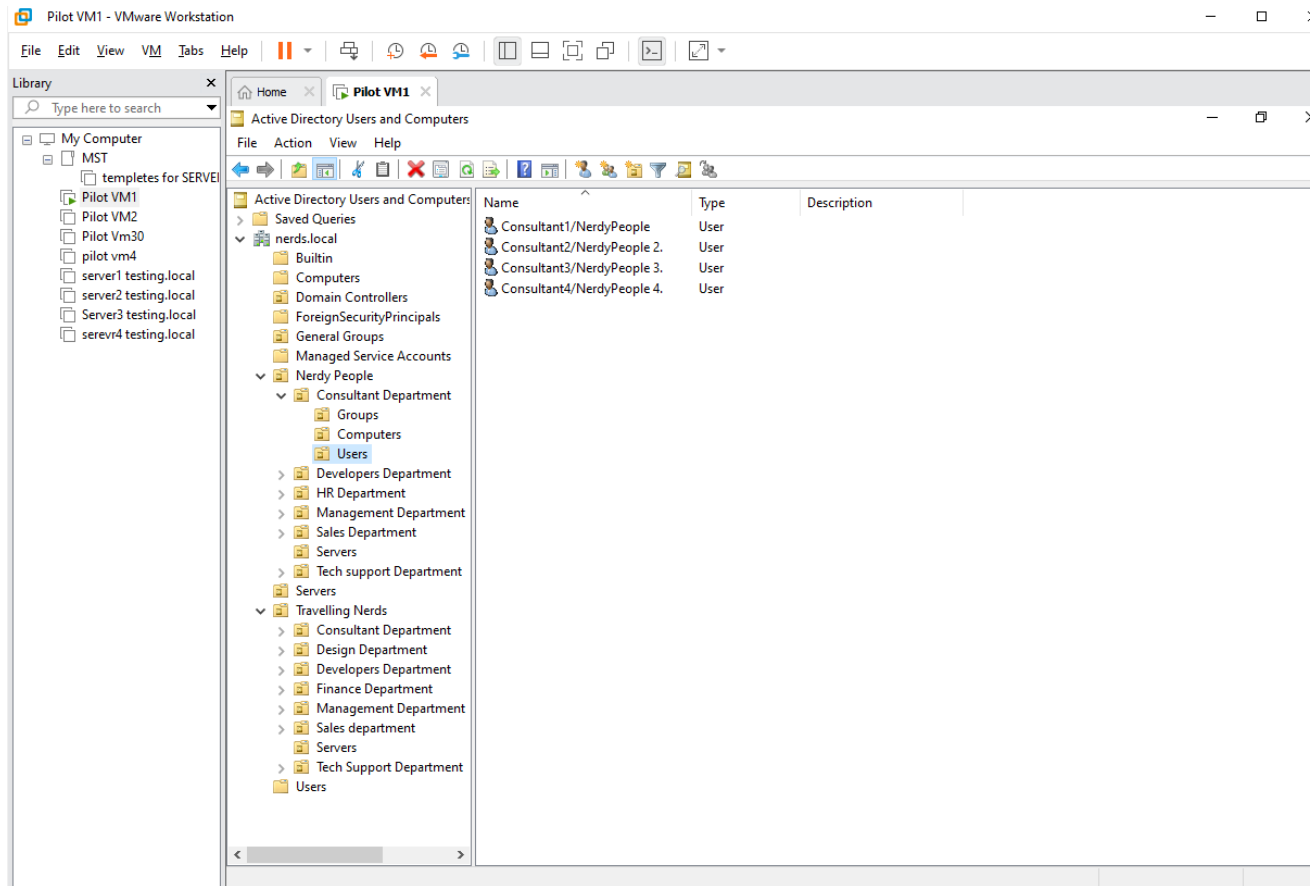
Ping statistics for 192.168.154.147:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>

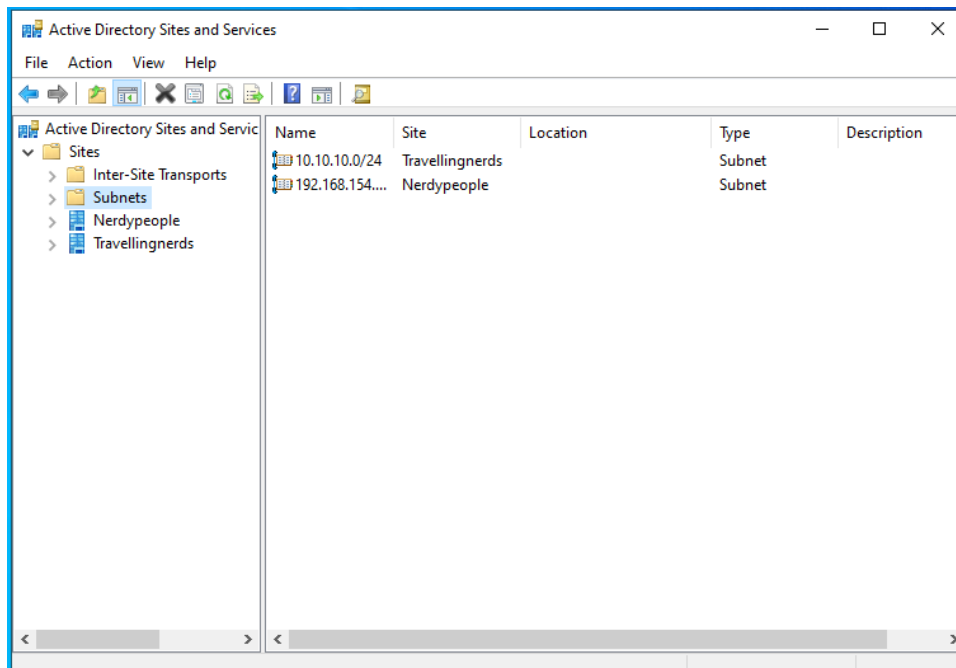
```

Server1

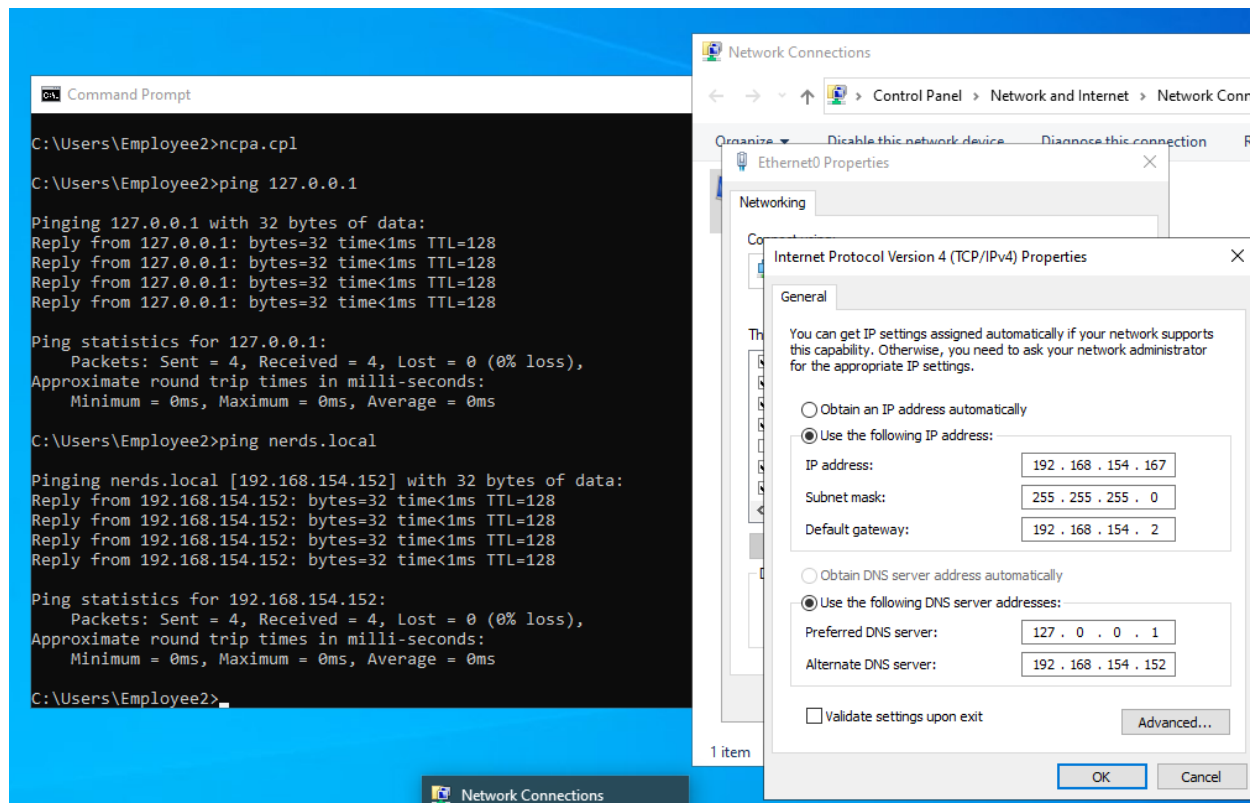
We are now organizing the different departments and their locations of Travelling nerds and Nerdy people using Organizational units. The stucture looks like this





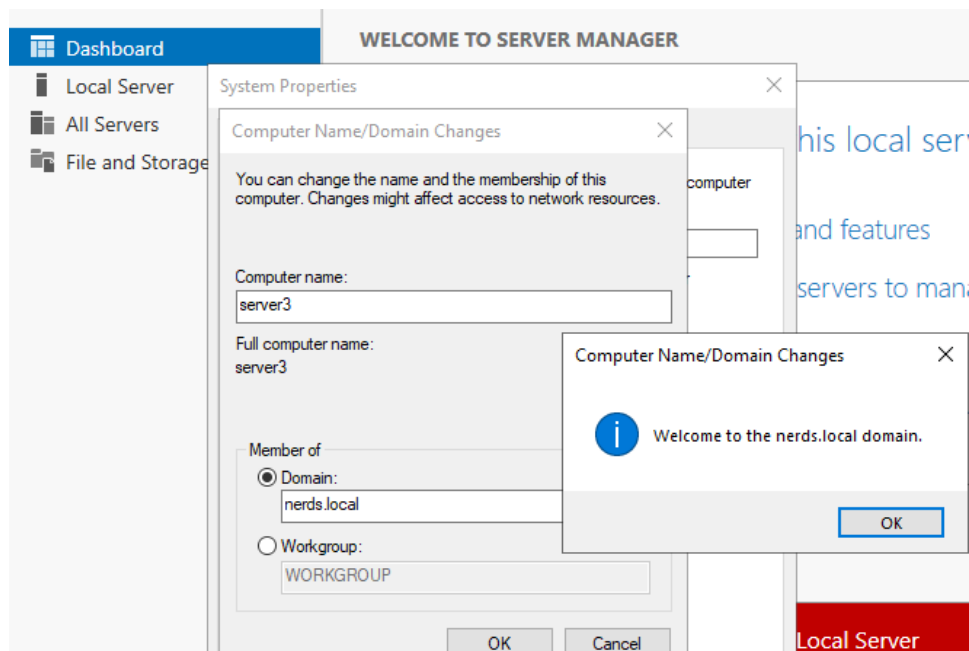


Now I am adding a Server3 to the domain as a member only server. I do that by configuring the DNS ips to the domain where server is hosted(server1). I have also set the alternative dns to the second domain controller(server2). I ping both server1 and domain nerds.local and they were successful.

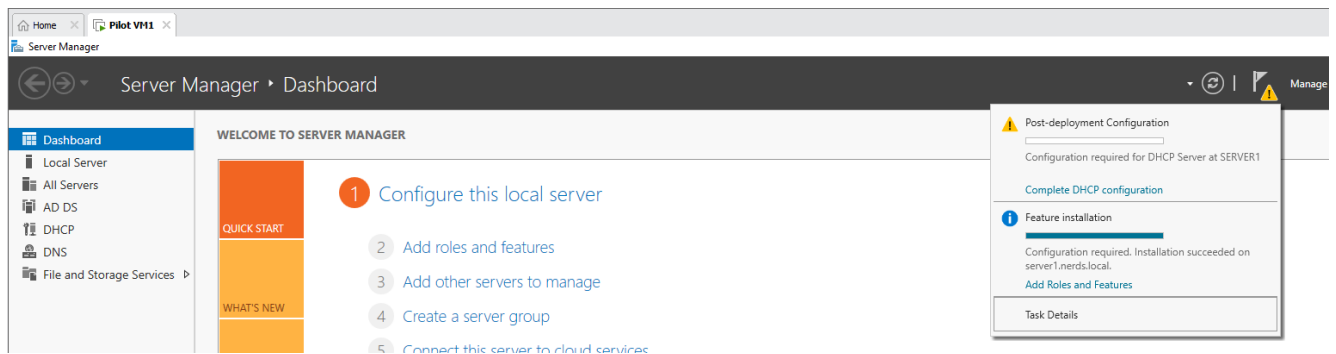
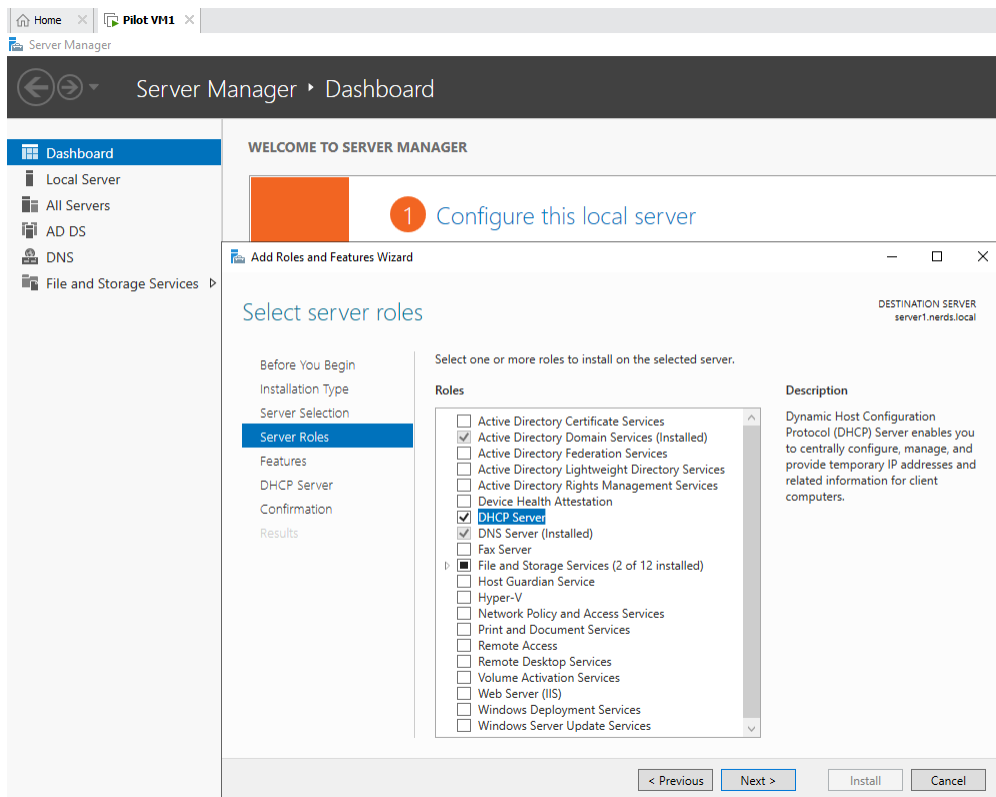


Server3

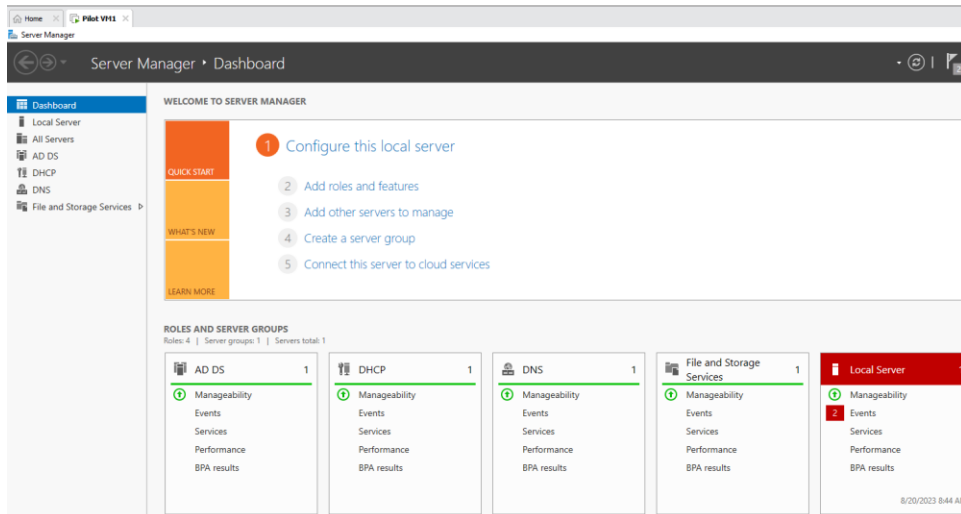
On server3, I enter setting – system – about – Rename this pc Advanced – click on “change” and set this pc as a member of domain “nerds.local”. Enter administrator login and click enter. It was a success and I was greeted into the nerds.local domain.



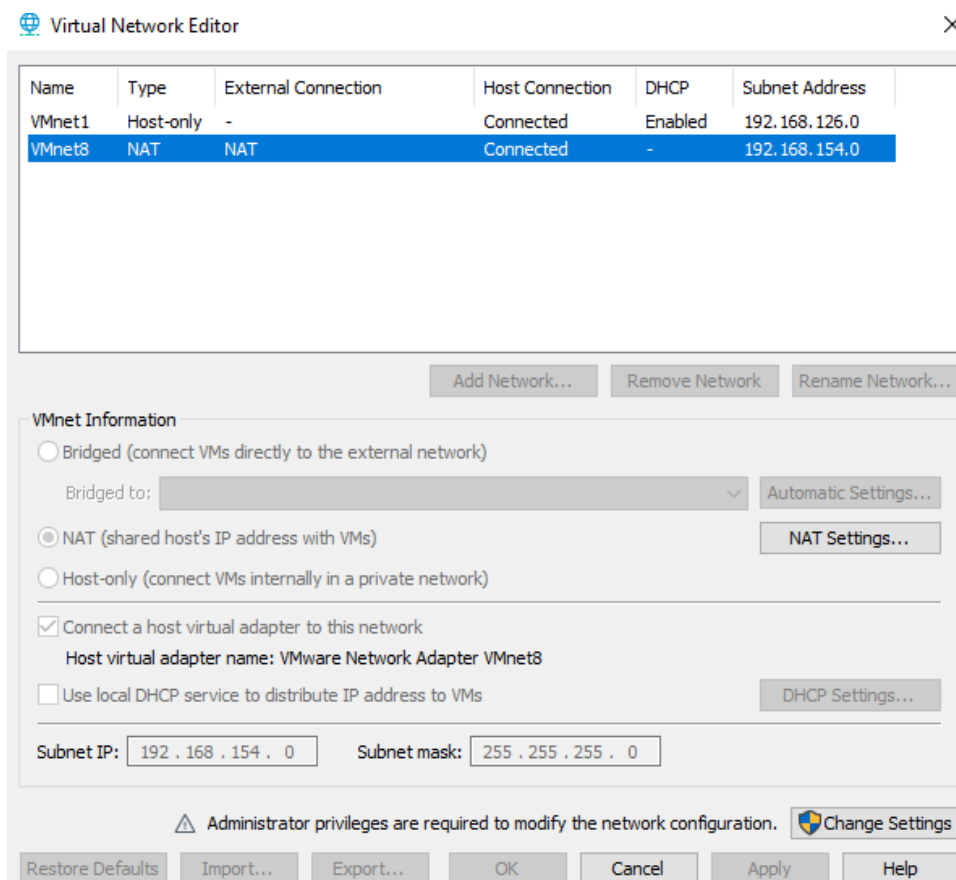
I am now installing the DHCP Server role in server1 to the domain. I add roles and features and install



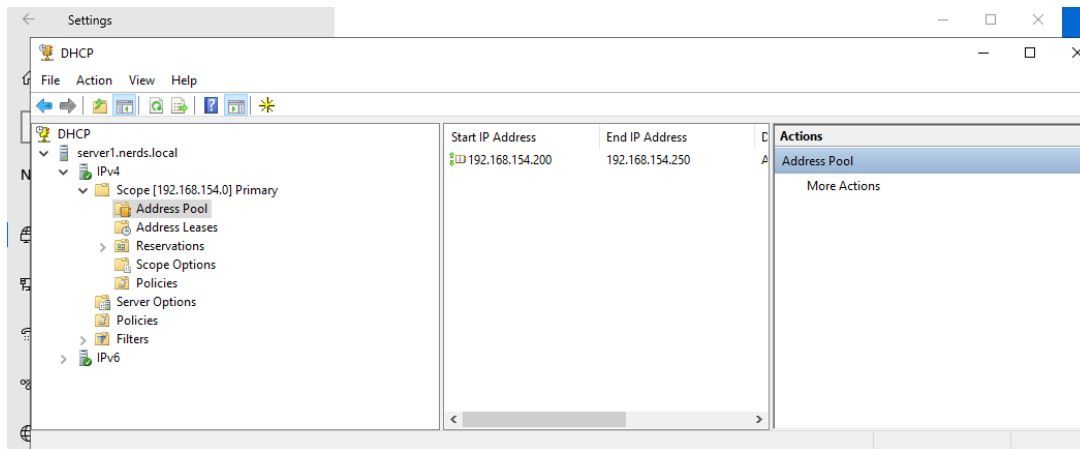
I have now installed DHCP



I click on edit inside VMware and open Virtual Network editor – change settings – Deselect “Use of local DHCP service”. Then click Apply.



I create a new Scope from “DHCP” with the ip address from “192.168.154.200” to “192.168.154.250”. Lets see if it works from a client server perspective (client)



It worked! I typed "ipconfig /flushdns", then "ipconfig /renew". I was given the ip "192.108.154.200" from the DHCP server. (client)

```
Administrator: Command Prompt

Ethernet adapter Ethernet0:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::323a:8d3a:b838:ebec%15
    Autoconfiguration IPv4 Address. . : 169.254.168.43
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

C:\Users\Administrator>ipconfig /renew

Windows IP Configuration

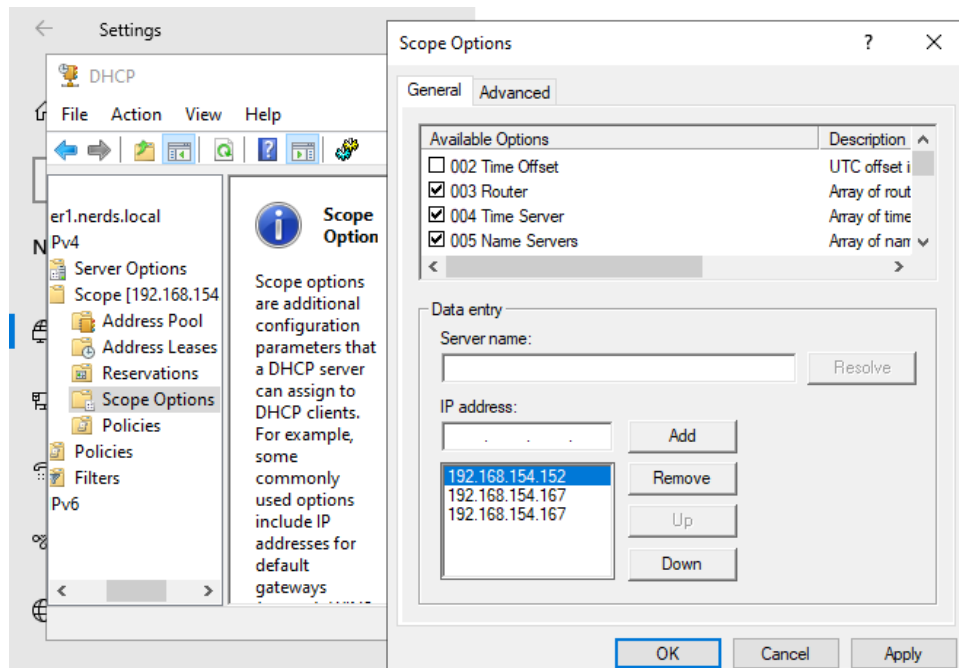
Ethernet adapter Ethernet0:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::323a:8d3a:b838:ebec%15
    IPv4 Address. . . . . : 192.168.154.200
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

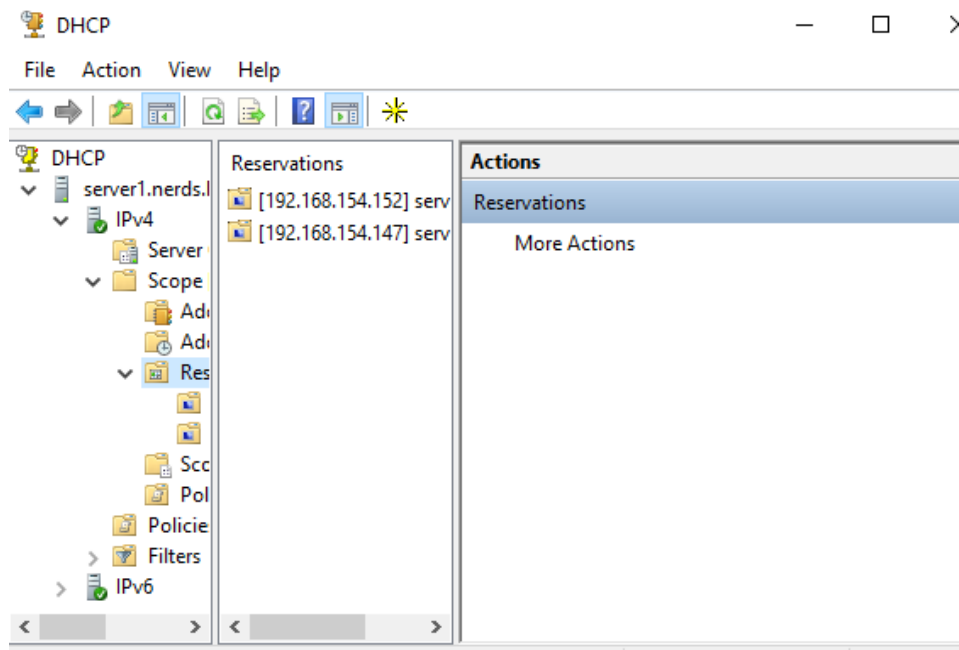
C:\Users\Administrator>
```

client

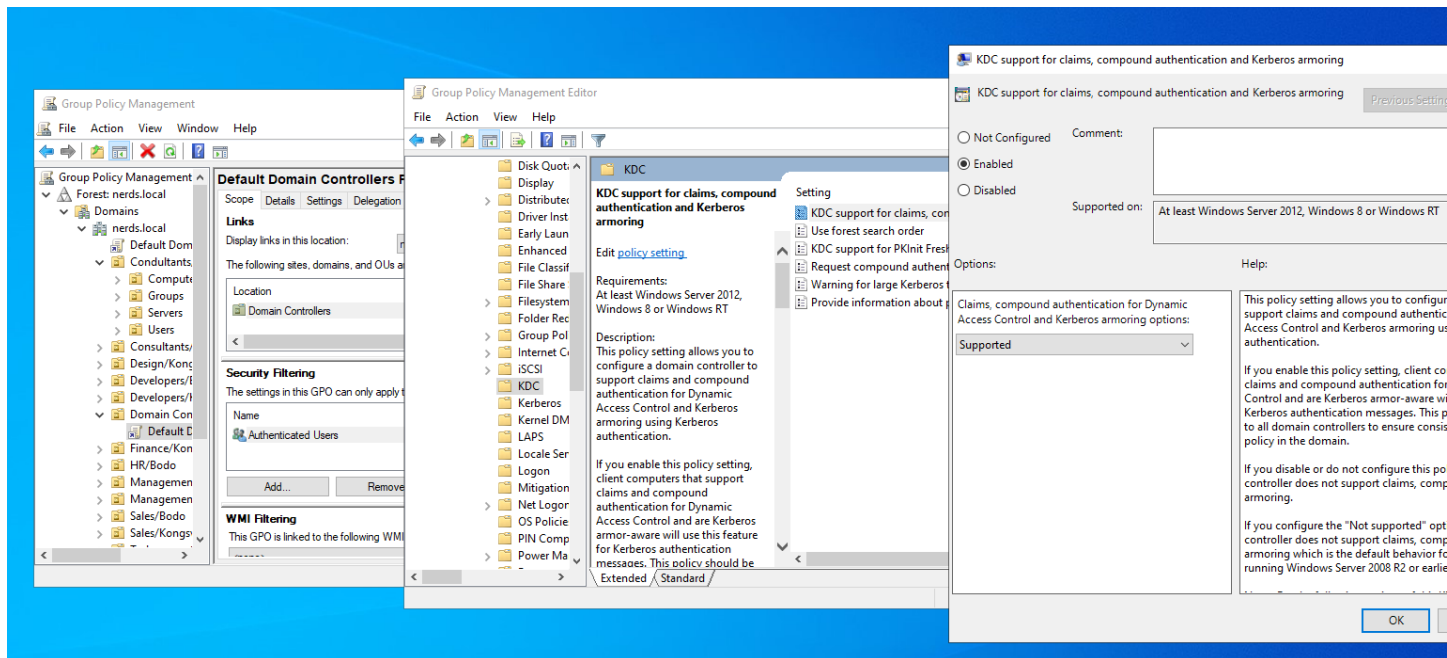
I did some further settings, I selected some options and added the IPs of server 1 and 2.



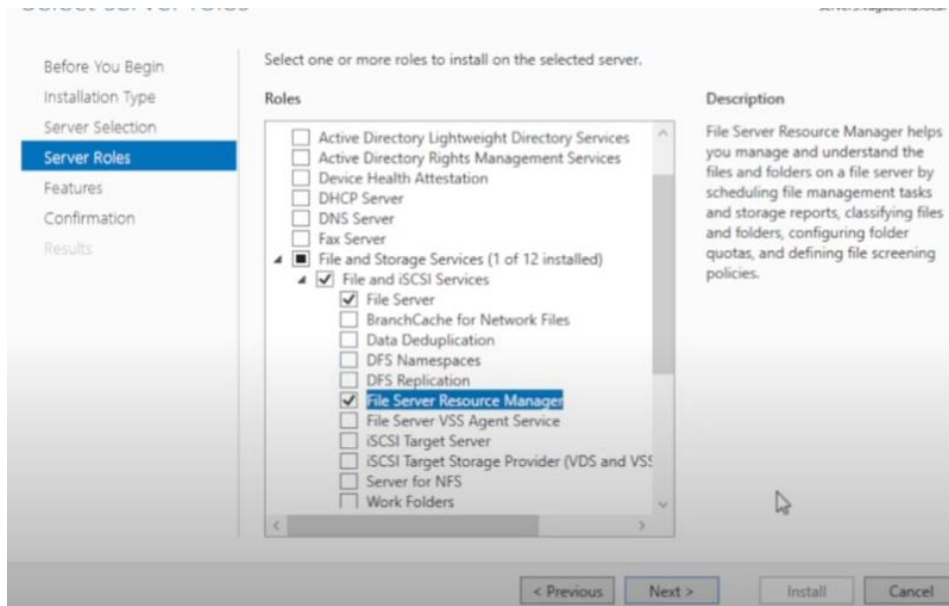
I did also reserve the IP addresses of server 1 and 2 as I do not want their ips mixed up in DHCP to cause potential errors.



Now to install dynamic access controll, before that we must enable “KDC Support” found in group policy editor shown below.



Install “File Server Resource Manager”



## Force update using “gpupdate /force”

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

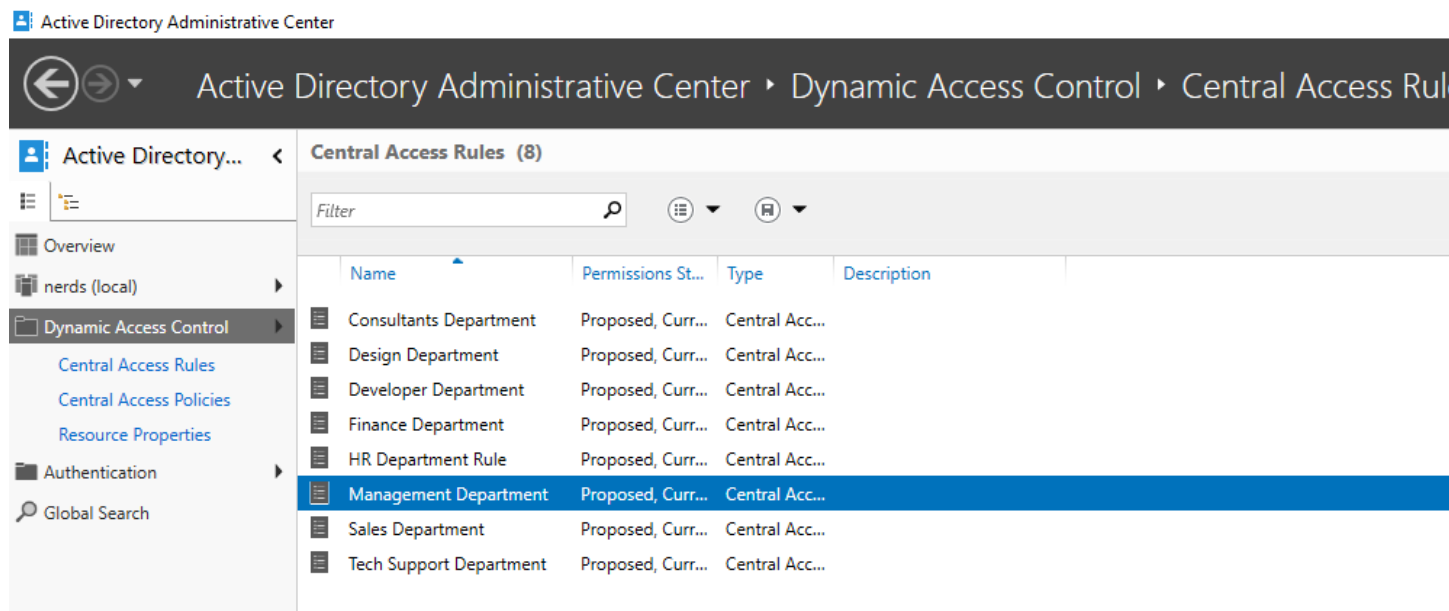
PS C:\Users\Administrator> cpupdate /force
cpupdate : The term 'cpupdate' is not recognized as the name of a cmdlet, function, script file, or operable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ ~~~~~
+ cpupdate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

PS C:\Users\Administrator> gpupdate /force
Updating policy...

Computer Policy update has completed successfully.
User Policy update has completed successfully.

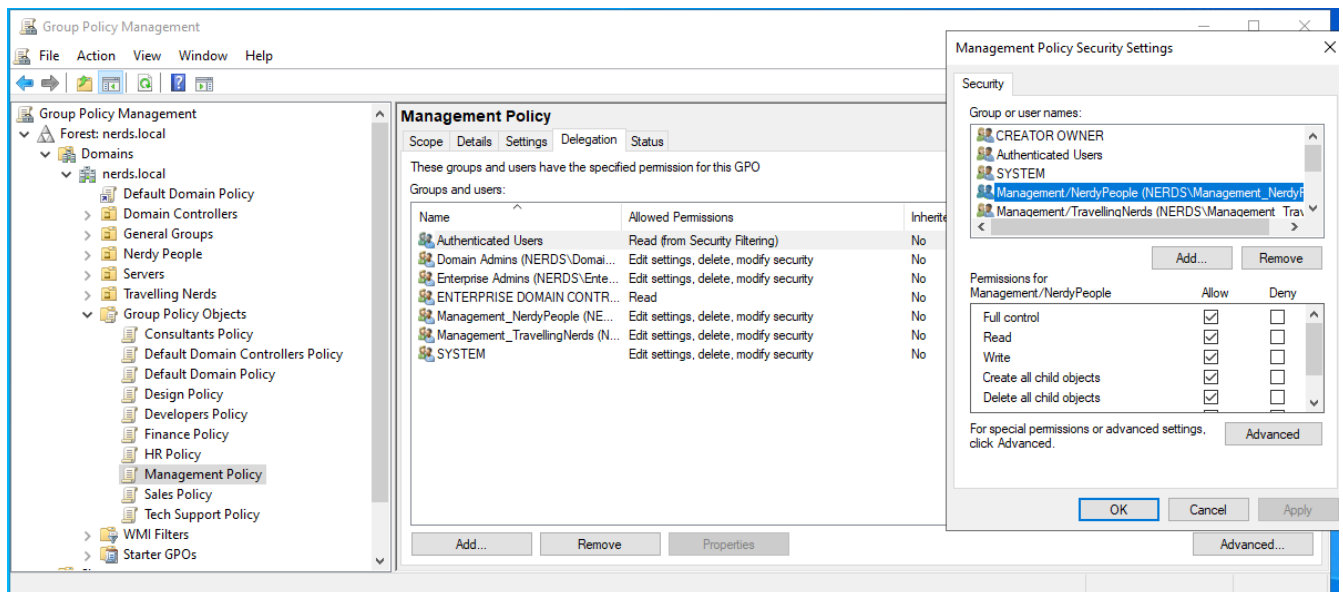
PS C:\Users\Administrator>
```

I now enter DAC and create departments for both Travelling Nerds and Nerdy people within Central access rules and policies. From DAC I have grouped the departments from both companies in their own shared departments. I configured appropriate permissions for the following departments within the companies.

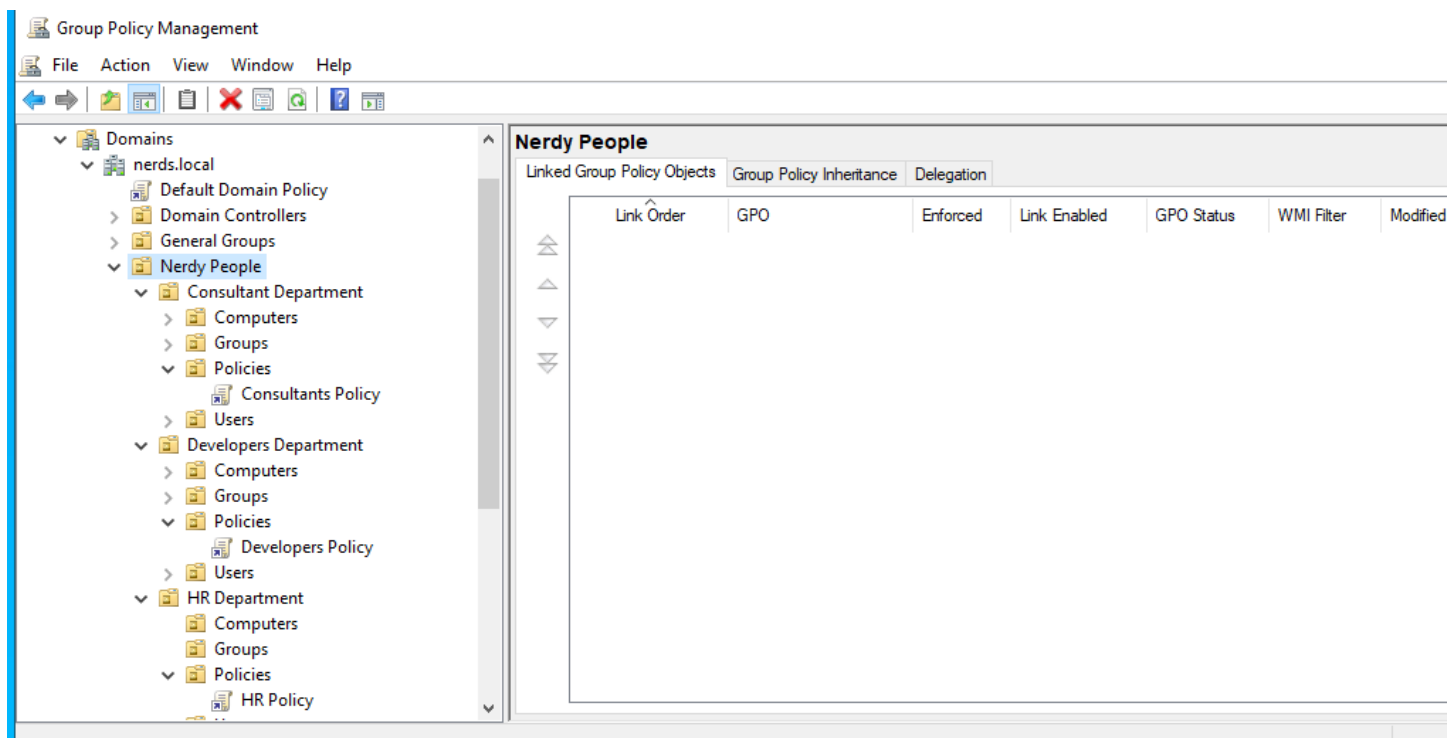


To create Group policies, I right click “Group policy Objects”, register names for all departments and add the users and groups to the policies where they belong like the one listed below. I also set the proper permissions for the departments through Delegation. For example, departments like “Management” should have more powerful permissions than those in “Sales” department.

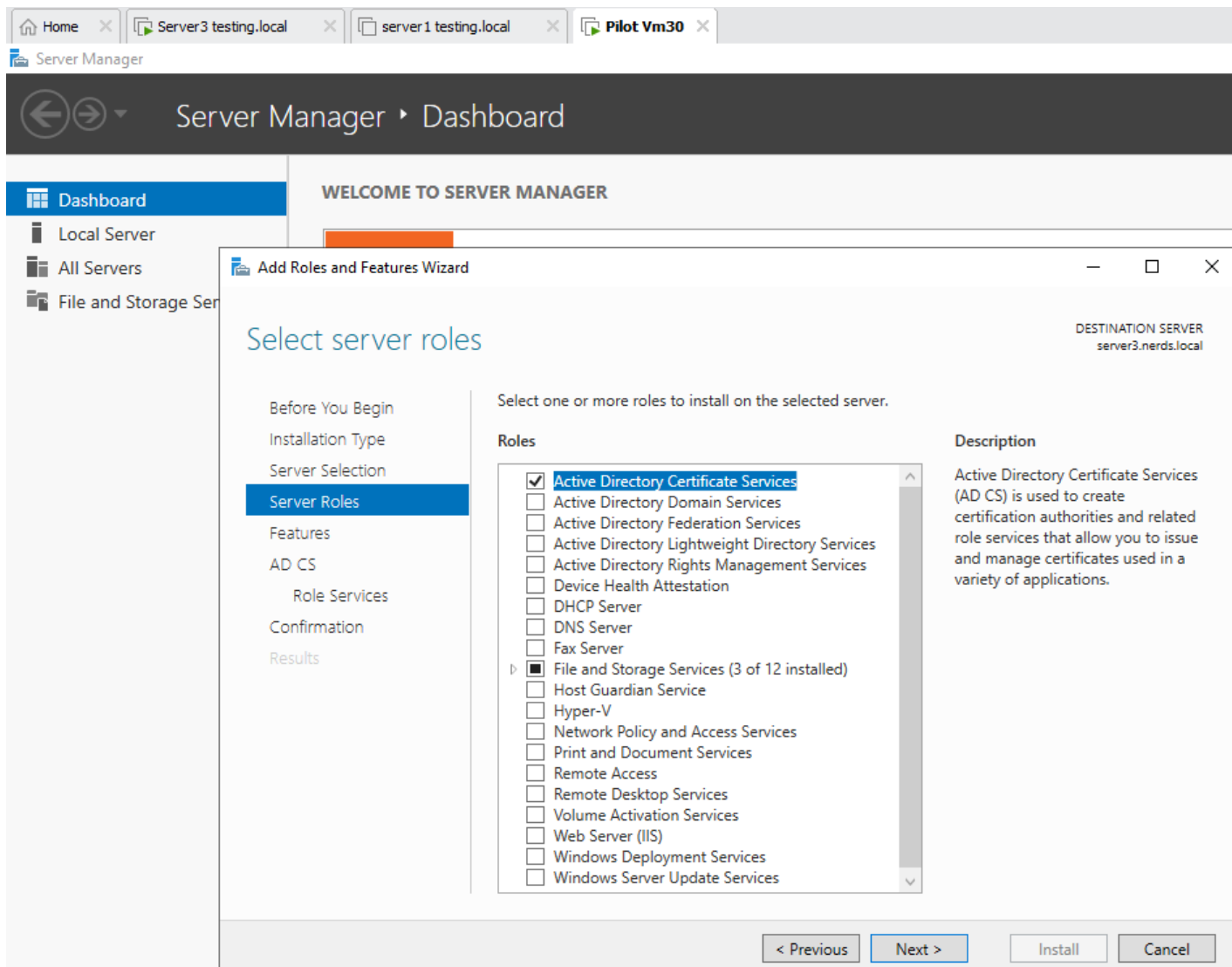




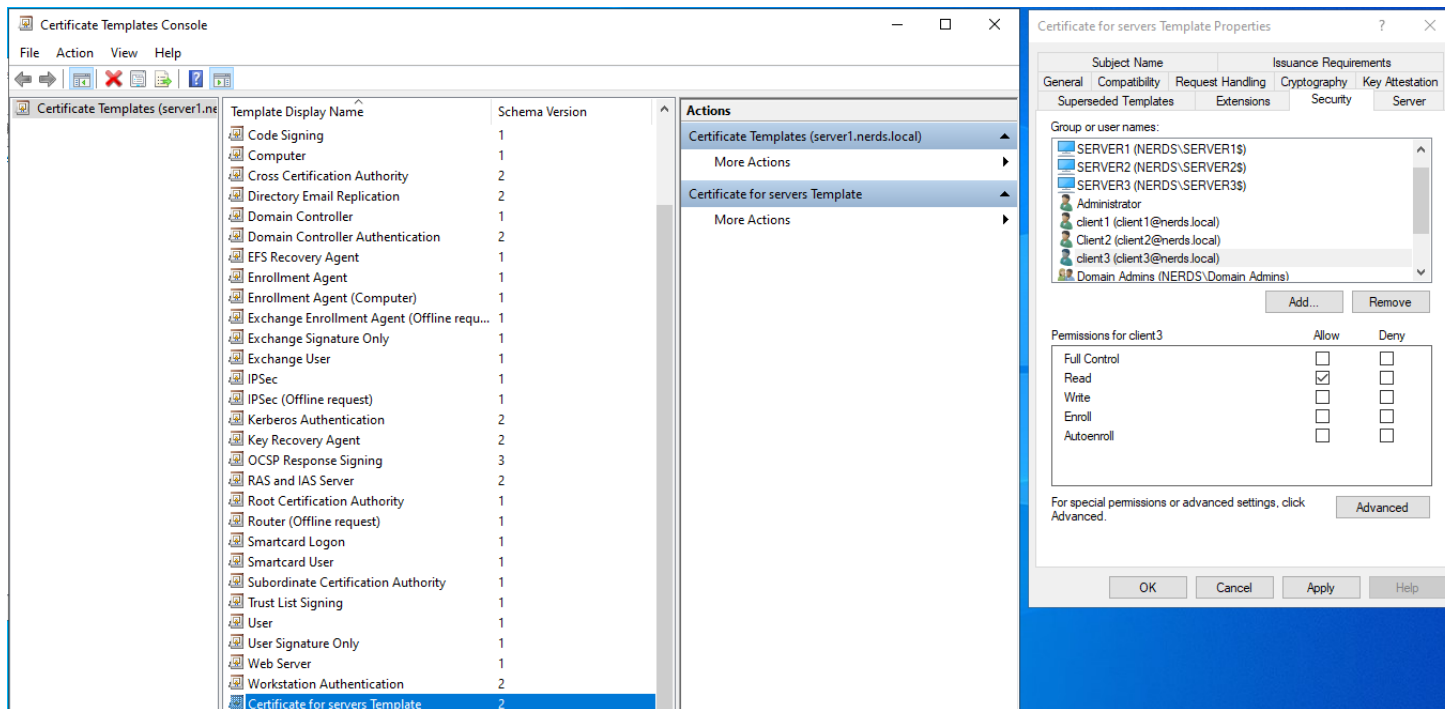
I now link the group policies to its proper location. Each department policy to its matching department organizational unit.



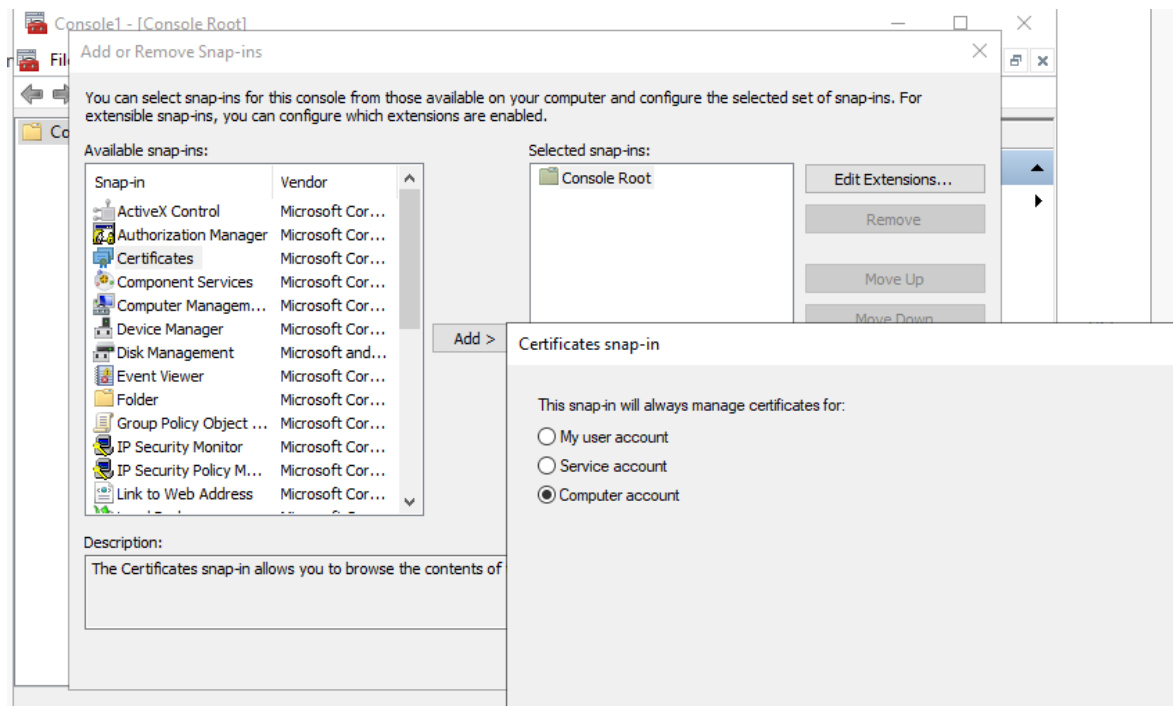
Now I go on to install “Active Directory Certificate Services” by adding a role on server3



Once the Certificate is installed and available, we open it up and create a certificate template, and add the 3 servers and the clients.

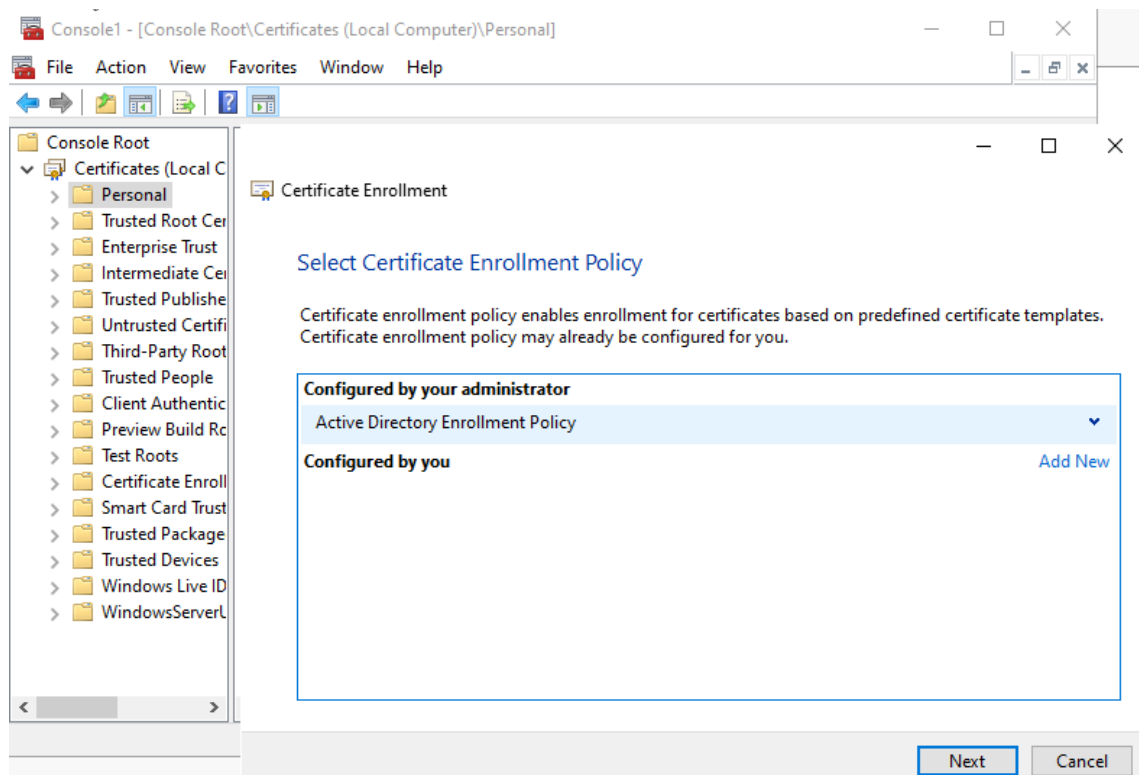


I continue to add “Console Root” snap in for “Computer account” certificate

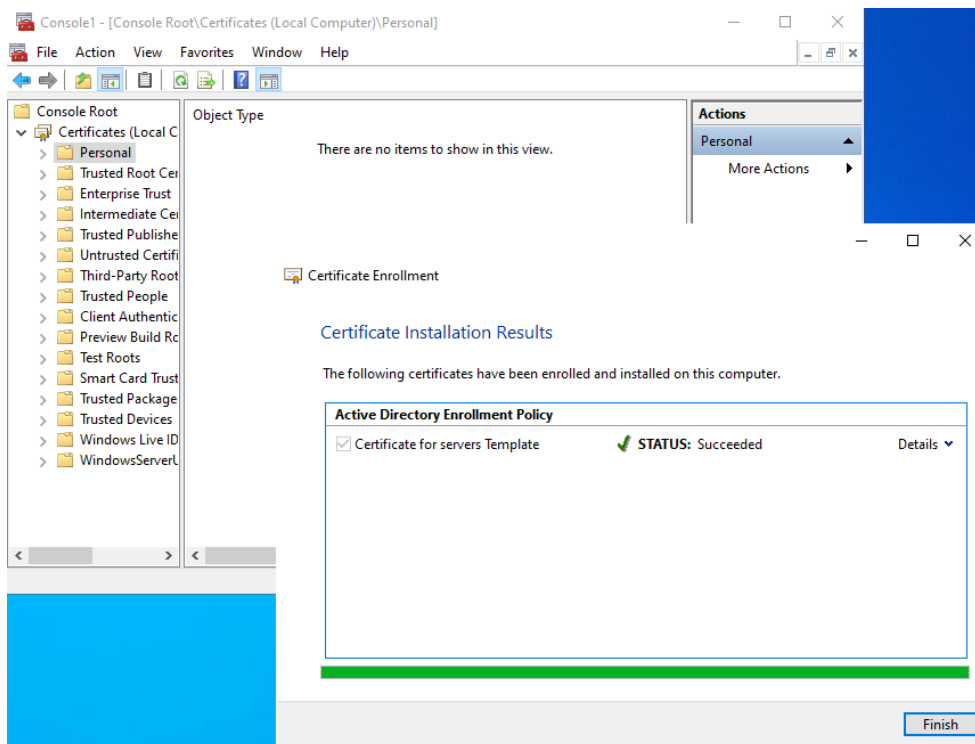


Client

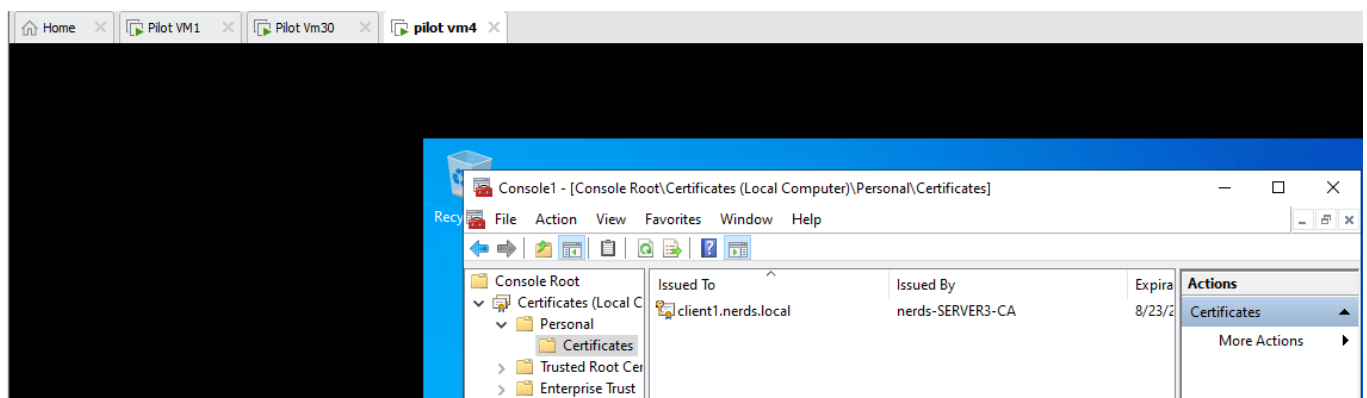
I now go inside the “Personal” folder and select certificate under “Active Directory Enrollment Policy”



I finish the installation successfully.



I now have my new certificate ready inside my “Personal” folder

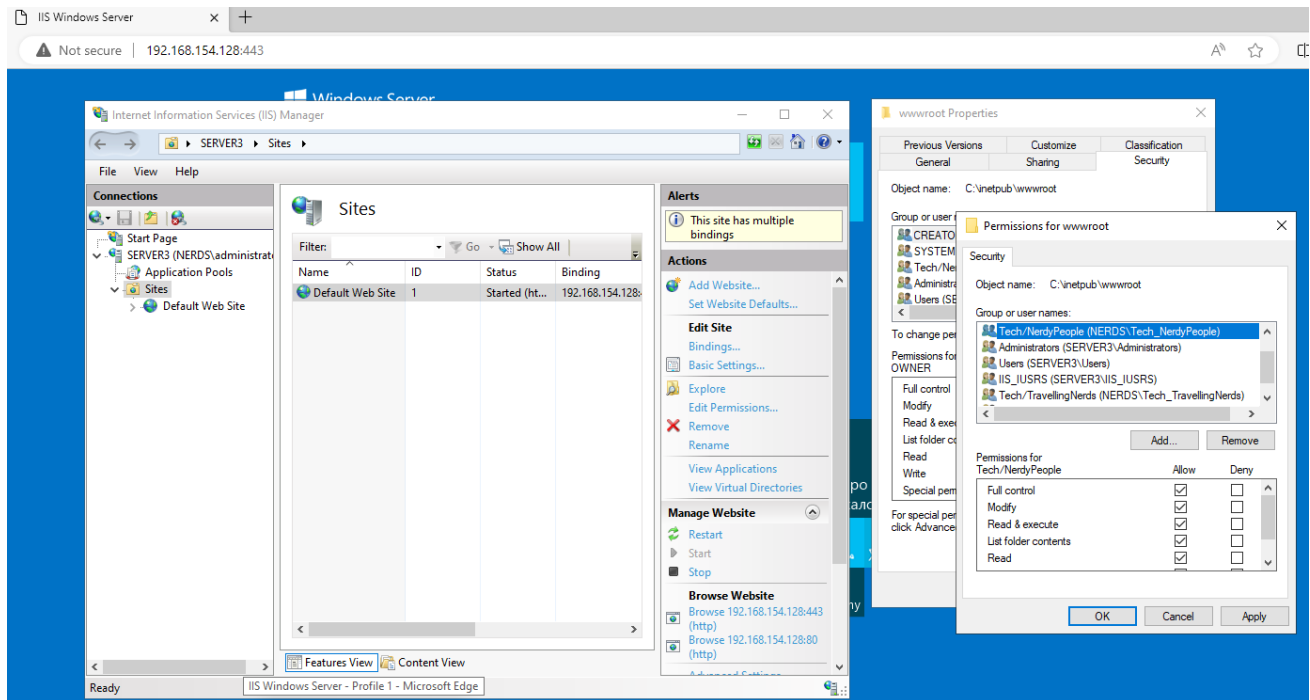


***At this point I must inform the teachers that I accidentally deleted server3, and had to reinstall the whole server along with all its roles and connect it to the domain. Server 1 and 2 did not take damage from this, I simply connected the new server3 to the domain with the other servers. In the process, server 3 was given a NEW ip address which is “192.168.154.128”. Just needed to clear this up incase of future confusion.***

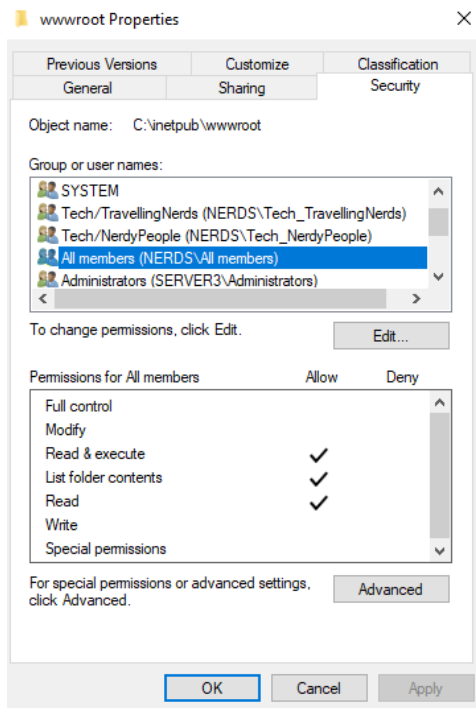
***NEW IP from here***

Server3	192.168.154.128
---------	-----------------

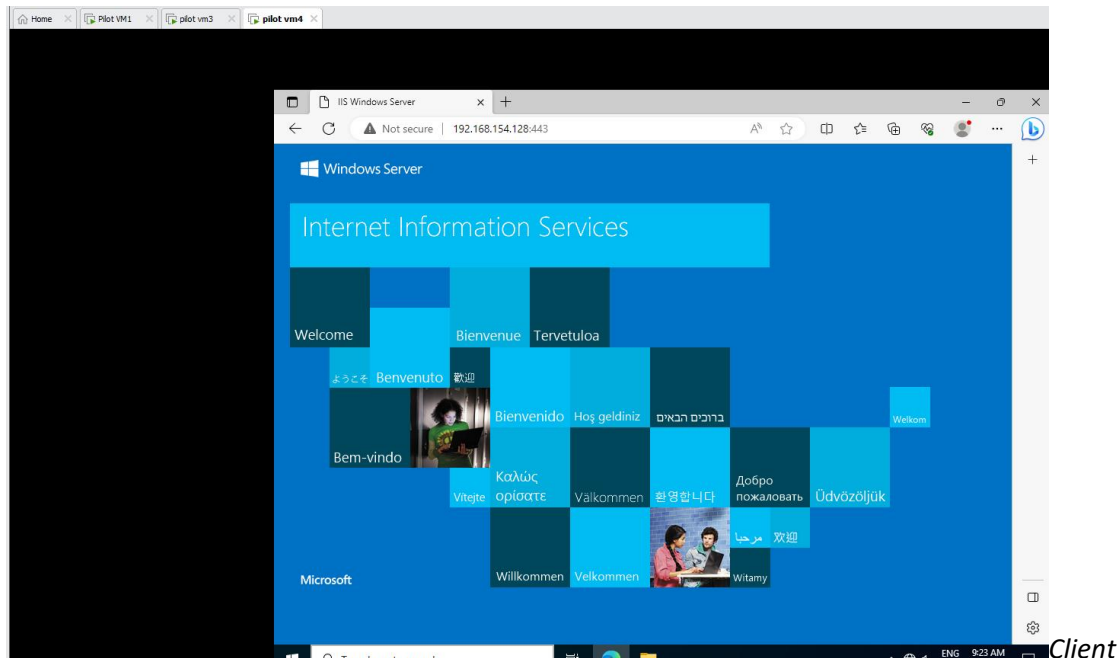
According to the requirements, I have added the “Techical Support” departments from both Kongsvinger and Bodø and given them the proper permissions as they will be the ones managing the site.



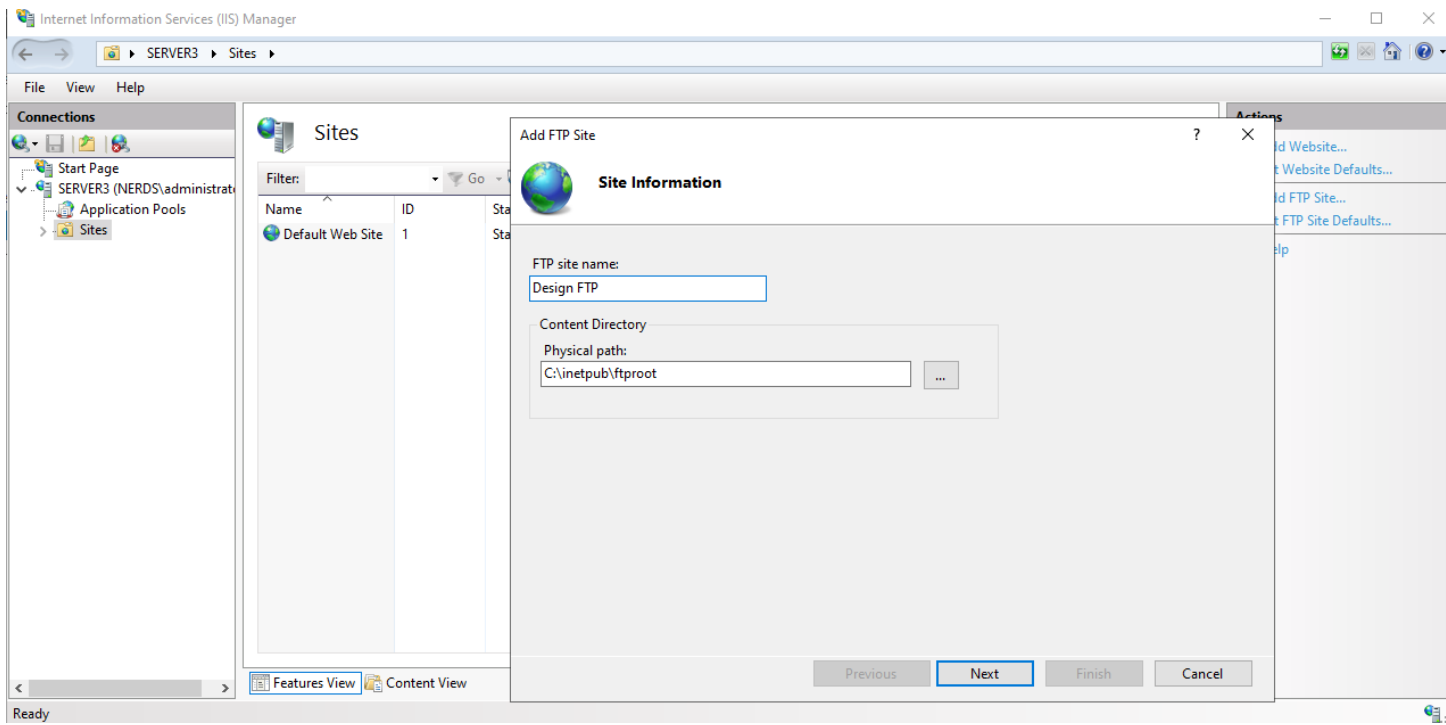
I then give the rest of the users only the permission to read the site, let's see if a regular user can read the site from a client perspective



From the perspective of any user on the domain, I log in from developer1 from Nerdy People in the client server and access the IIS website and I was granted read access to the site.



I go on to add a FTP server for the Design Department to manage. I installed the FTP role and added a FTP site





**Binding and SSL Settings**

**Binding**

IP Address:  Port:

☐ Enable Virtual Host Names:  
Virtual Host (example: ftp.contoso.com):

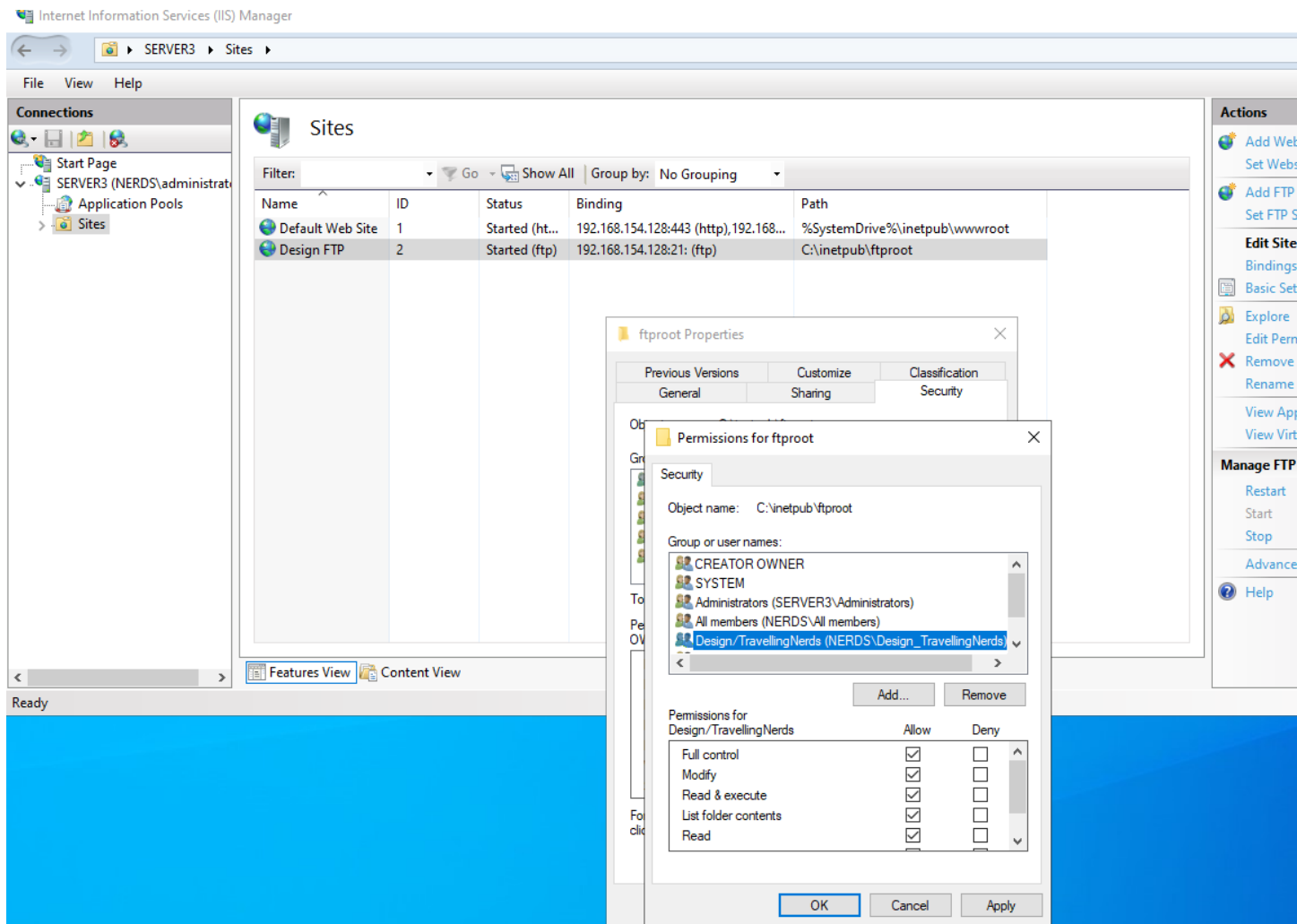
☒ Start FTP site automatically

**SSL**

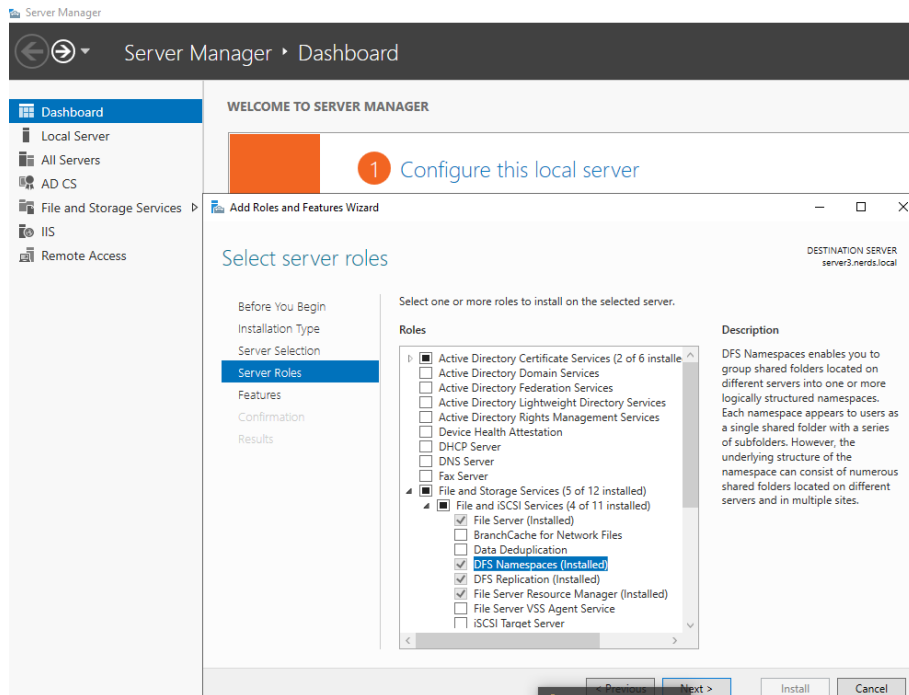
☐ No SSL  
☐ Allow SSL  
☒ Require SSL

SSL Certificate:

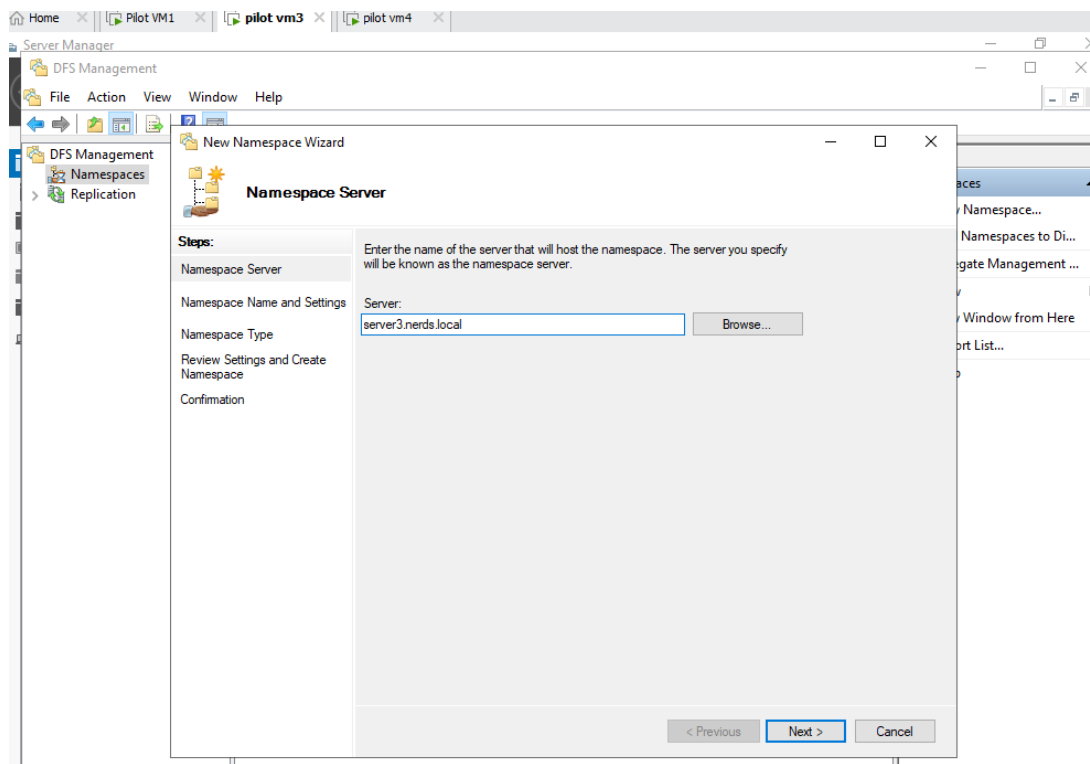
I set the proper permissions for Design Department members, and let the rest only have the basic read permissions.



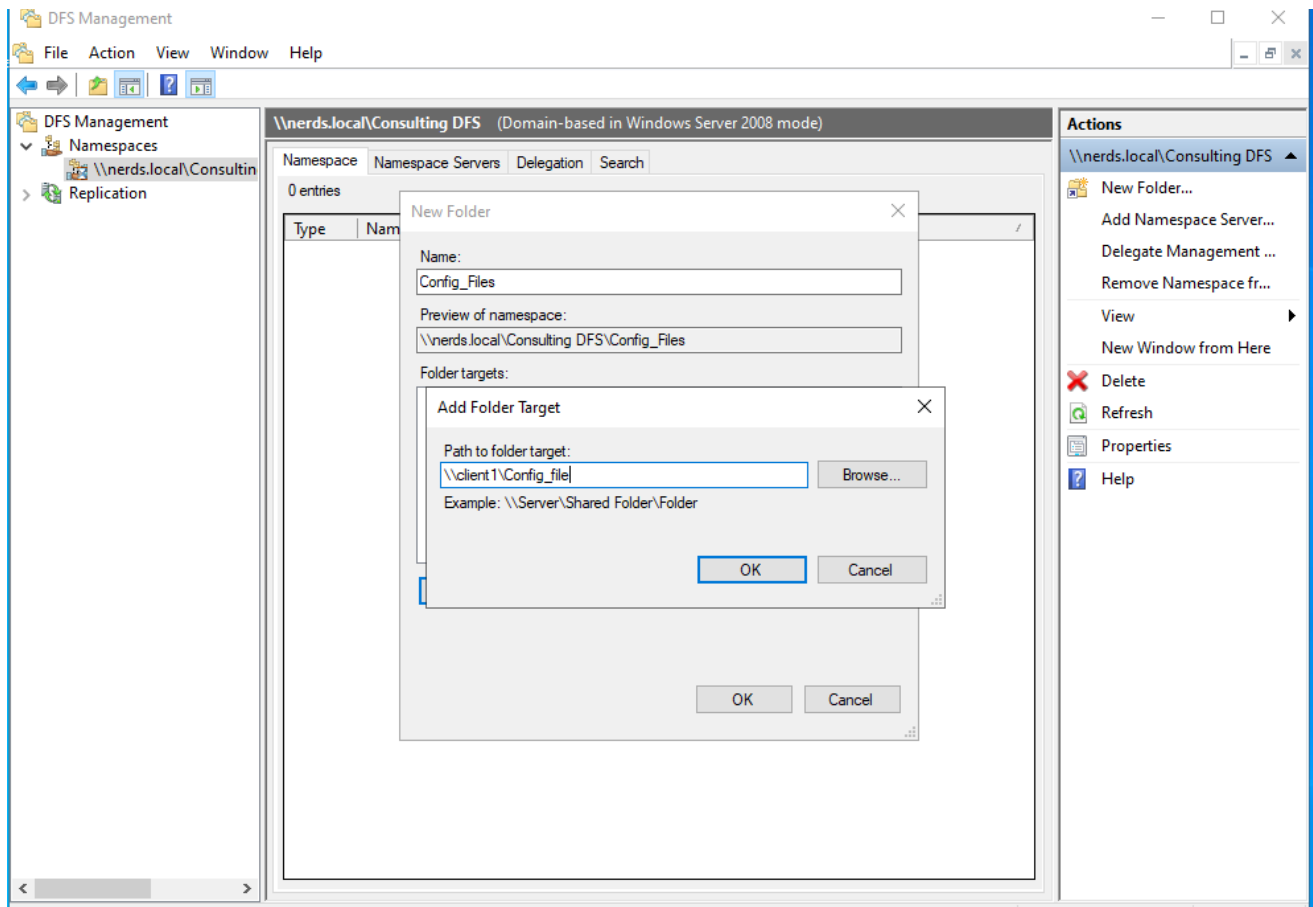
I now go on to add DFS Management through adding roles in Server Manager



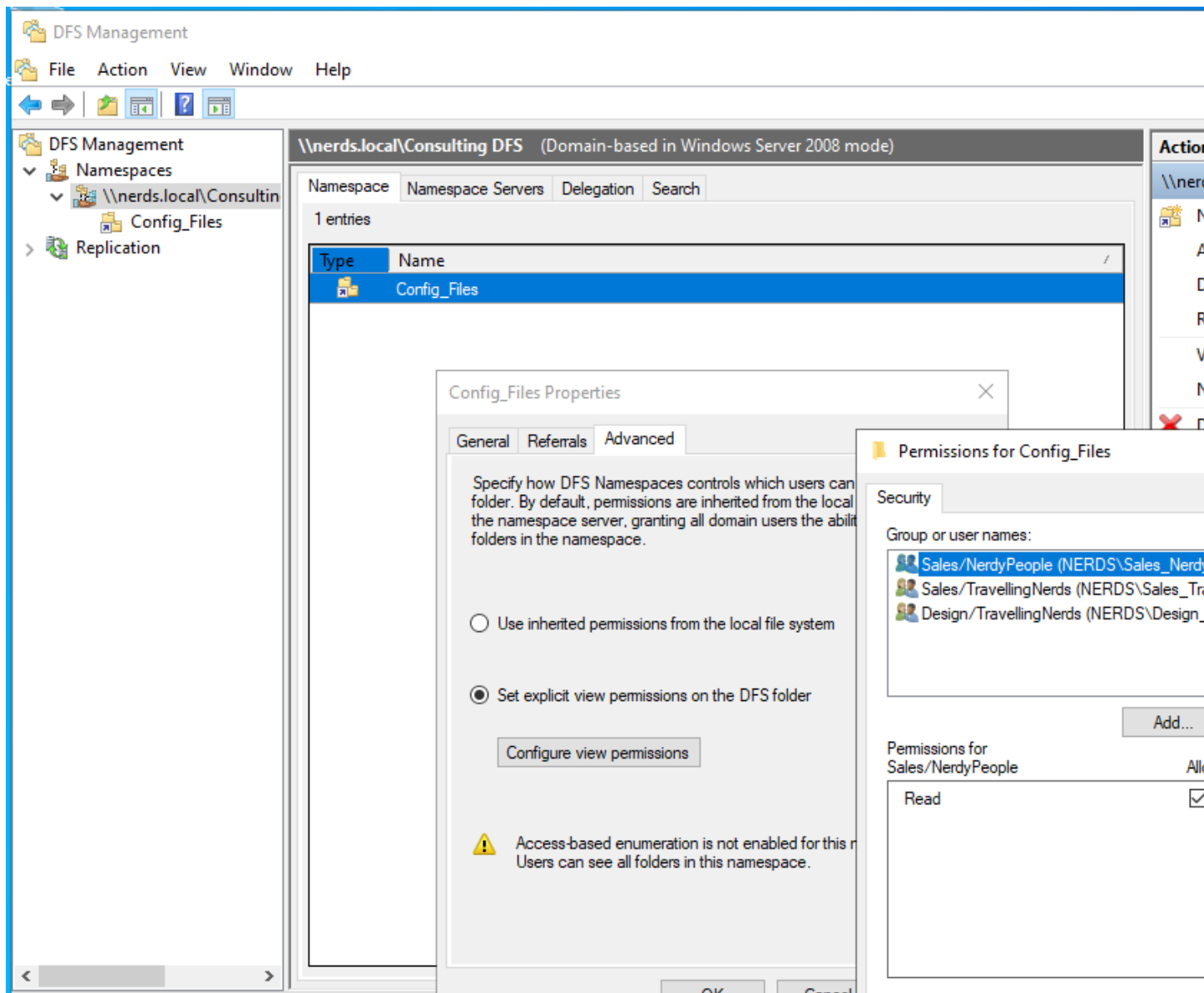
I created a Namespace server called “Consulting DFS” under server3



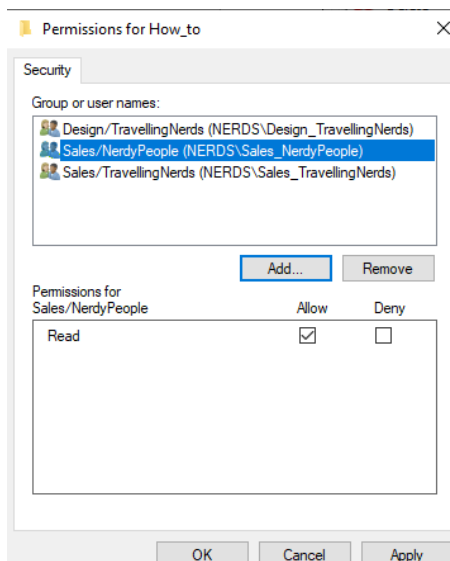
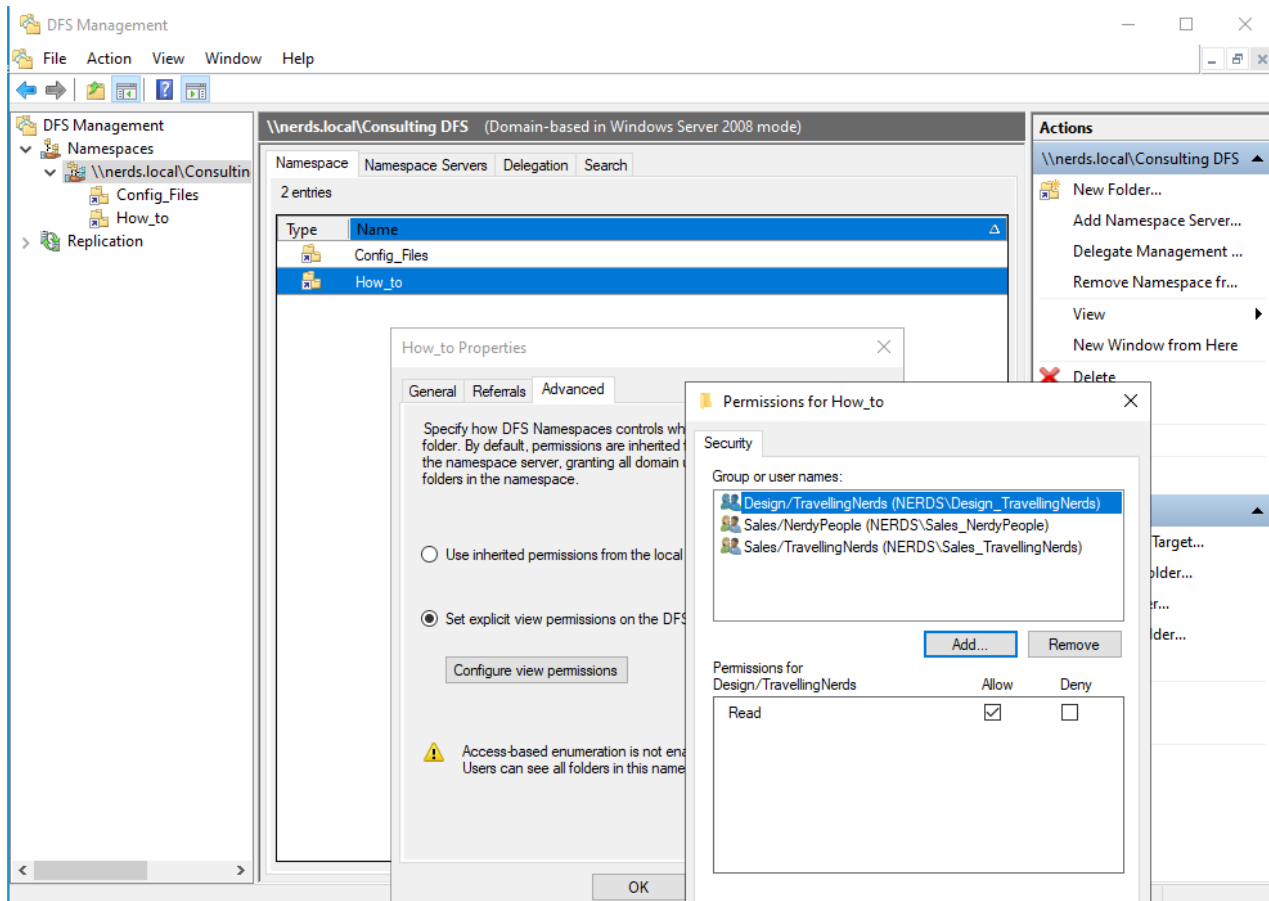
I created a new file for configuration files and called it "Config\_files".



I set the permissions for Sales departments groups to read the file and for the Design department group to read and write.



I created another file to contain How to instructions to be available for both Design department groups and Sales department groups. I set the permissions for both groups to allow “Read” function.



Through Delegation I set both consulting departments groups to have full control of all contents within the DFS systems.

DFS Management

File Action View Window Help

DFS Management

Namespaces

\\nerds.local\Consultin

Config\_Files

How\_to

Replication

\\nerds.local\Consulting DFS (Domain-based in Windows Server 2008 mode)

Namespace

Namespace Servers

Delegation

Search

5 entries

User or Group	How Permission Is Granted
NERDS\Consultants_NerdyPeople	Explicit
NERDS\Consultants_TravellingNerds	Explicit
NERDS\Domain Admins	Explicit
NERDS\Enterprise Admins	Inherited
NT AUTHORITY\SYSTEM	Explicit

Actions

\\nerds.local\Con

New Folder...

Add Namesp

Delegate Mar

Remove Nam

View

New Window

Delete

Refresh

Properties

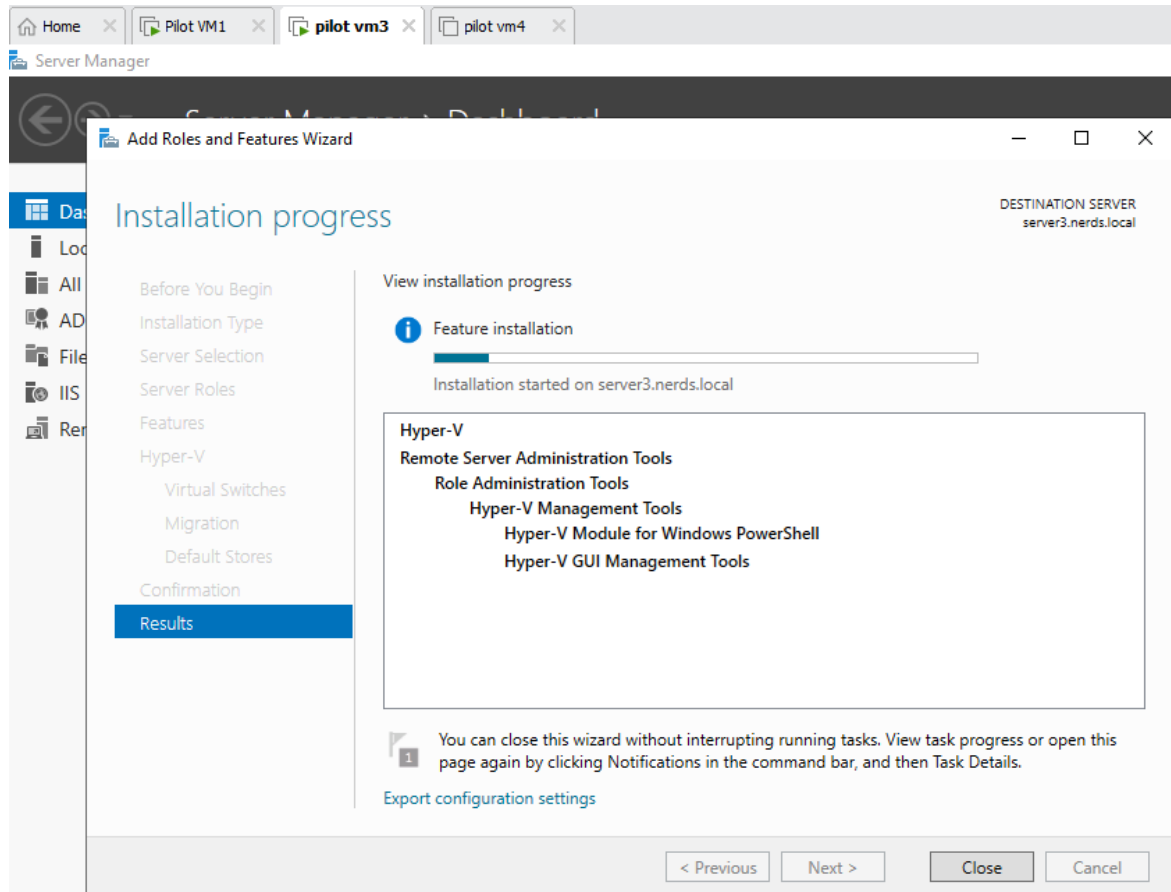
Help

NERDS\Consultar

Remove...

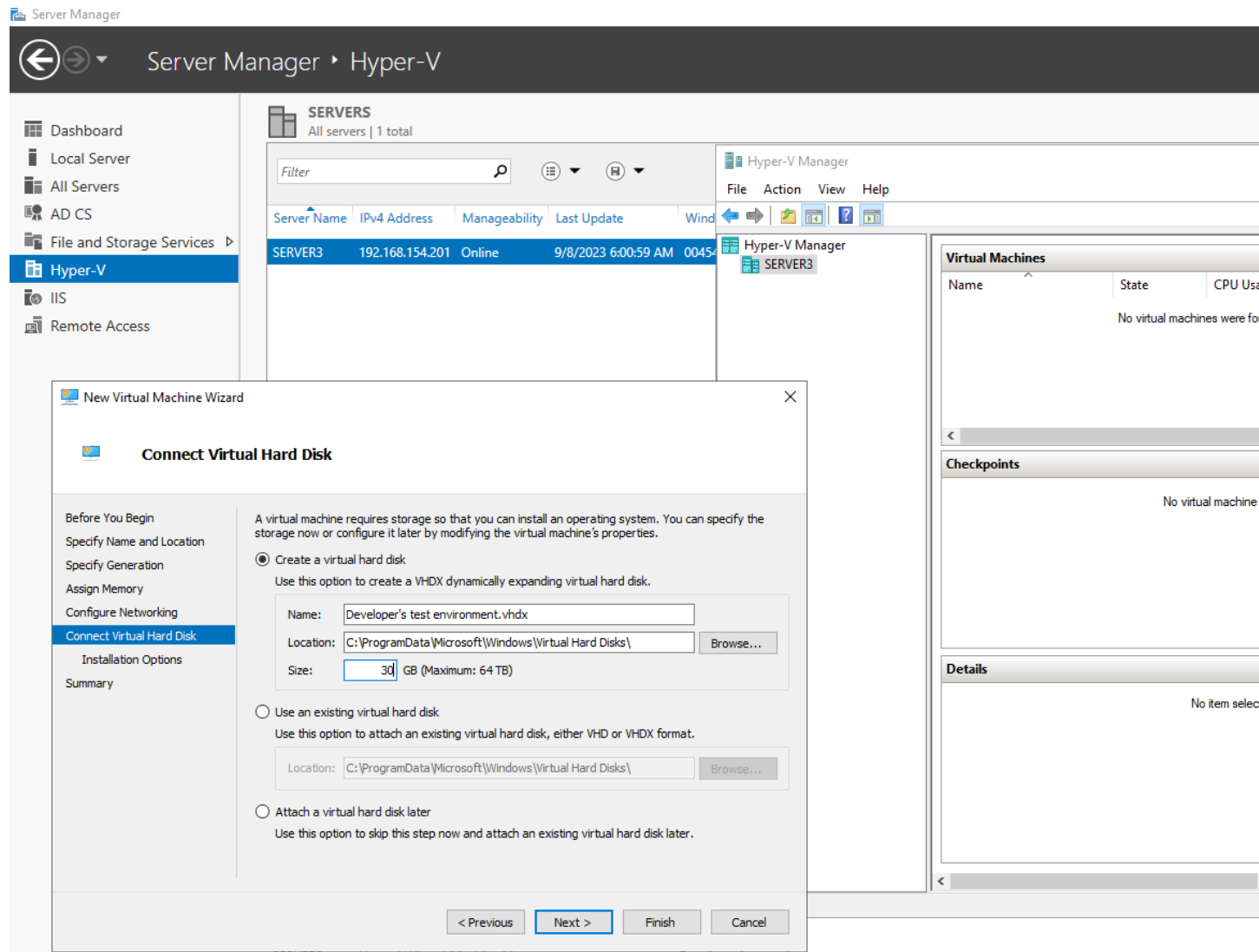
Help

I am now about to create a test environment for Developers to test their applications before distribution. I plan to do this through Hyper-V nested virtualization in an already existing vm. I first activate the ability to virtualize hyper v within VMware for server3. I then install the “Hyper-V” role in server3. (Bose, 2021)



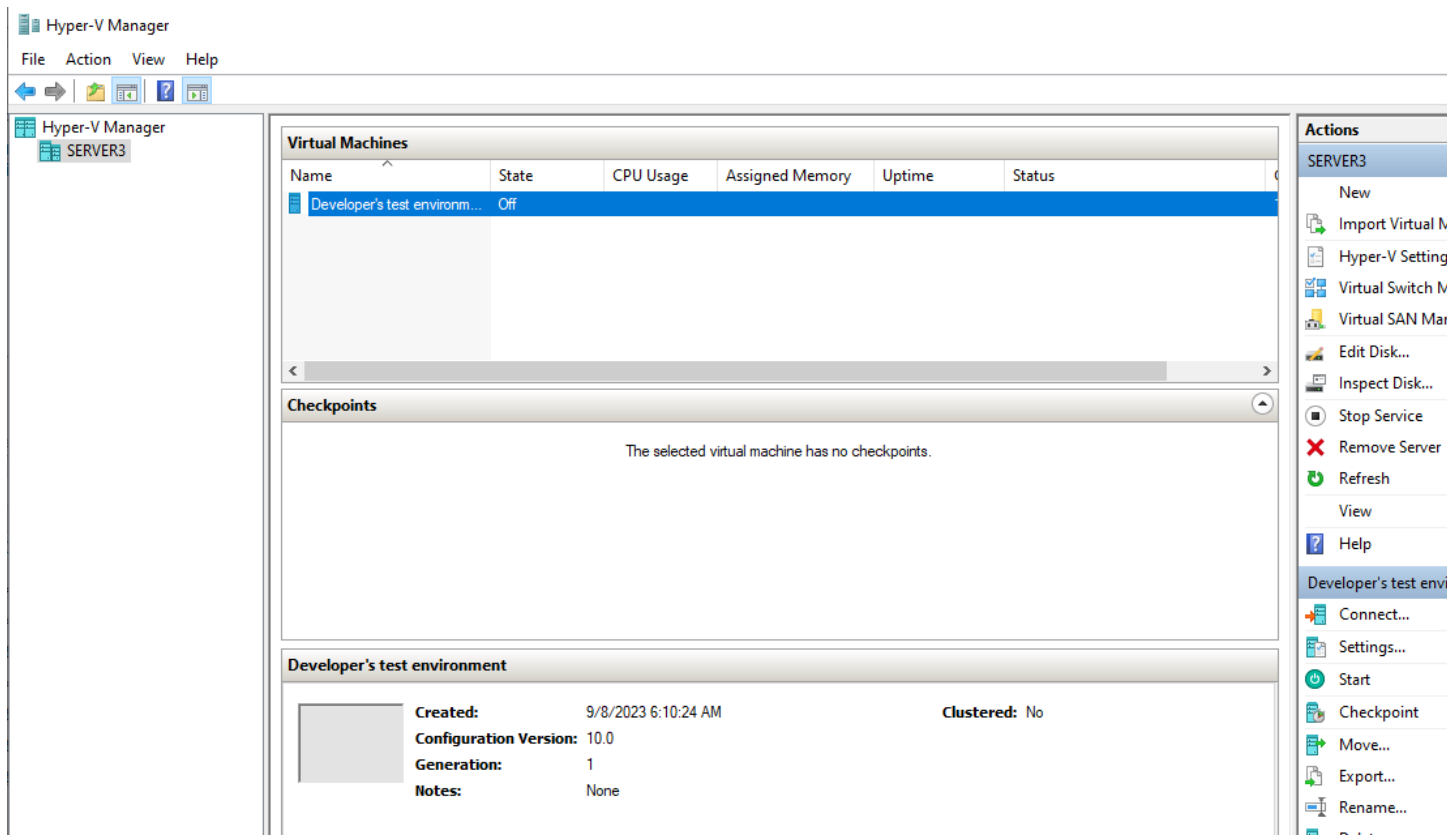
After a restart of the server, I open Hyper V role within server manager, open “Hyper-V Manager” and create a new Virtual Machine called “Developer’s test environment”.



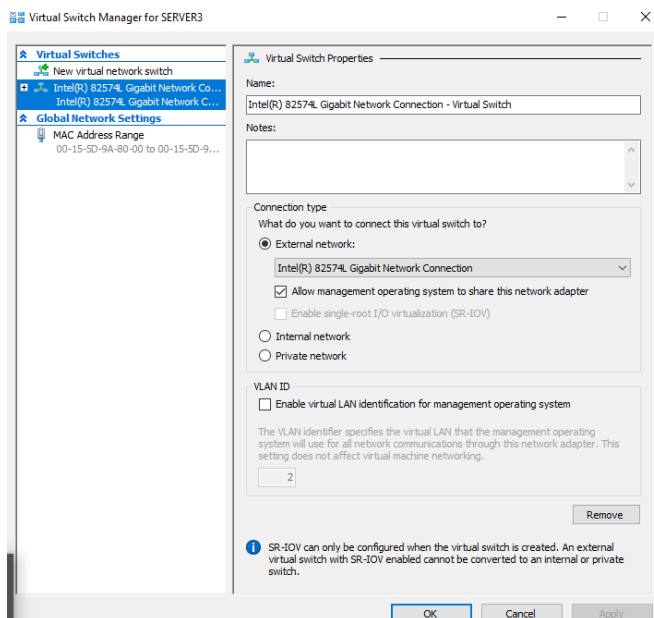


*(I want to note that for some reason I was automatically given a DHCP ip address on server3 after downloading hyper v as can be seen in screenshot above. I changed this back to the static ip address I had already configured at 192.168.154.128)*

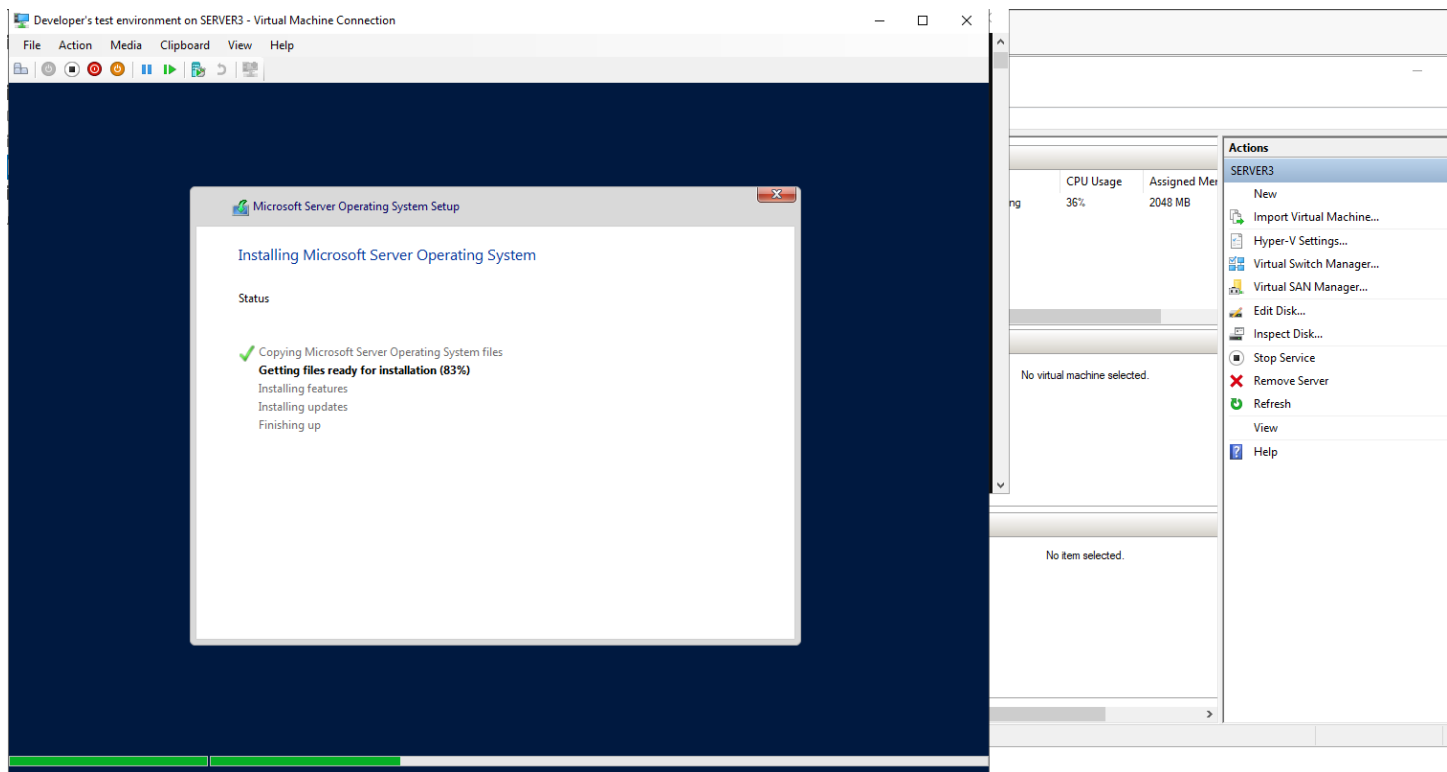
I have created the VM and I give it and ISO through setting which is the "Microsoft Server Desktop Experience" ISO.



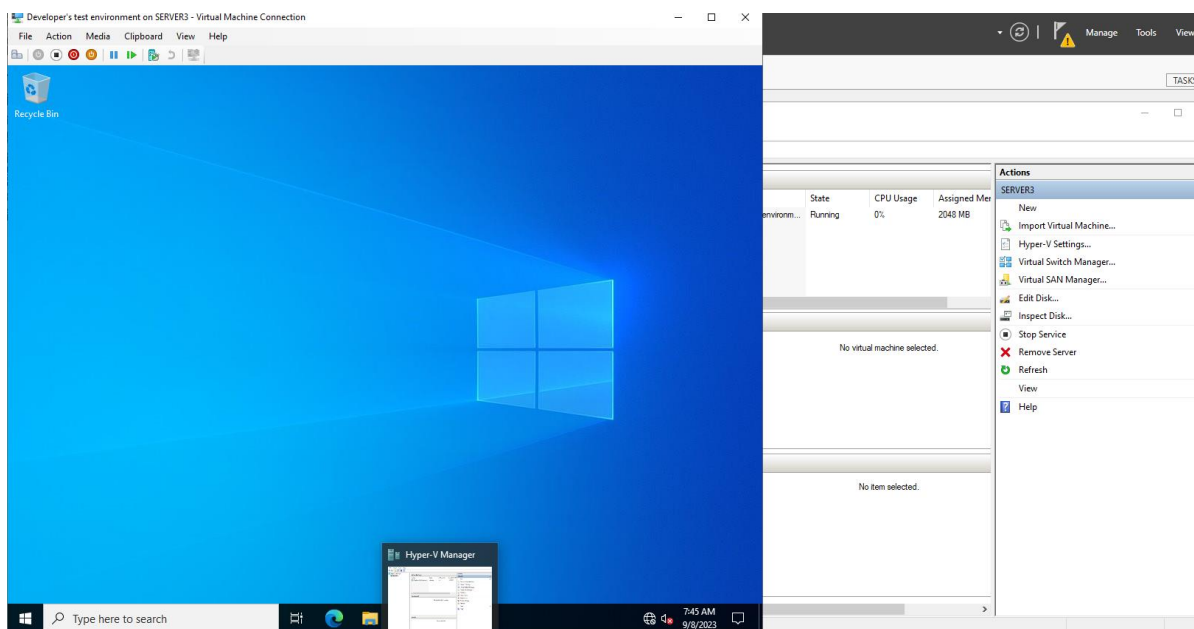
I add an External virtual network switch to the VM



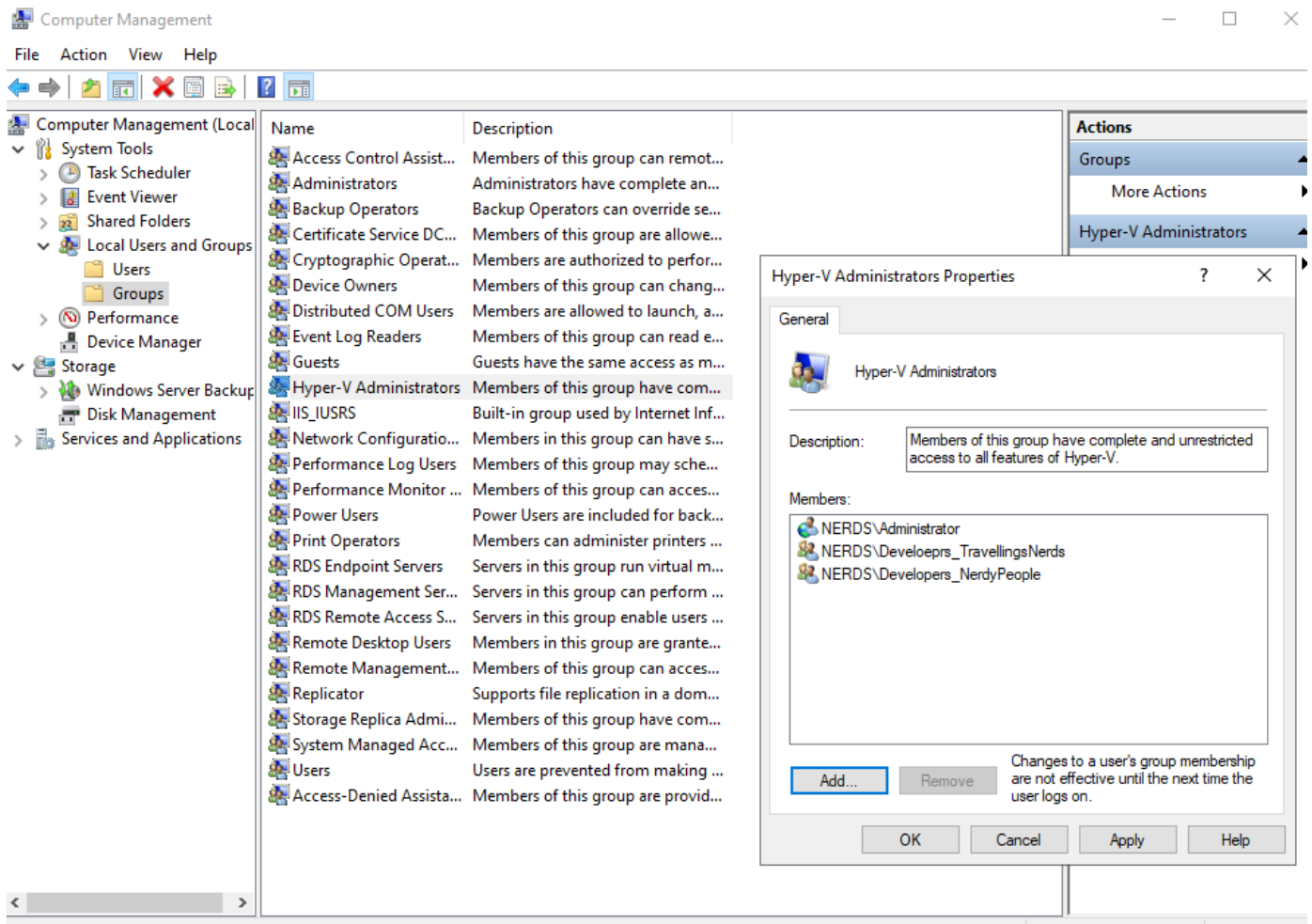
Installation started



Installation was a success, I have now created a test environment.

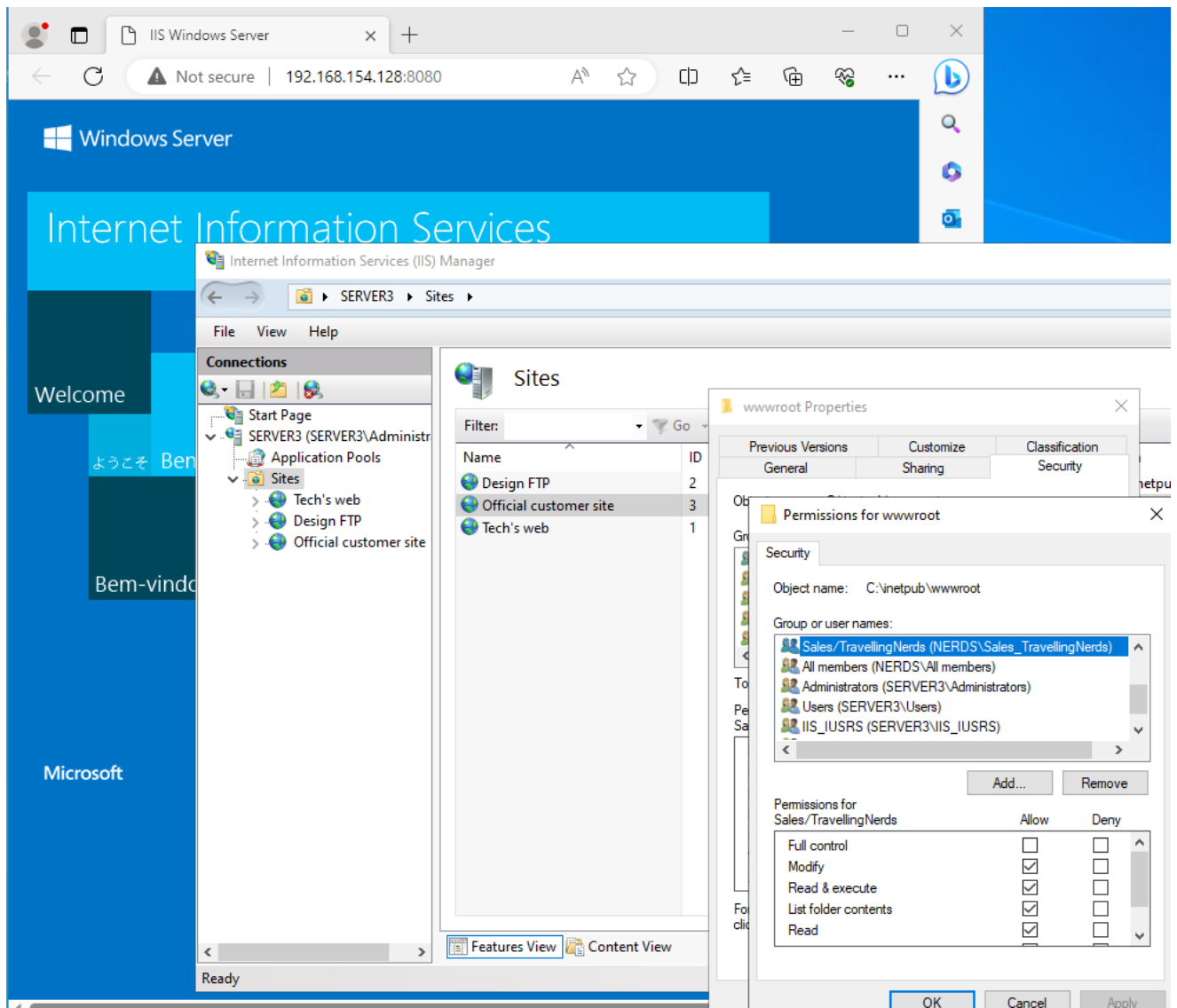


Now I give Hyper V administrator access the developer departments from both “Travelling Nerds” and “Nerdy People” as they are the ones using the test environment. An administrator will always be given access to any role or feature due to maintenance and support purposes.



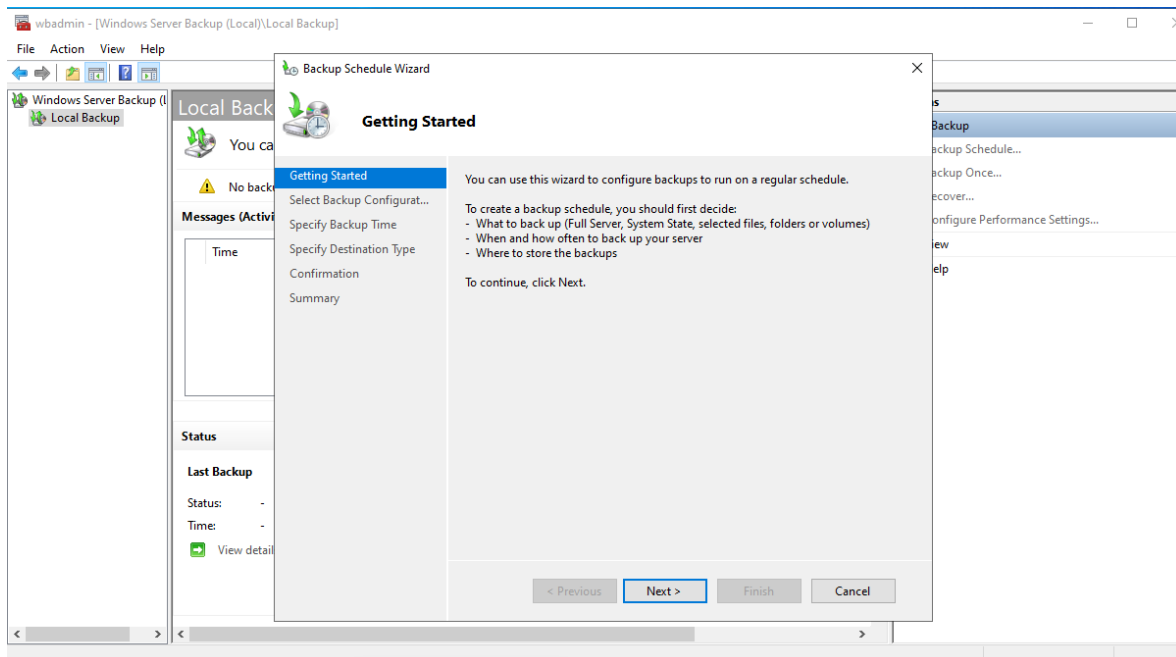
According to the requirements, I add a new site to be managed by the sales departments from both Travelling Nerds and Nerdy People. I create the new site under port “8080” under Ip “192.168.154.128”. The site is accessible from a browser. I edited the permissions to give access to “Sales” departments

from both companies to grant most permissions to Sales departments except absolute full control as that is preserved for administrators. “All members” of the domain have read access, but not much else.

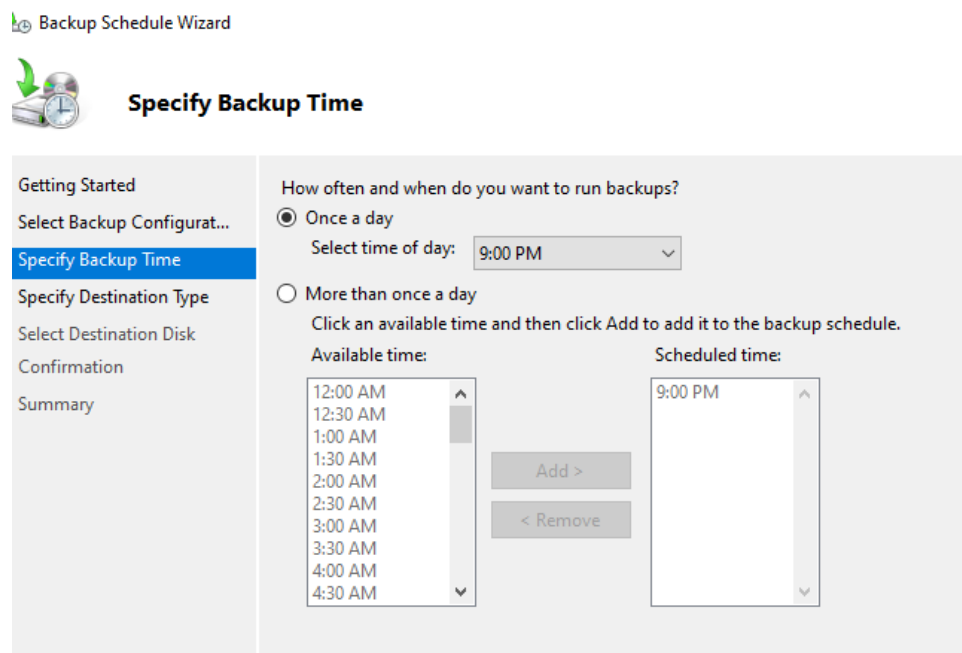


Sites				
Filter:	Go	Show All	Group by:	No Grouping
Name	ID	Status	Binding	Path
Design FTP	2	Started (ftp)	192.168.154.128:21 (ftp)	C:\inetpub\ftproot
Official customer site	3	Started (http)	192.168.154.128:8080 (http)	C:\inetpub\wwwroot
Tech's web	1	Started (http)	192.168.154.128:443 (http), 192.168...	%SystemDrive%\inetpub\wwwroot

In terms of security the first and probably most important aspect is the creation of backup files. I install the role “Windows Server Backup” and run it once installed. I open the application “Windows Server Backup” and create a new “Backup Schedule”.



I make sure a new backup schedule of the infrastructure is taken and saved every day at 09.00 PM. Backup schedules are recommended to be done every 24-48 hours. I have chosen everyday. (Herrod, 2021)



I have chosen to keep the backups on the share network domain folder to limit access for the backups to only domain members.



## Specify Destination Type

Getting Started

Select Backup Configurat...

Specify Backup Time

**Specify Destination Type**

Specify Remote Shared F...

Confirmation

Summary

Where do you want to store the backups?

☐ Back up to a hard disk that is dedicated for backups (recommended)

Choose this option for the safest way to store backups. The hard disk that you use will be formatted and then dedicated to only store backups.

☐ Back up to a volume

Choose this option if you cannot dedicate an entire disk for backups. Note that the performance of the volume may be reduced by up to 200 percent while it is used to store backups. We recommend that you do not store other server data on the same volume.

☒ Back up to a shared network folder

Choose this option if you do not want to store backups locally on the server. Note that you will only have one backup at a time because when you create a new backup it overwrites the previous backup.

< Previous

Next >

Finish

Cancel

I have successfully created the backup schedule.



## Summary

Getting Started

Select Backup Configurat...

Specify Backup Time

Specify Destination Type

Select Destination Disk

Confirmation

**Summary**

Status: You have successfully created the backup schedule.

Your first scheduled backup will happen at 06/01/2023 21:00.

Make sure that the disks you are using to store scheduled backups are attached to this computer and are available.

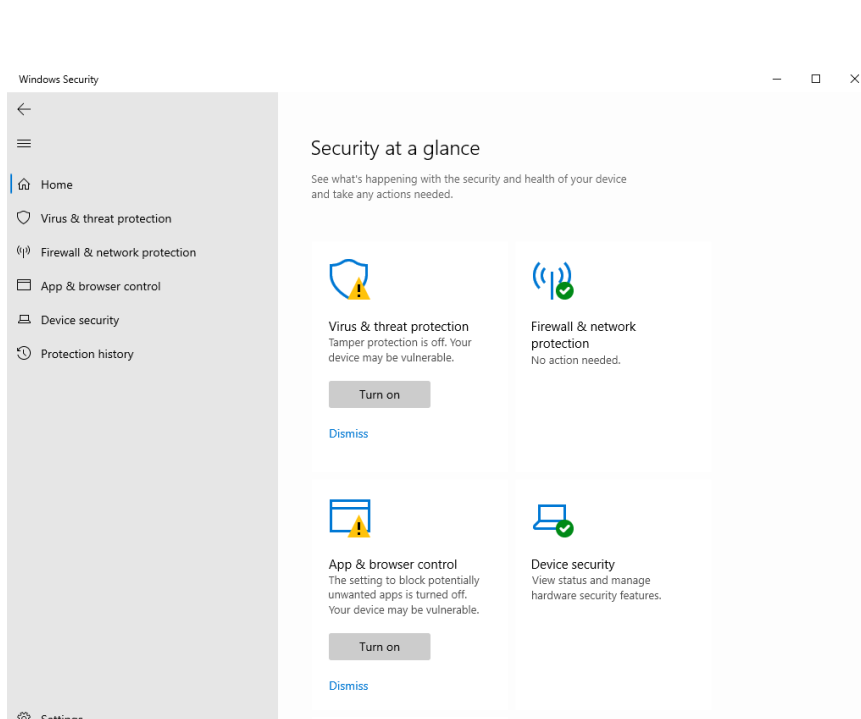
< Previous

Next >

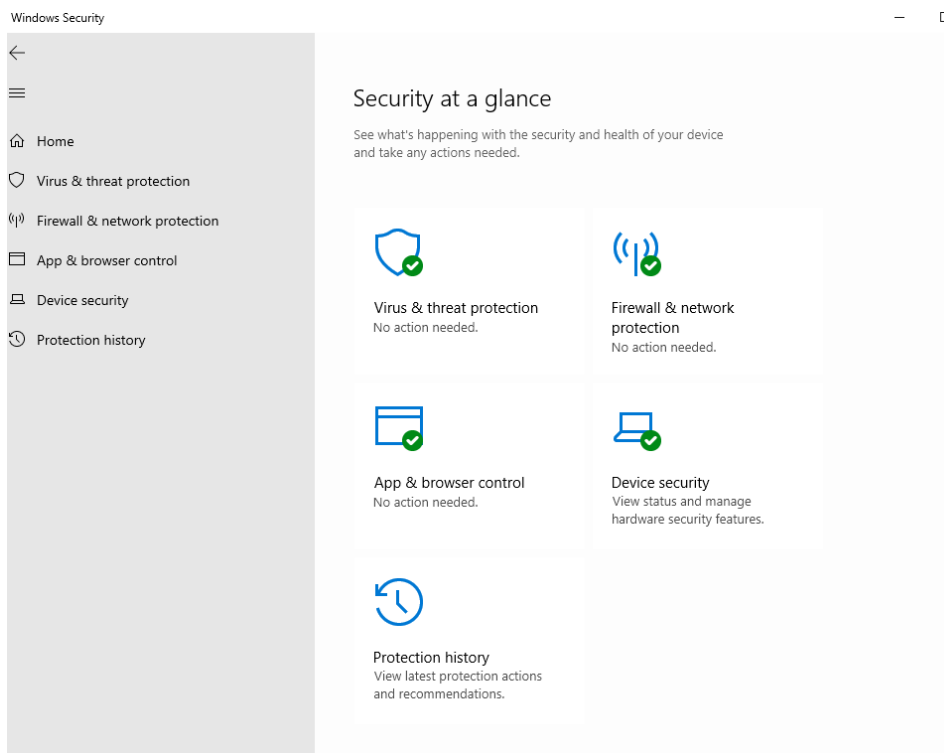
**Close**

Cancel

I now go on to open the “Windows Security” on server3 to see the status. I have the option to turn on “Virus and Protection” and “App and browser control”. I turn them both on. I do the same thing on server1 and server2 to make sure all servers are running their security features.

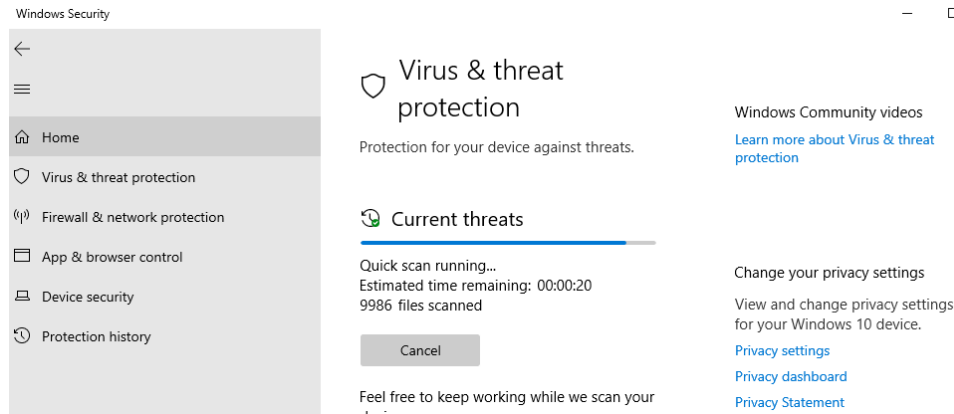


Now all features are running and ready to take on digital threats.

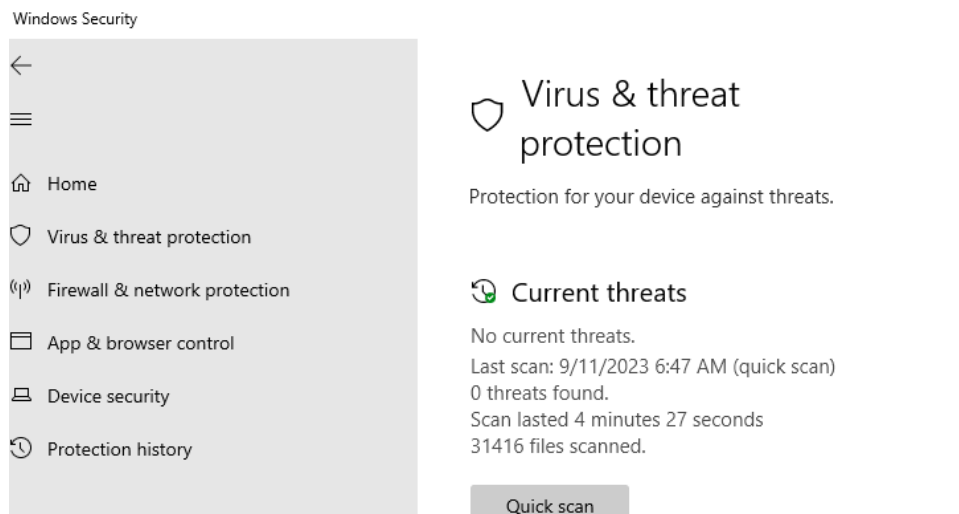


I do a quick scan all server1, server2 and server3 to see if there are any threats facing my servers at this moment.



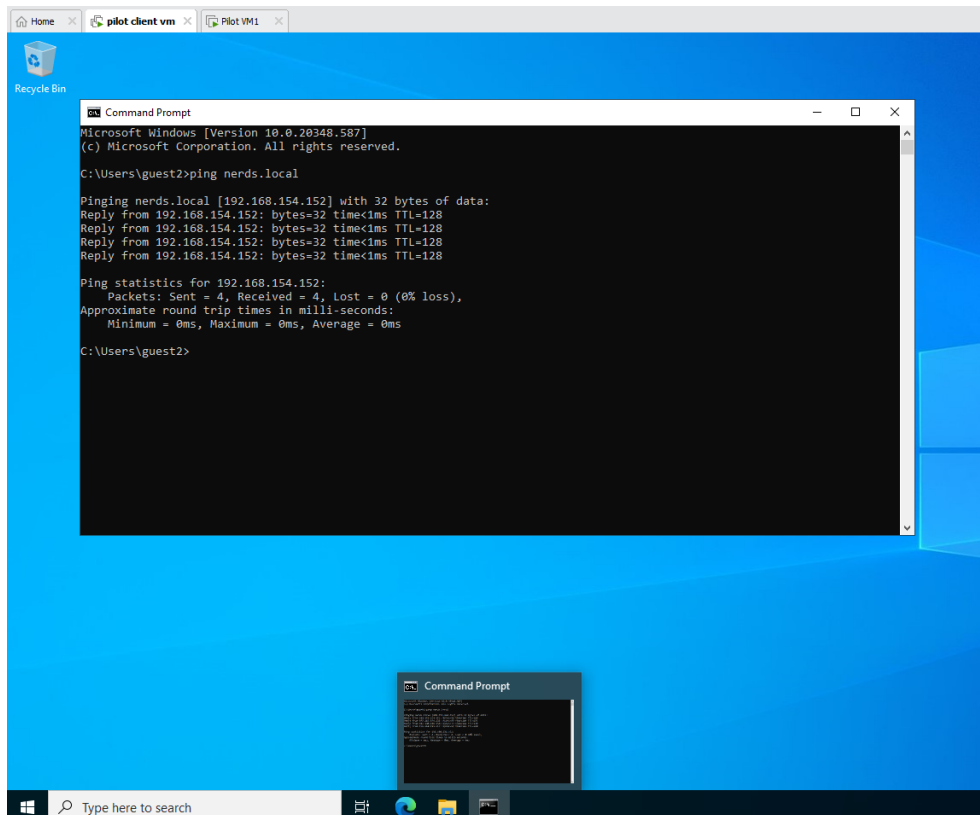


It came out clean on all 3 servers. There are No current threats.

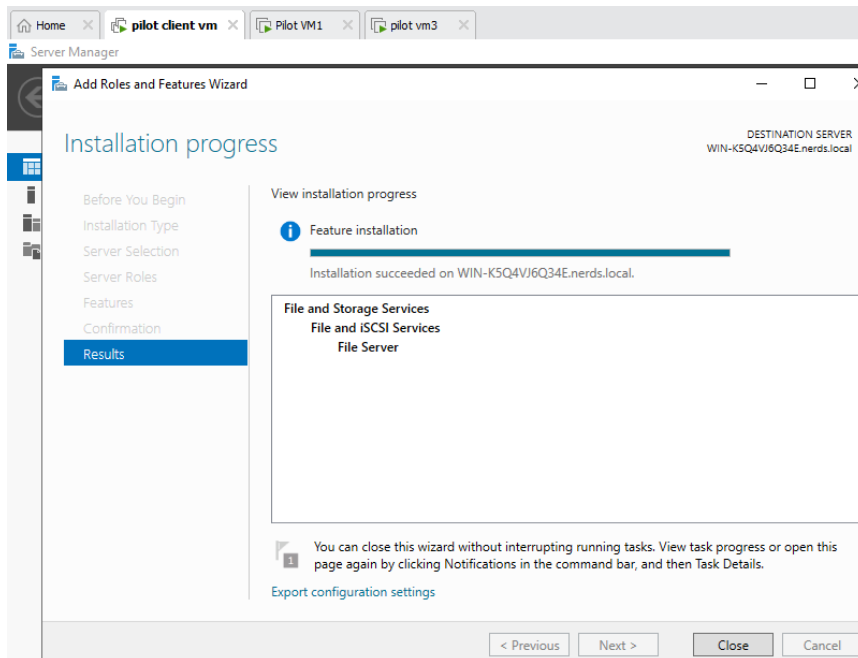


**File server**

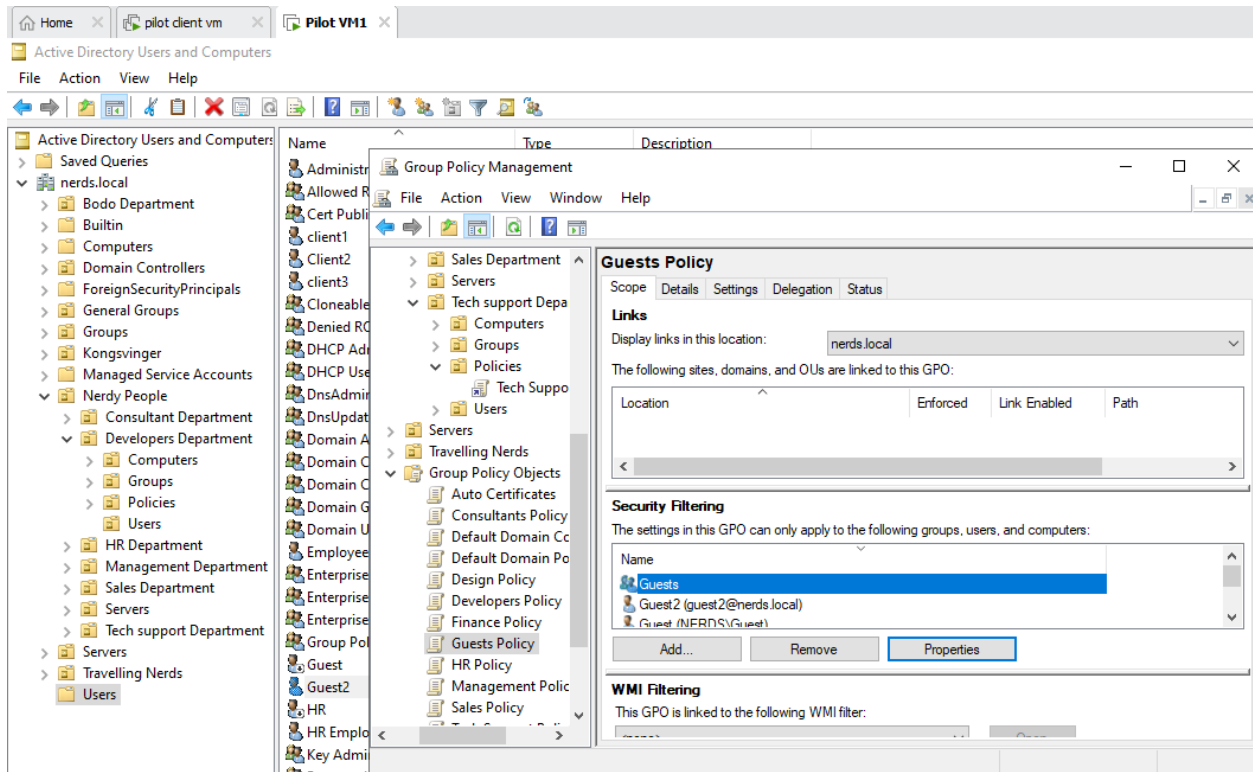
For a guest file server I created a new vm server for guest usage. I configured the static ip and joined the domain.



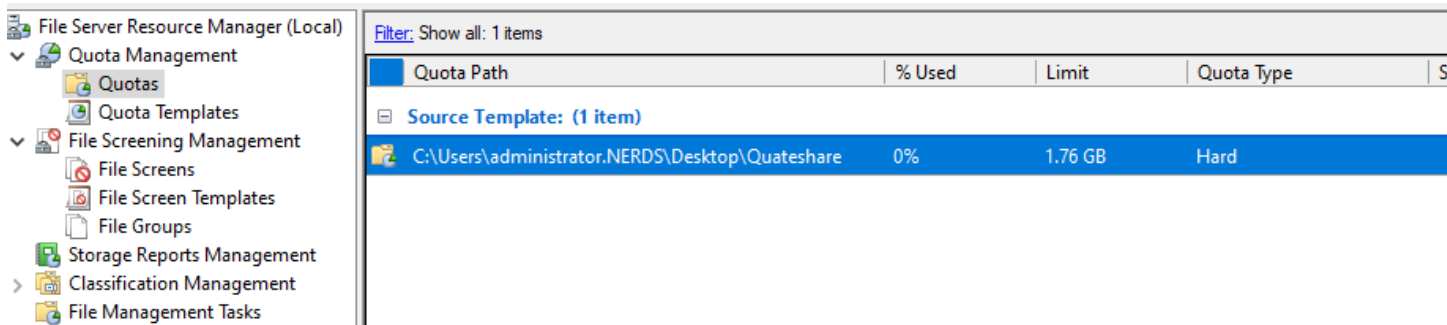
I install the feature “File server” from server manager



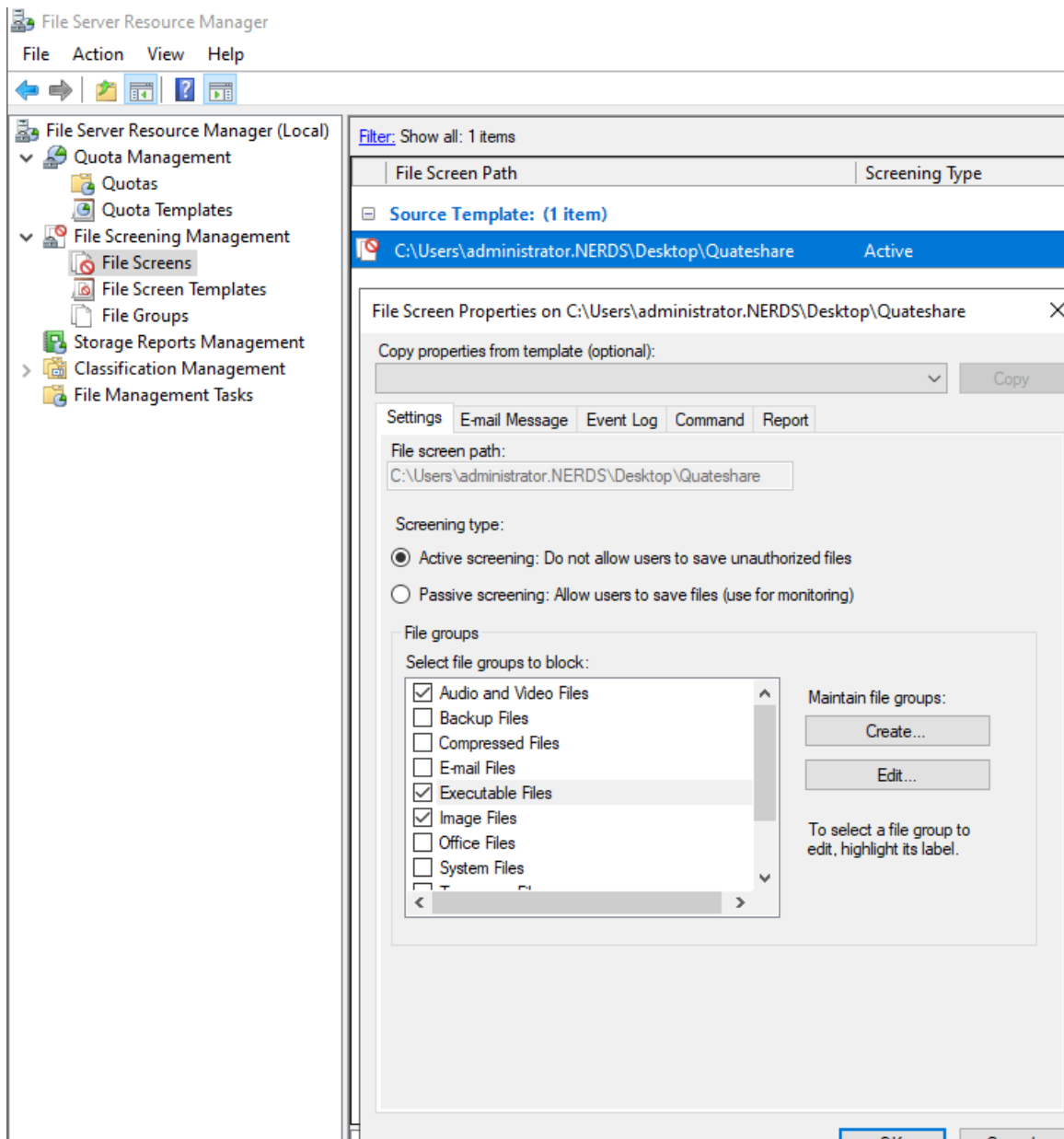
While it is installing, I create a new group policy for the guests accounts where I can set basic permissions.



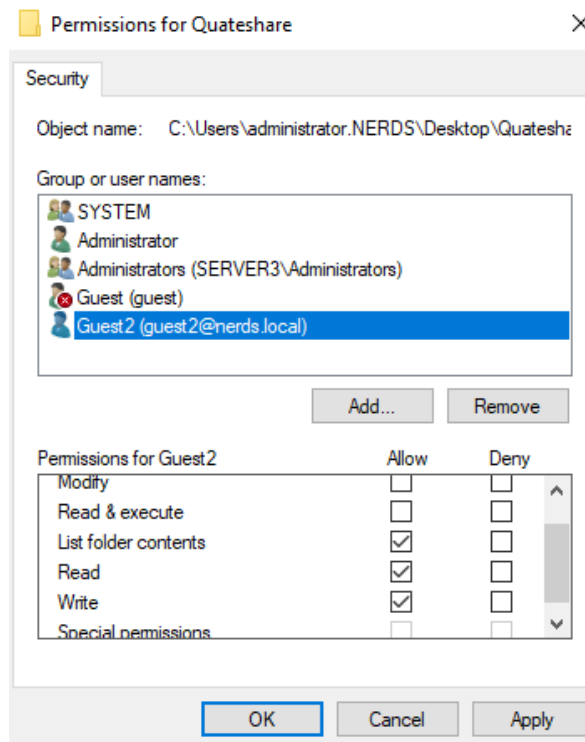
In order to set more specific permissions including ability to save certain files, I must create a Quota folder and use that same path to create file screening permissions.



I create file screening using the same path as the quota, I set the permissions to block "Audio & Video", "Executable files" and "Image files". I also let "Active Screening" on to prevent users to save these files.



Lastly I go into the actual Quota folder that I named “Quotashare”. Open properties and enter security section and add the guest accounts. Which are “Guest” and “Guest2”. Set basic permissions here as well



## Summary and conclusion

As part of a practical assignment, I designed and implemented a complete server infrastructure for two merging companies, Travelling Nerds and Nerdy People, using Microsoft Server with Desktop Experience. The solution involved configuring core services such as Active Directory, DNS, DHCP, file sharing (DFS), and certificate services, in line with the companies' organizational structure and specific access requirements. I set up users, groups, and permissions to ensure secure and efficient access management across all departments. In addition, I implemented scheduled backup routines across three critical servers to ensure data security and business continuity. All configurations and processes were documented thoroughly throughout the project.

## References

Robert Allen, (2023). "How to Add Secondary Domain Controller (2012, 2016, 2019)" Available at <https://activedirectorypro.com/add-secondary-domain-controller/>

Baeldung, (2023). "The Difference Between 127.0.0.1 and Localhost" Available at <https://www.baeldung.com/cs/127-0-0-1-vs-localhost>

Shreya Bose, (2021). "Testing on Virtual Machines (VM): Move to Real Device Testing" Available at <https://www.browserstack.com/guide/virtual-machine-testing>

Kelly Herrod, (2021). "Defining Frequency for Server Level Backups – Explained" Available at <https://herrodtech.com/defining-frequency-for-server-level-backups-explained/>