

Jason Hodge

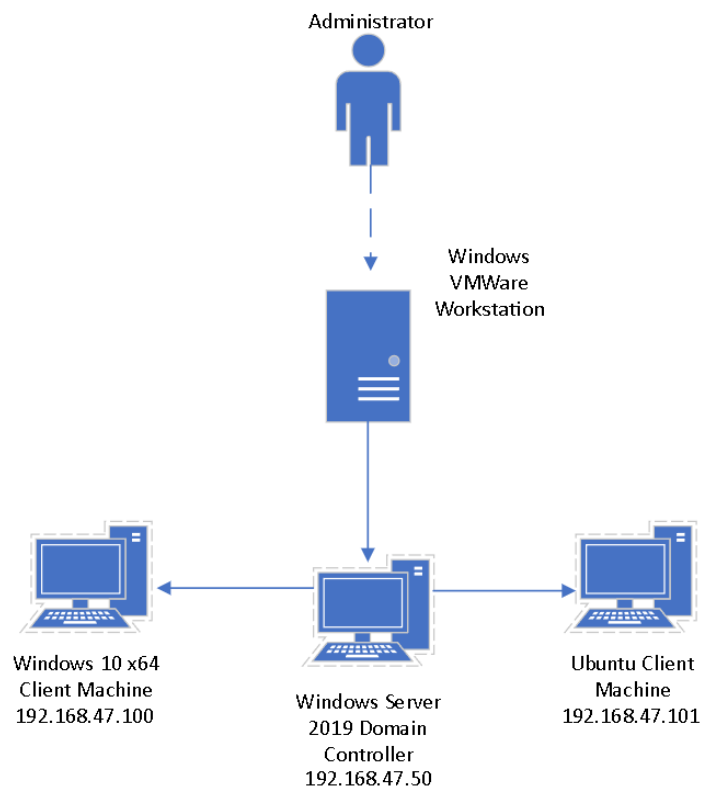
Lab 01 – Building a Virtual Lab

February 16, 2024

### Description:

The primary objective of this lab was to set up virtual machines (VMs) for us to complete our future labs on. Using VMware Workstation, we set up a Windows operating system environment, I used Windows 10. We also set up a domain controller for future active directory usage on a Windows 2019 Server VM. We set up a Windows 10 Client machine and an Ubuntu machine and connected them to the Windows Server VM so they can be managed by the server machine. Then I ensured they were all able to communicate with each other. Once that was done, I added a windows server roles feature to demonstrate the File Server Resource Manager.

### Topology:



This is a basic overview of the three virtual machines built in this lab within VMWare Workstation.

**Key Syntax:**

Command Prompt (CMD) was used to check the hostname and IPv4 address, subnet mask, default gateway and DNS Servers. This was used as a second verification to see the changes have been made.

**Commands:**

**'hostname'**: Provides the computer's host name.

**'hostnamectl'**: Provides vital machine information.

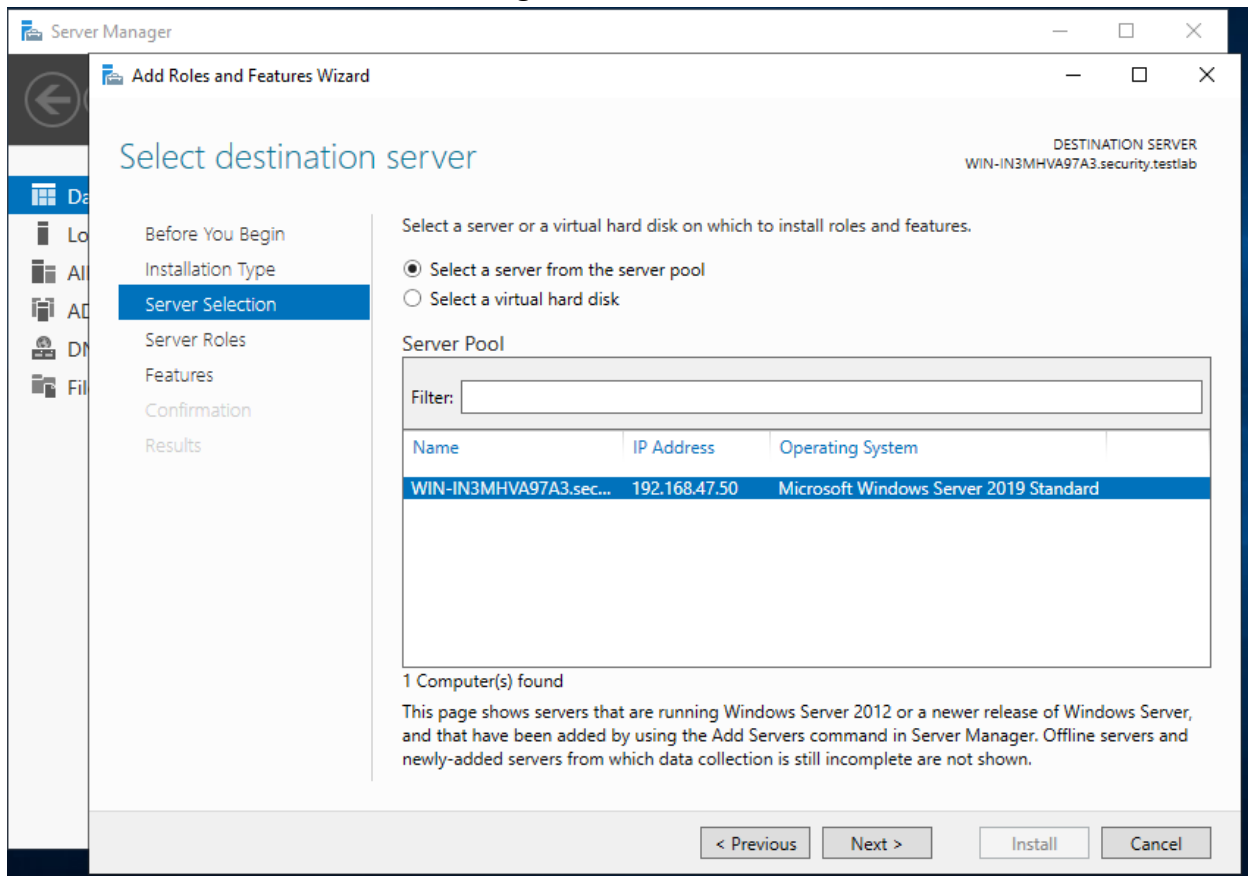
**'ipconfig /all'**: Provides full detailed adapter configuration information (IPv4 address, subnet mask, default gateway, DNS Servers, etc.)

**'ip a'**: Provides network information about the host machine.

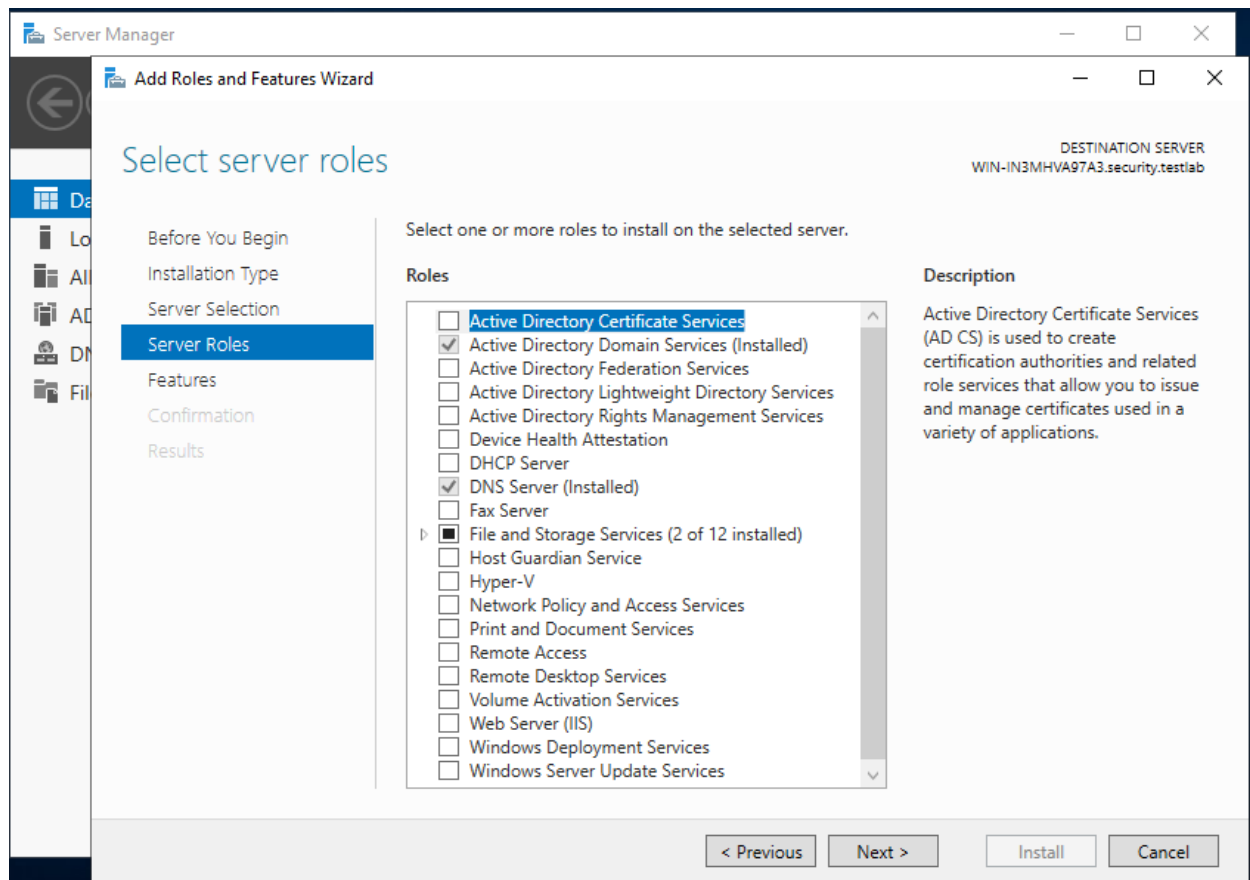
**Verification:****TASK ONE: Hypervisor Configuration**

My VMWare Workstation is up and running.

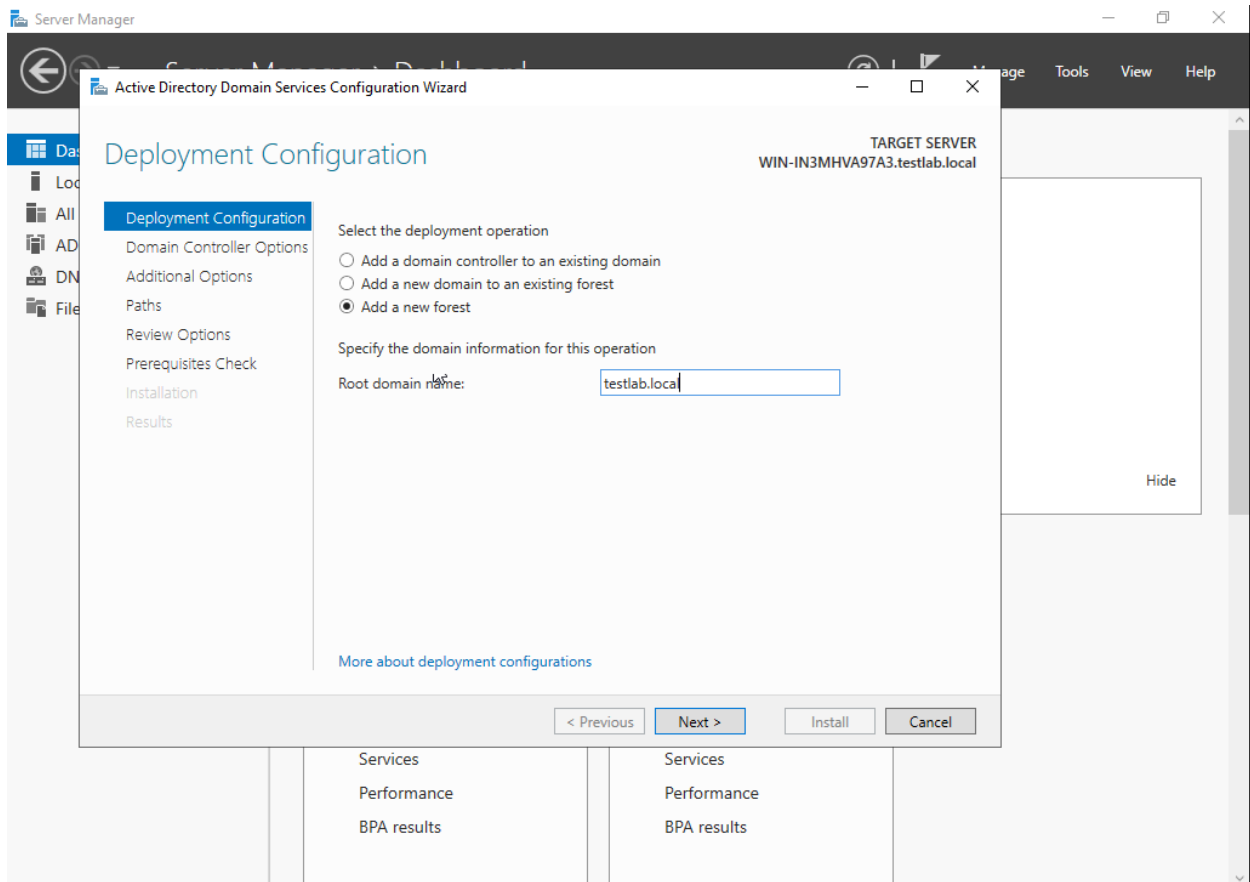
## TASK TWO: Lab Environment VM Configuration



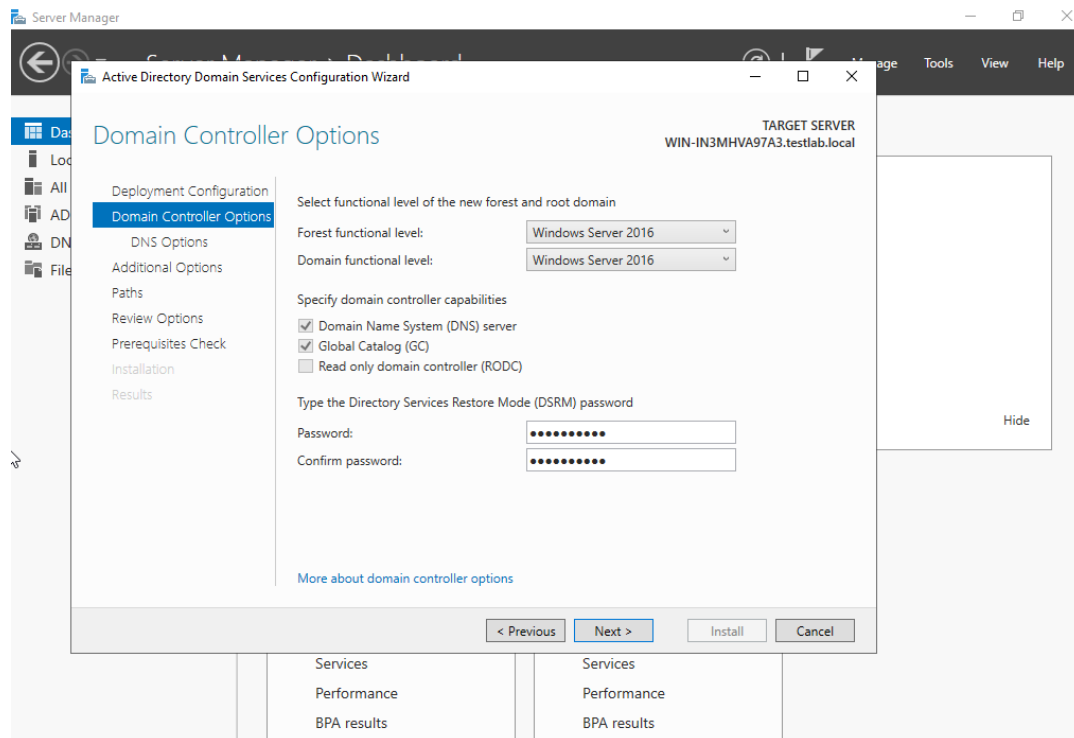
Here we select the only server available (ours).



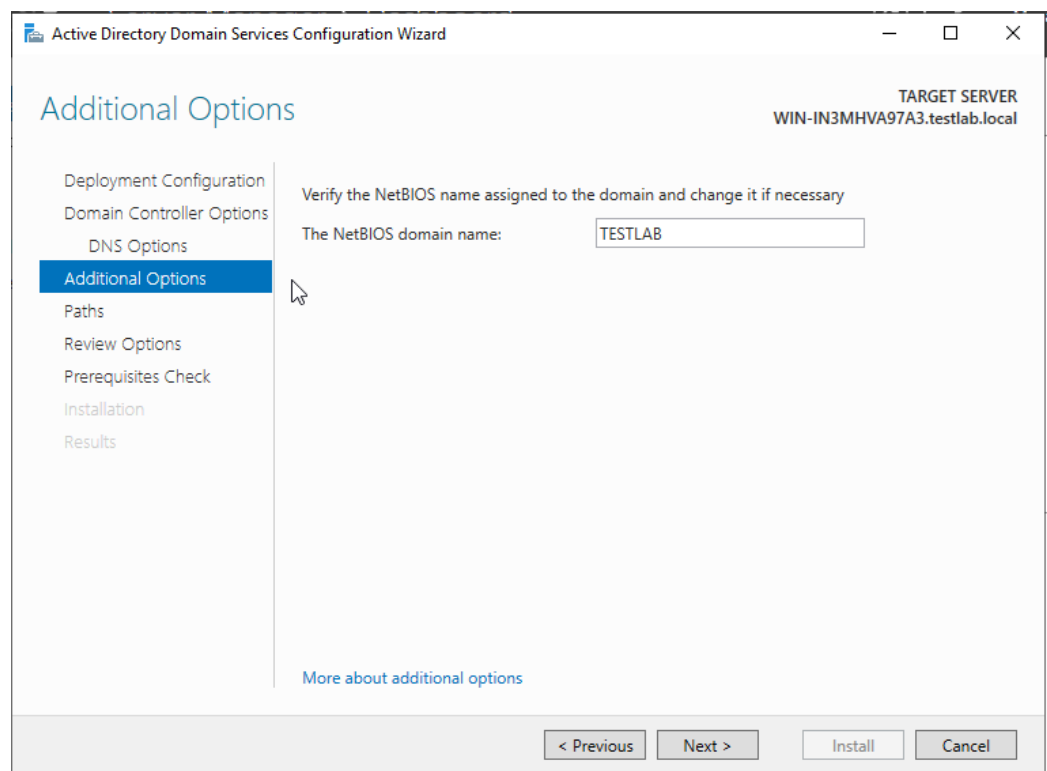
After opening the server manager dashboard and selecting add roles and features, we then get the option to select roles. In our case just Active Directory Domain Services and DNS Server are needed.



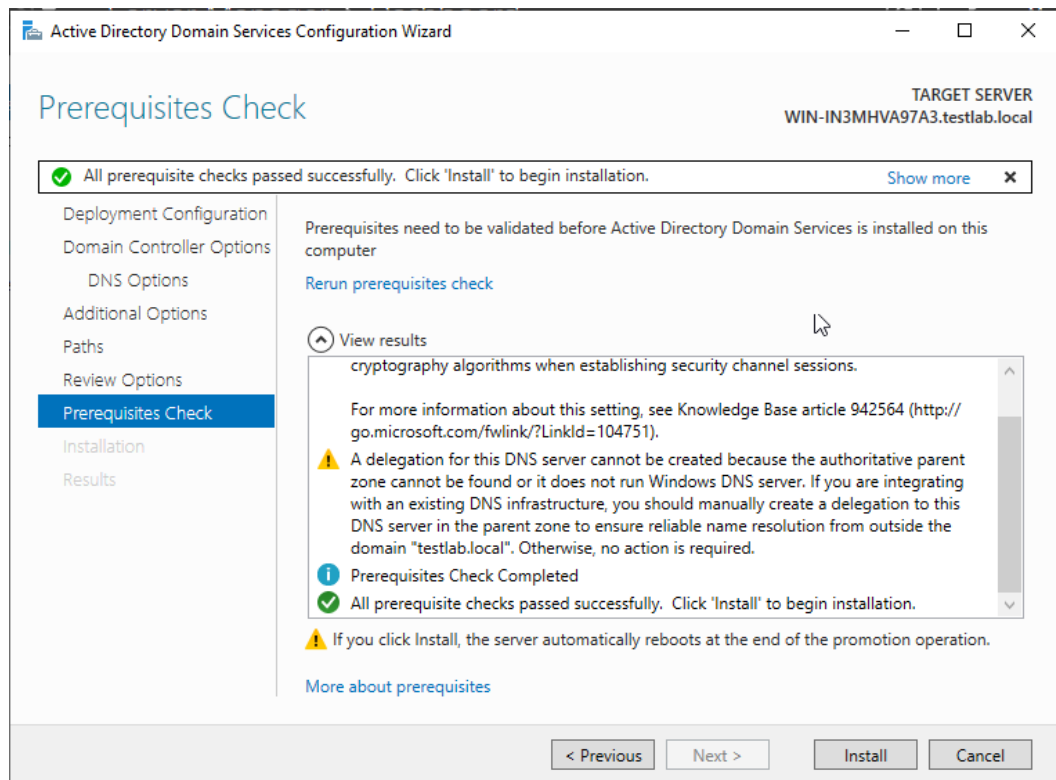
Here we want to promote our server. So we added a new forest at the end of the installation. In this case I named the root domain name “testlab.local”.



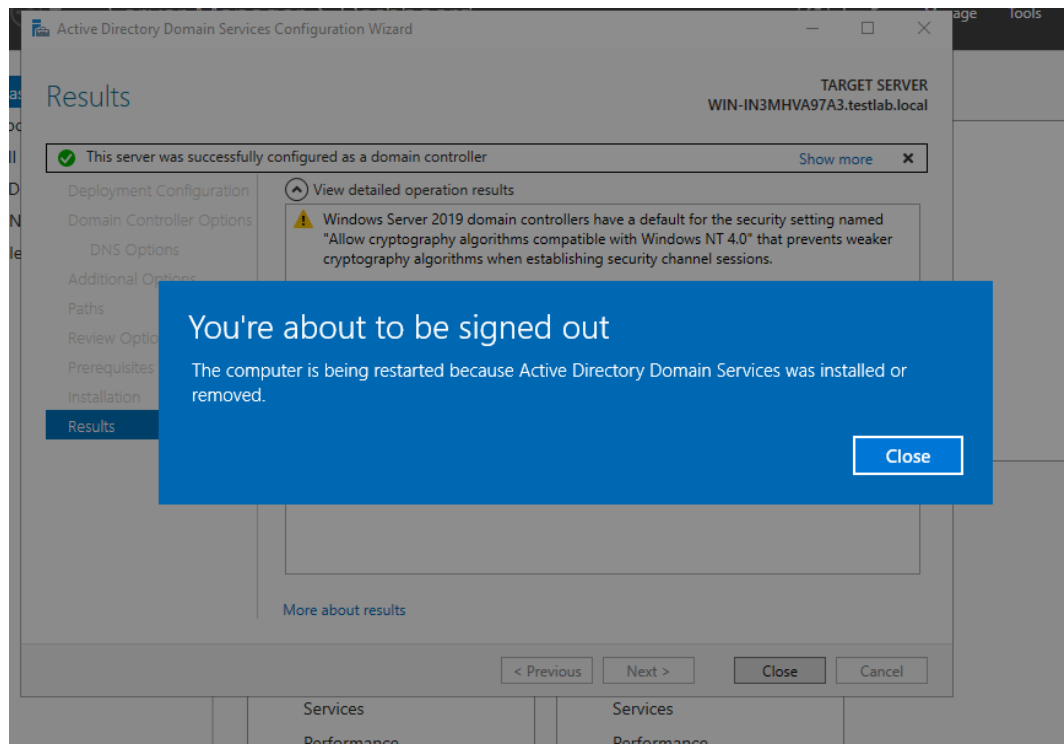
Here we are creating a password for the domain controller.



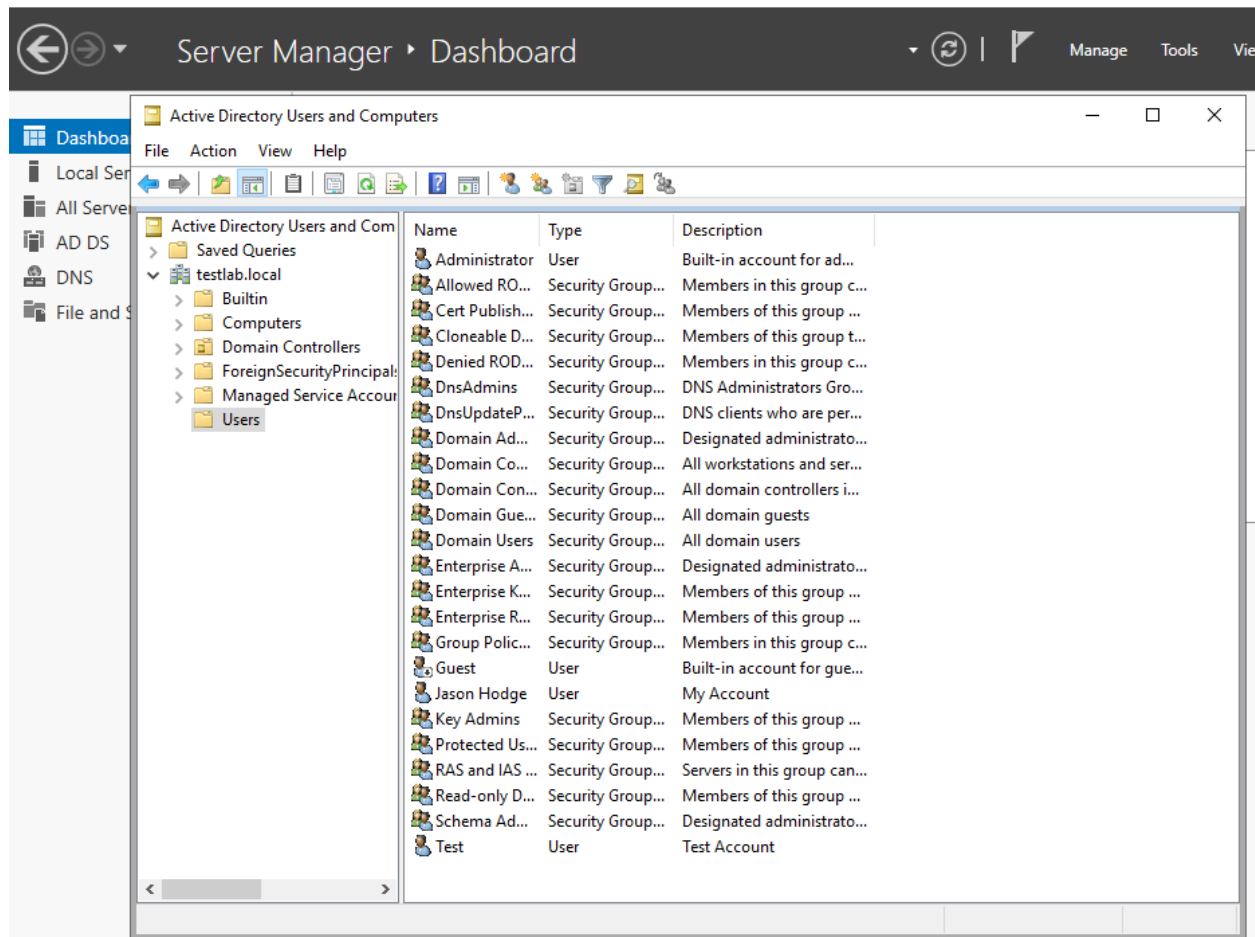
The NetBIOS domain name is prepopulated based on what you named your root. In this case "TESTLAB".



Installation for domain controller starting.

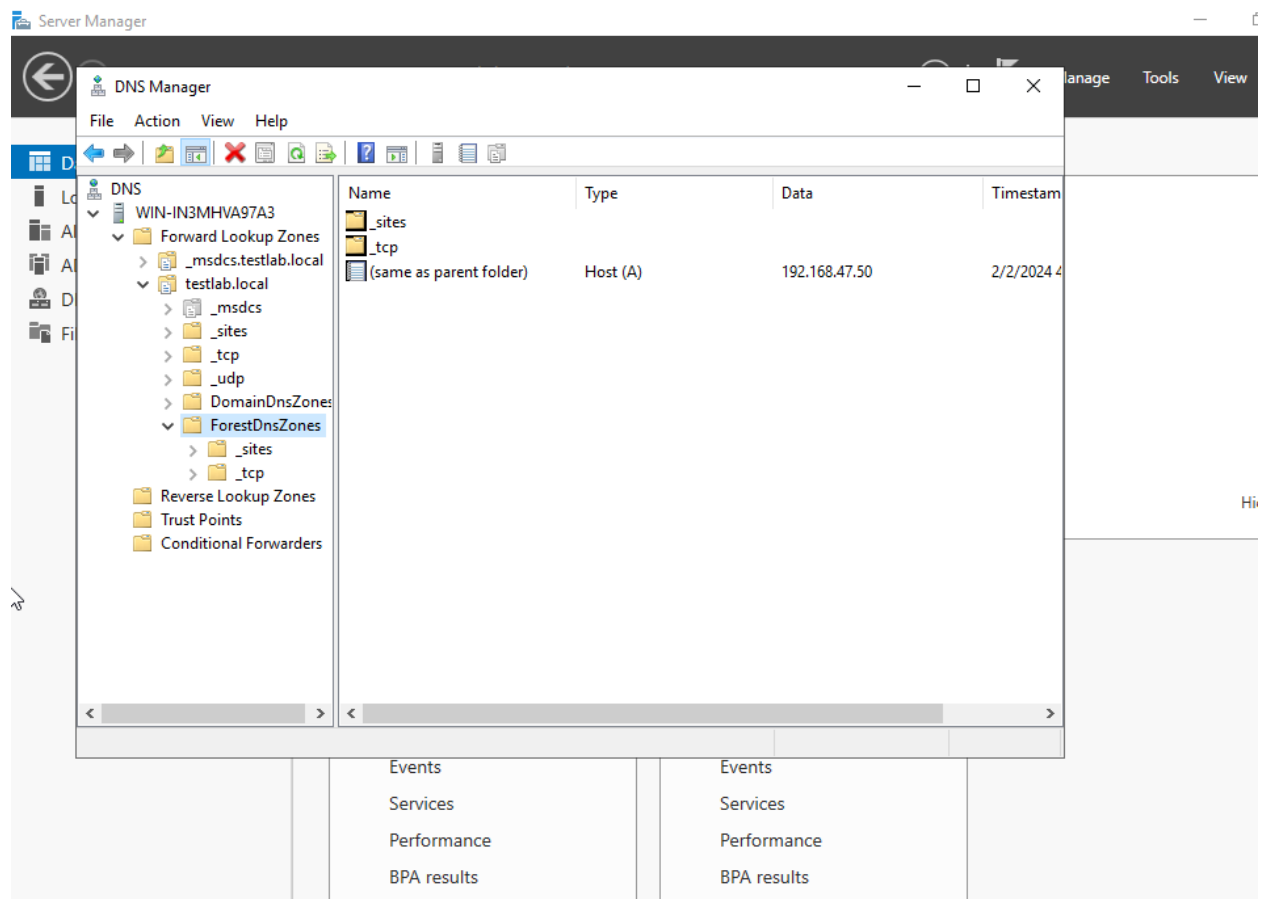


These show the configuration installation process for the domain controller, and we can see it is successful. The PC now prompts to restart to make these changes.

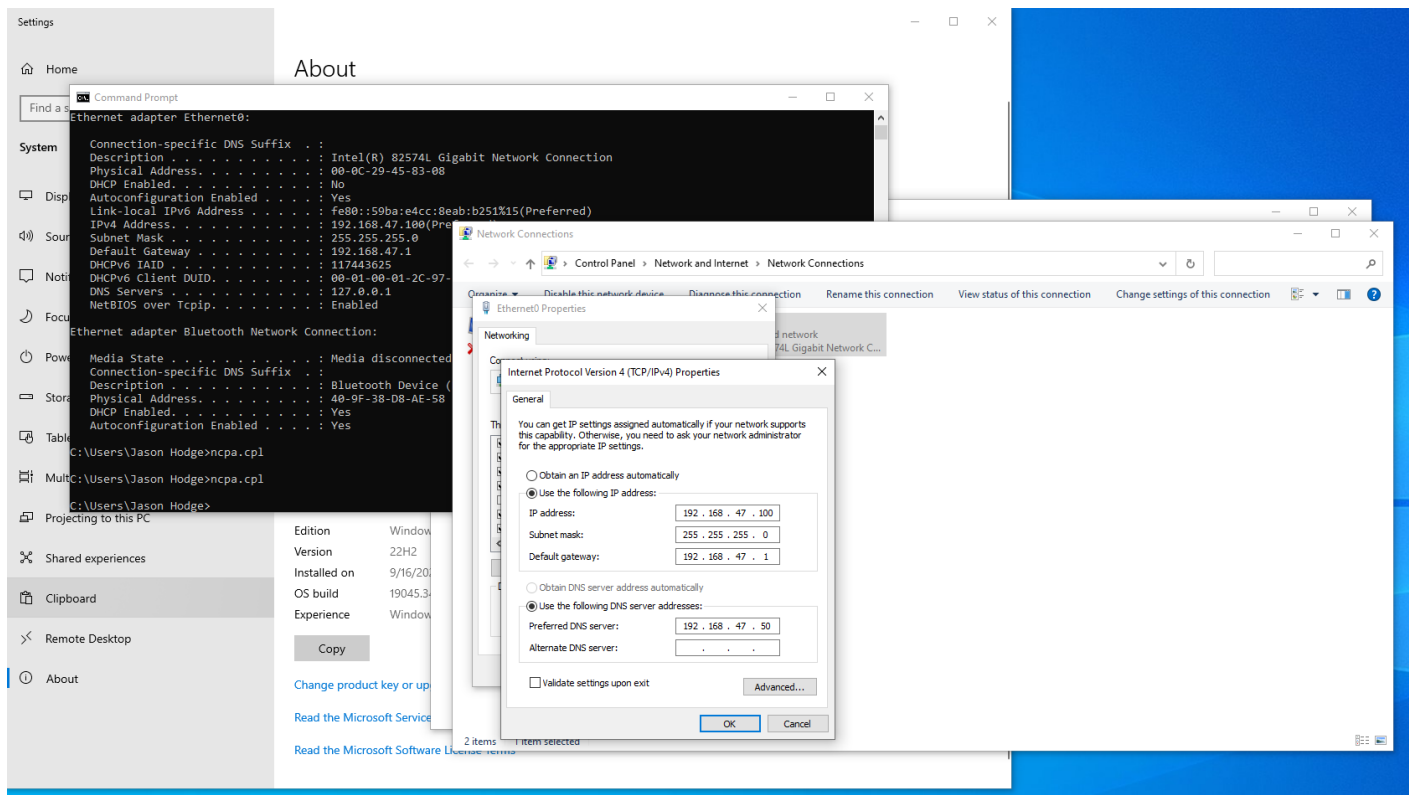


After the restart, I signed back into the VM and checked the Active Directory Users. Here we can create a user, add them to a group and they can successfully sign in with a created username and password. Once in a group a user has access to organization resources within that group. I added the users "Jason Hodge" and "Test".

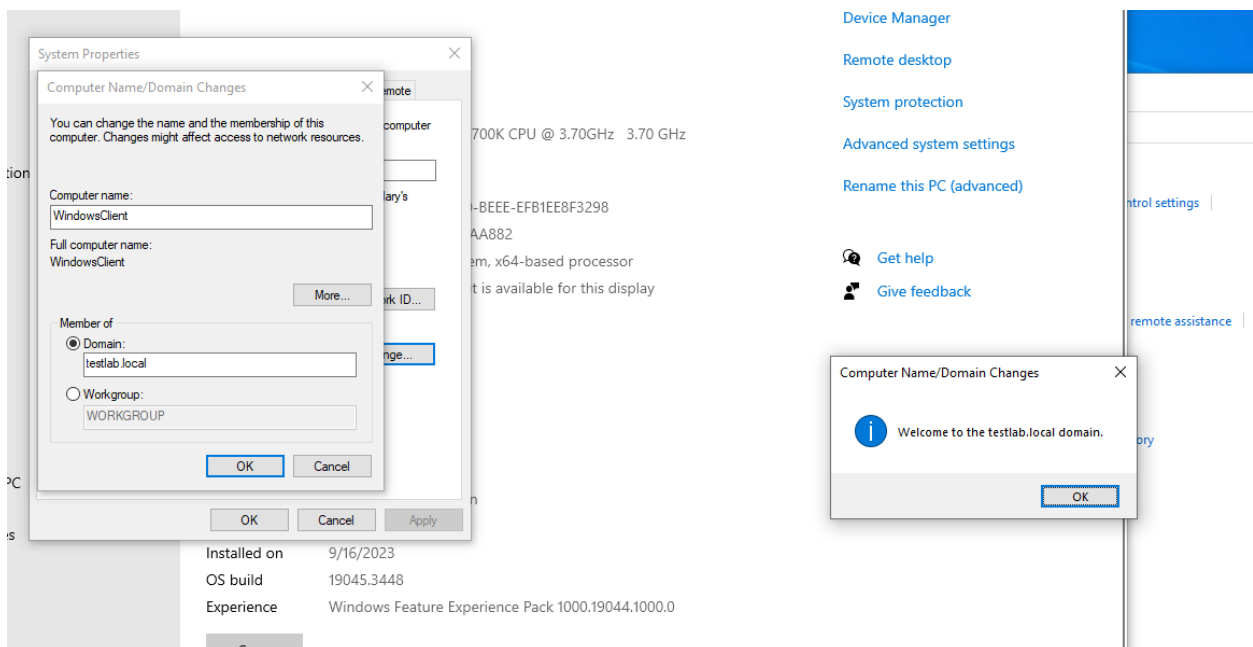




Here we can see the DNS Manager Forest for controlling and organizing DNS server clusters.



Here we can see the configured Windows Client machine set to the proper IP address configurations.



Here we can see the Windows Client machine joined the testlab.local domain.

Settings

Home

Find a setting

System

Display

Sound

Notifications & actions

Focus assist

Power & sleep

Storage

Tablet

Multitasking

About

Your PC is monitored and protected.  
[See details in Windows Security](#)

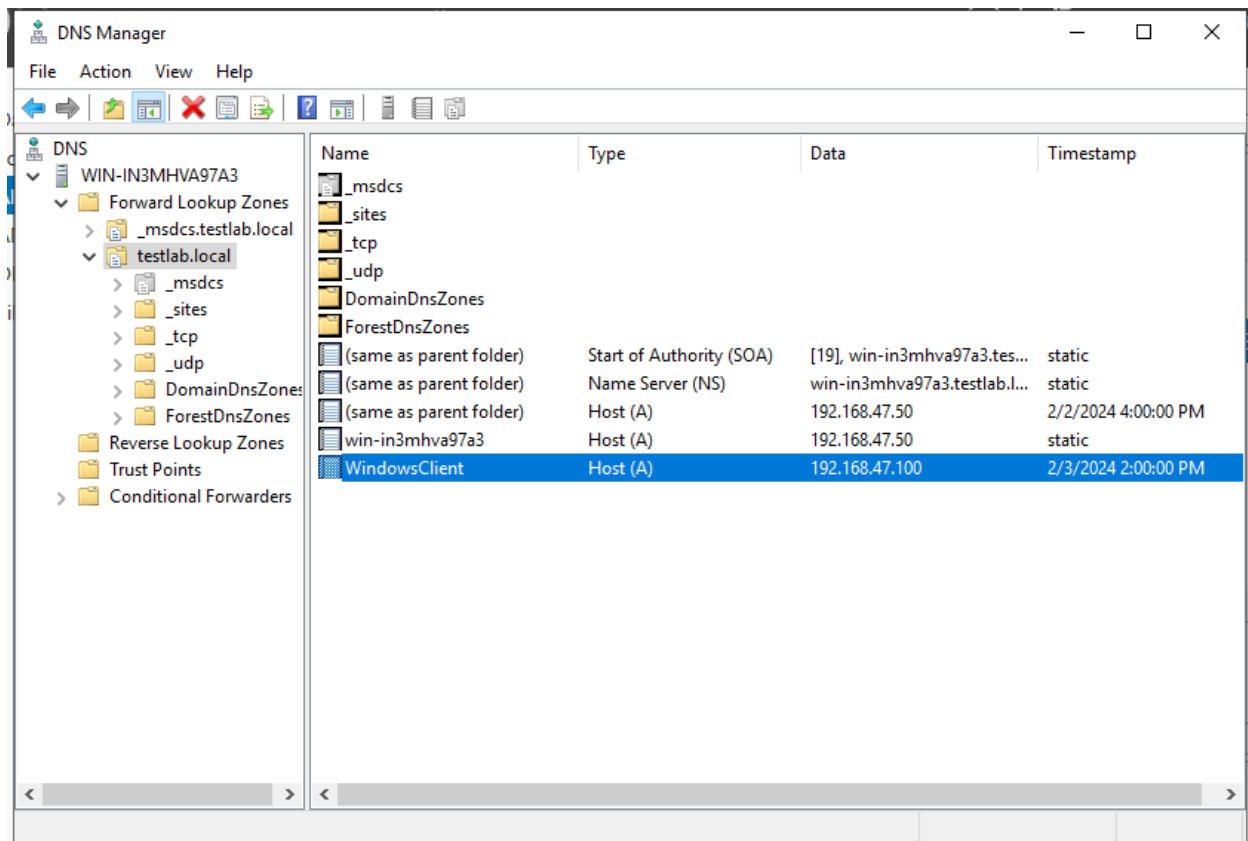
Device specifications

Device name	WindowsClient
Full device name	WindowsClient.testlab.local
Processor	Intel(R) Core(TM) i7-8700K CPU @ 3.70GHz 3.70 GHz (2 processors)
Installed RAM	2.00 GB
Device ID	4AA236CF-CF1B-4C10-BEEE-EFB1EE8F3298
Product ID	00328-00805-34838-AA882
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

Copy

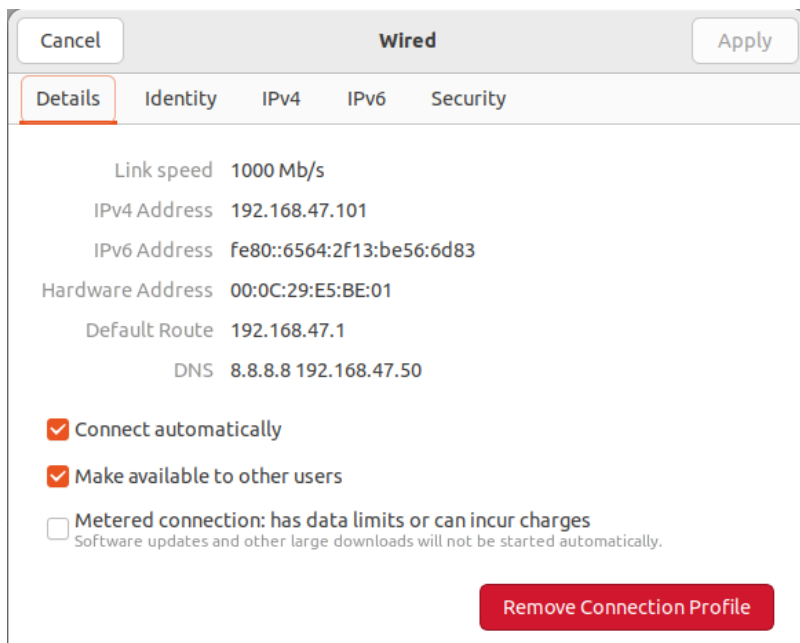
Rename this PC

This shows the breakdown of the device with the full device name.



If we look at the DNS Manager, we can see the machine named “WindowsClient” is managed.

Taking a look at the Ubuntu machine, it is configured and ready to go.



```

jason@Ubuntu:~$ hostnamectl
Static hostname: ubuntu
        Icon name: computer-vm
        Chassis: vm
        Machine ID: b8913562a1c541f99d5078e3e54ccd70
        Boot ID: 423fa630652749b79a48dc65cdc7d84e
        Virtualization: VMware
Operating System: Ubuntu 22.04.3 LTS
        Kernel: Linux 6.2.0-34-generic
        Architecture: x86_64
        Hardware Vendor: VMware, Inc.
        Hardware Model: VMware Virtual Platform
jason@Ubuntu:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UNKNOWN group default qlen 1000
    link/ether 00:0c:29:2e:41:c9 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 192.168.47.101/24 brd 192.168.47.255 scope global noprefixroute ens33
        valid_lft forever preferred_lft forever

```

Here we can see the host name and network information.

```

jason@ubuntu:~$ sudo apt update -y
[sudo] password for jason:
Ign:1 https://ppa.launchpadcontent.net/wireshark-dev/stable/ubuntu jammy InRelease
Ign:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Ign:3 http://security.ubuntu.com/ubuntu jammy-security InRelease
Ign:4 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Ign:5 http://security.ubuntu.com/ubuntu jammy-security InRelease
Ign:1 https://ppa.launchpadcontent.net/wireshark-dev/stable/ubuntu jammy InRelease
Ign:2 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Ign:3 http://security.ubuntu.com/ubuntu jammy-security InRelease
Ign:4 https://ppa.launchpadcontent.net/wireshark-dev/stable/ubuntu jammy InRelease
Ign:5 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Err:1 http://security.ubuntu.com/ubuntu jammy-security InRelease
      Temporary failure resolving 'security.ubuntu.com'
Err:2 https://ppa.launchpadcontent.net/wireshark-dev/stable/ubuntu jammy InRelease
      Temporary failure resolving 'ppa.launchpadcontent.net'
Ign:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Ign:4 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Ign:5 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Ign:1 https://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Ign:2 https://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Err:3 http://us.archive.ubuntu.com/ubuntu jammy InRelease
      Temporary failure resolving 'us.archive.ubuntu.com'
Err:4 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
      Temporary failure resolving 'us.archive.ubuntu.com'
Err:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
      Temporary failure resolving 'us.archive.ubuntu.com'
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
21 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/jammy/InRelease Temporary failure resolving 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/jammy-updates/InRelease Temporary failure resolving 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/jammy-backports/InRelease Temporary failure resolving 'us.archive.ubuntu.com'
W: Failed to fetch http://security.ubuntu.com/ubuntu/dists/jammy-security/InRelease Temporary failure resolving 'security.ubuntu.com'
W: Failed to fetch https://ppa.launchpadcontent.net/wireshark-dev/stable/ubuntu/dists/jammy/InRelease Temporary failure resolving 'ppa.launchpadcontent.net'
W: Some index files failed to download. They have been ignored, or old ones used instead.
jason@ubuntu:~$ sudo hostnamectl set-hostname ubuntu.client
jason@ubuntu:~$ hostnamectl
Static hostname: ubuntu.client
        Icon name: computer-vm
        Chassis: vm
        Machine ID: b8913562a1c541f99d5078e3e54ccd70
        Boot ID: b0cc234afa1c49cfa8f2391fd04e64d5
        Virtualization: vmware
Operating System: Ubuntu 22.04.3 LTS
        Kernel: Linux 6.2.0-34-generic
        Architecture: x86_64
        Hardware Vendor: VMware, Inc.
        Hardware Model: VMware Virtual Platform

```

```

jason@ubuntu:~$ sudo hostnamectl set-hostname ubuntu.testlab.local
sudo: unable to resolve host ubuntu.client: Temporary failure in name resolution
jason@ubuntu:~$ hostnamectl
Static hostname: ubuntu.testlab.local
Icon name: computer-vm
Chassis: vm
Machine ID: b8913562a1c541f99d5078e3e54ccd70
Boot ID: b0cc234afa1c49cfa8f2391fd04e64d5
Virtualization: vmware
Operating System: Ubuntu 22.04.3 LTS
Kernel: Linux 6.2.0-34-generic
Architecture: x86-64
Hardware Vendor: VMware, Inc.
Hardware Model: VMware Virtual Platform

```

Here the system name is being updated to ubuntu.testlab.local

```

jason@ubuntu:~$ resolvectl status
Global
  Protocols: -LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
  resolv.conf mode: stub

Link 2 (ens33)
  Current Scopes: DNS
  Protocols: +DefaultRoute +LLMNR -mDNS -DNSOverTLS DNSSEC=no/unsupported
  Current DNS Server: 192.168.47.50
  DNS Servers: 192.168.47.50

```

```

root@ubuntuclient:~# hostnamectl set-hostname ubuntu.testlab.local
root@ubuntuclient:~# hostnamectl
Static hostname: ubuntu.testlab.local
Icon name: computer-vm
Chassis: vm
Machine ID: 205a6c4b64ed41bfb25b8ba982a35385
Boot ID: 27c38dc94fb44a228bf682621b78bc9a
Virtualization: vmware
Operating System: Ubuntu 22.04.3 LTS
Kernel: Linux 6.5.0-15-generic
Architecture: x86-64
Hardware Vendor: VMware, Inc.
Hardware Model: VMware Virtual Platform

```

```

root@ubuntu:~# apt install -y sssd-ad sssd-tools realmd adcli
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
realm is already the newest version (0.17.0-1ubuntu2).
sssd-ad is already the newest version (2.6.3-1ubuntu3.2).
sssd-ad set to manually installed.
The following additional packages will be installed:
  sssd-dbus
The following NEW packages will be installed:
  adcli sssd-dbus sssd-tools
0 upgraded, 3 newly installed, 0 to remove and 2 not upgraded.
Need to get 297 kB of archives.
After this operation, 1,044 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 adcli amd64 0.9.1-1ubuntu2 [98.1 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 sssd-dbus amd64 2.6.3-1ubuntu3.2 [106 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 sssd-tools amd64 2.6.3-1ubuntu3.2 [92.5 kB]
Fetched 297 kB in 0s (1,778 kB/s)
Selecting previously unselected package adcli.
(Reading database ... 178380 files and directories currently installed.)
Preparing to unpack .../adcli_0.9.1-1ubuntu2_amd64.deb ...
Unpacking adcli (0.9.1-1ubuntu2) ...
Selecting previously unselected package sssd-dbus.
Preparing to unpack .../sssd-dbus_2.6.3-1ubuntu3.2_amd64.deb ...
Unpacking sssd-dbus (2.6.3-1ubuntu3.2) ...
Selecting previously unselected package sssd-tools.
Preparing to unpack .../sssd-tools_2.6.3-1ubuntu3.2_amd64.deb ...
Unpacking sssd-tools (2.6.3-1ubuntu3.2) ...
Setting up adcli (0.9.1-1ubuntu2) ...
Setting up sssd-tools (2.6.3-1ubuntu3.2) ...
Setting up sssd-dbus (2.6.3-1ubuntu3.2) ...
sssd-ifp.service is a disabled or a static unit, not starting it.
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...

```

```

root@ubuntu:~# sudo apt update
Hit:1 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [567 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,366 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [272 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1,412 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [400 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [233 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,043 kB]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1,142 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [687 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [235 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [24.3 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu jammy-backports/universe i386 Packages [13.4 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [211 kB]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1,366 kB]
Get:19 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [224 kB]
Get:20 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [839 kB]
Get:21 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [590 kB]
Get:22 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [160 kB]
Fetched 11.1 MB in 2s (5,666 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
9 packages can be upgraded. Run 'apt list --upgradable' to see them.

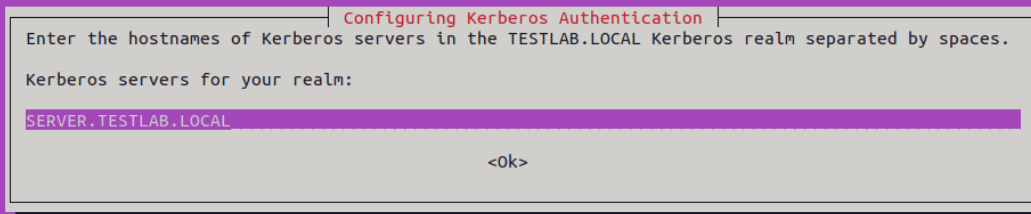
```

These screenshots show the hostname being set and updates being made.

With the command:

```
sudo apt-get -y install realmd sssd sssd-tools samba-common krb5-user packagekit samba-common-bin samba-lsmbd adcli ntp
```

I was able to add the Ubuntu machine to the Kerberos server in TESTLAB.LOCAL domain realm by inputting the machine name and the server domain.



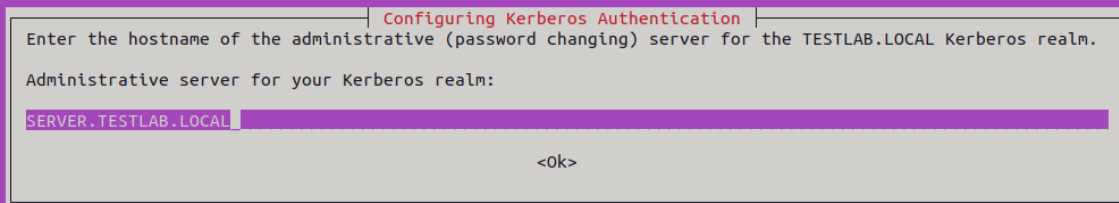
Configuring Kerberos Authentication

Enter the hostnames of Kerberos servers in the TESTLAB.LOCAL Kerberos realm separated by spaces.

Kerberos servers for your realm:

SERVER.TESTLAB.LOCAL

<Ok>



Configuring Kerberos Authentication

Enter the hostname of the administrative (password changing) server for the TESTLAB.LOCAL Kerberos realm.

Administrative server for your Kerberos realm:

SERVER.TESTLAB.LOCAL

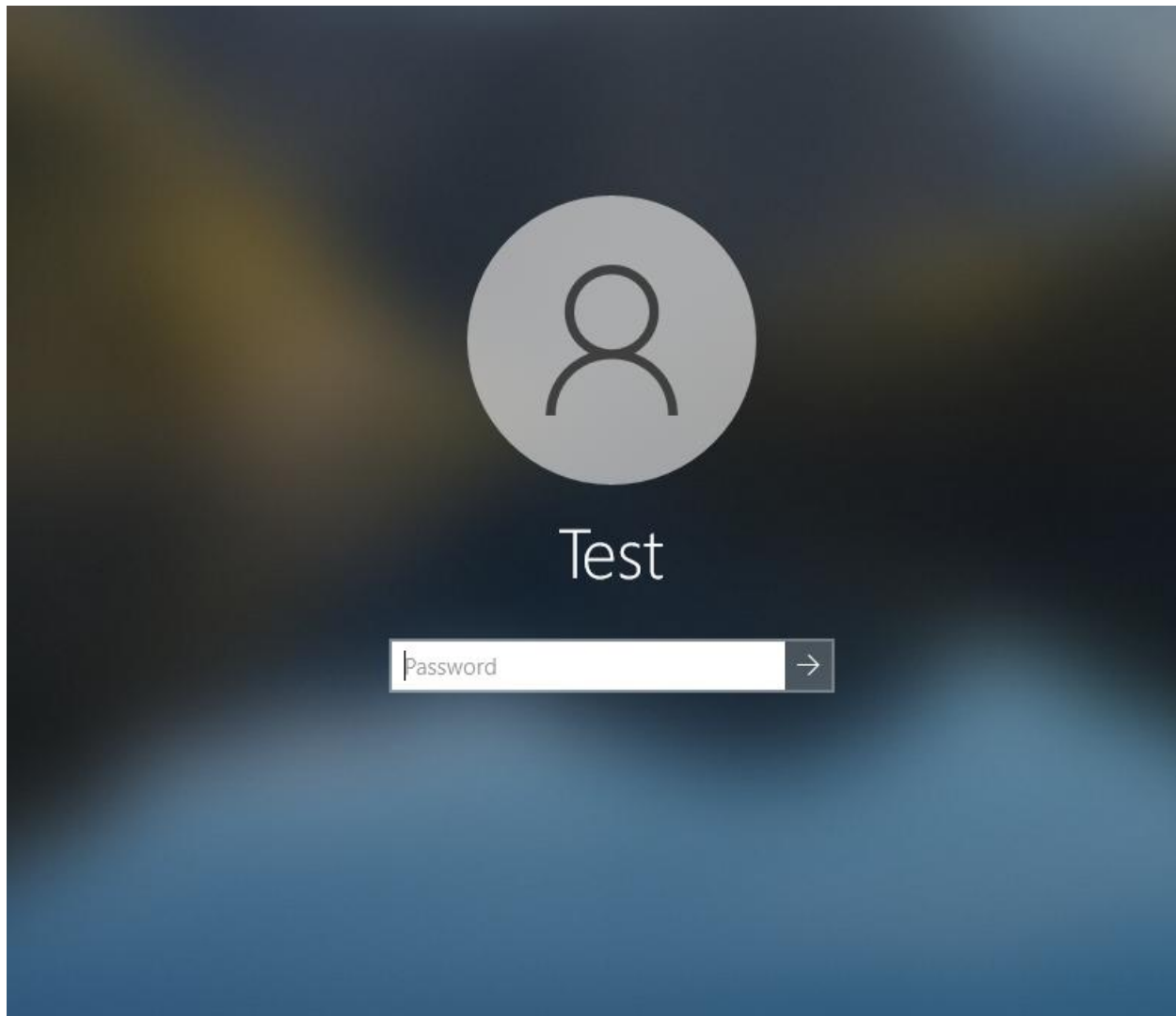
<Ok>



```
Setting up snmp (1:4.2.8p15+dfsg-1ubuntu2) ...
Setting up libini-config5:amd64 (0.6.2-1) ...
Setting up adcli (0.9.1-1ubuntu2) ...
Setting up samba-lsbs:amd64 (2:4.15.13+dfsg-0ubuntu1.5) ...
Setting up sssd-common (2.6.3-1ubuntu3.2) ...
Warning: found usr.sbin.sssd in /etc/apparmor.d/force-complain, forcing complain mode
Warning from /etc/apparmor.d/usr.sbin.sssd (/etc/apparmor.d/usr.sbin.sssd line 60): Caching disabled for: 'usr.sbin.sssd' due to force complain
Created symlink /etc/systemd/system/sss.service.wants/sss-autofs.socket → /lib/systemd/system/sss-autofs.socket.
Created symlink /etc/systemd/system/sss.service.wants/sss-nss.socket → /lib/systemd/system/sss-nss.socket.
Created symlink /etc/systemd/system/sss.service.wants/sss-pam-priv.socket → /lib/systemd/system/sss-pam-priv.socket.
Created symlink /etc/systemd/system/sss.service.wants/sss-pam.socket → /lib/systemd/system/sss-pam.socket.
Created symlink /etc/systemd/system/sss.service.wants/sss-ssh.socket → /lib/systemd/system/sss-ssh.socket.
Created symlink /etc/systemd/system/sss.service.wants/sss-sudo.socket → /lib/systemd/system/sss-sudo.socket.
Created symlink /etc/systemd/system/multi-user.target.wants/sss.service → /lib/systemd/system/sss.service.
sss-autofs.service is a disabled or a static unit, not starting it.
sss-nss.service is a disabled or a static unit, not starting it.
sss-pam.service is a disabled or a static unit, not starting it.
sss-ssh.service is a disabled or a static unit, not starting it.
sss-sudo.service is a disabled or a static unit, not starting it.
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 142.
Setting up sssd-proxy (2.6.3-1ubuntu3.2) ...
Setting up ldap-utils (2.5.16+dfsg-0ubuntu0.22.04.2) ...
Setting up sssd-dbus (2.6.3-1ubuntu3.2) ...
Warning: sssd-ifp.service is a disabled or a static unit, not starting it.
Setting up sssd-ad-common (2.6.3-1ubuntu3.2) ...
Created symlink /etc/systemd/system/sss.service.wants/sss-pac.socket → /lib/systemd/system/sss-pac.socket.
sss-pac.service is a disabled or a static unit, not starting it.
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 142.
Setting up sssd-krb5-common (2.6.3-1ubuntu3.2) ...
Setting up libsmclient:amd64 (2:4.15.13+dfsg-0ubuntu1.5) ...
Setting up sssd-krb5 (2.6.3-1ubuntu3.2) ...
Setting up libkadm5srv-mit12:amd64 (1.19.2-2ubuntu0.3) ...
Setting up samba-dsdb-modules:amd64 (2:4.15.13+dfsg-0ubuntu1.5) ...
Setting up sssd-ldap (2.6.3-1ubuntu3.2) ...
Setting up python3-samba (2:4.15.13+dfsg-0ubuntu1.5) ...
Setting up sssd-ad (2.6.3-1ubuntu3.2) ...
Setting up sssd-tools (2.6.3-1ubuntu3.2) ...
Setting up sssd-ipa (2.6.3-1ubuntu3.2) ...
Setting up krb5-user (1.19.2-2ubuntu0.3) ...
Setting up samba-common-bin (2:4.15.13+dfsg-0ubuntu1.5) ...
Checking smb.conf with testparm
Load smb config files from /etc/samba/smb.conf
Loaded services file OK.
Weak crypto is allowed

Server role: ROLE_STANDALONE

Done
Setting up sssd (2.6.3-1ubuntu3.2) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
```



Here we can see one of the users configured with the server manager is functional on the Windows Client machine.

```
jason@ubuntu:~$ ping 192.168.47.50
PING 192.168.47.50 (192.168.47.50) 56(84) bytes of data.
64 bytes from 192.168.47.50: icmp_seq=1 ttl=128 time=0.231 ms
64 bytes from 192.168.47.50: icmp_seq=2 ttl=128 time=0.362 ms
64 bytes from 192.168.47.50: icmp_seq=3 ttl=128 time=0.339 ms
64 bytes from 192.168.47.50: icmp_seq=4 ttl=128 time=0.374 ms
^C
--- 192.168.47.50 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3051ms
rtt min/avg/max/mdev = 0.231/0.326/0.374/0.056 ms
```

Here the Ubuntu machine can successfully ping the Windows Server.

```
C:\Users\Test>ping 192.168.47.50

Pinging 192.168.47.50 with 32 bytes of data:
Reply from 192.168.47.50: bytes=32 time<1ms TTL=128
Reply from 192.168.47.50: bytes=32 time<1ms TTL=128
Reply from 192.168.47.50: bytes=32 time<1ms TTL=128
Reply from 192.168.47.50: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.47.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

The Windows Client machine can also ping the Windows Server.

```
C:\Users\Test>ping 192.168.47.101

Pinging 192.168.47.101 with 32 bytes of data:
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64

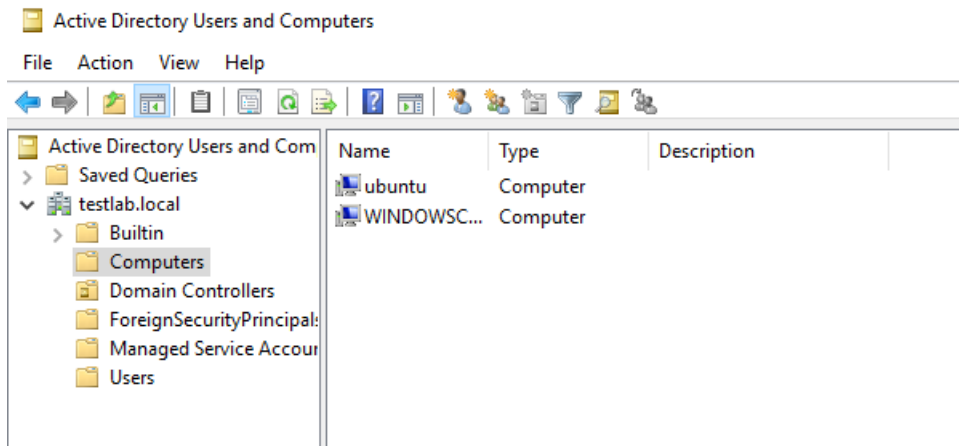
Ping statistics for 192.168.47.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Users\Administrator.WIN-IN3MHVA97A3>ping 192.168.47.101

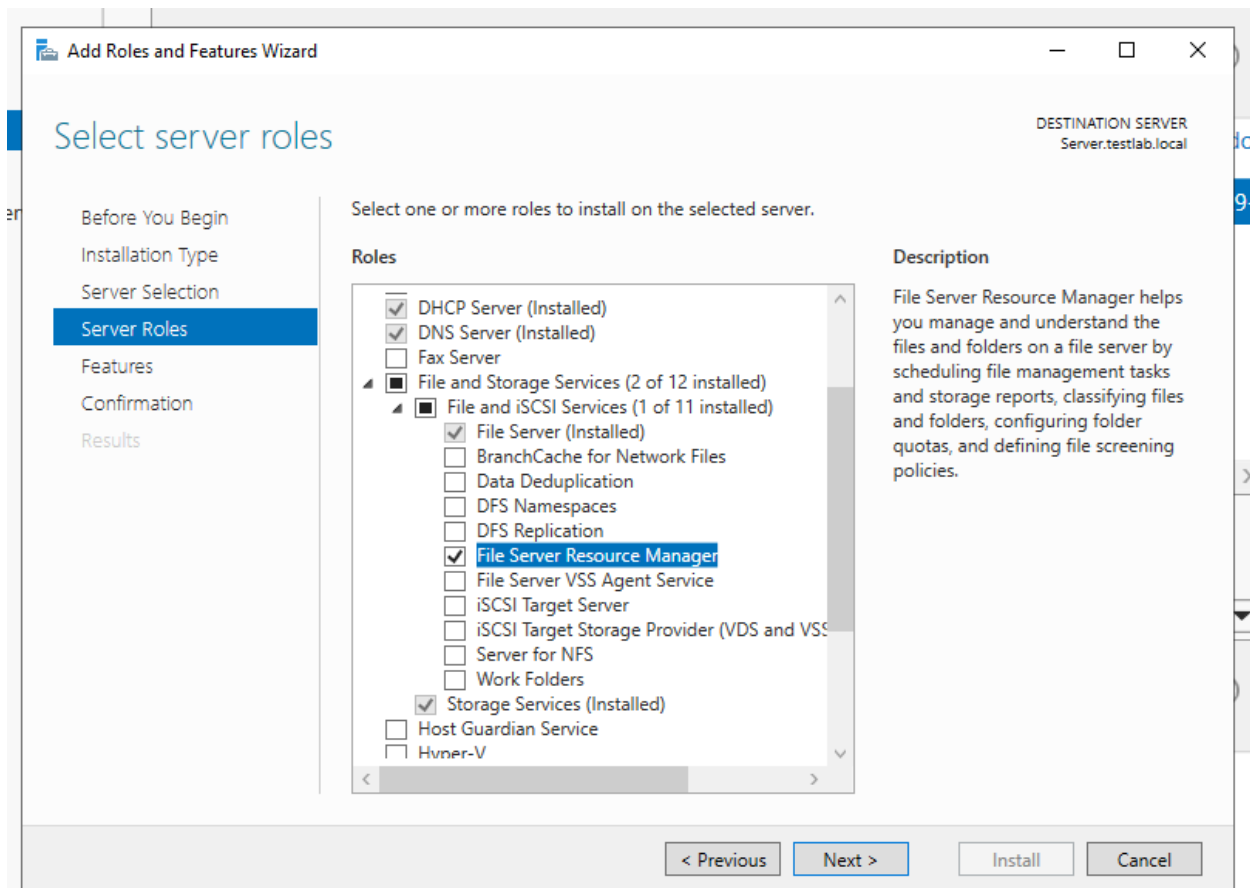
Pinging 192.168.47.101 with 32 bytes of data:
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64
Reply from 192.168.47.101: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.47.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

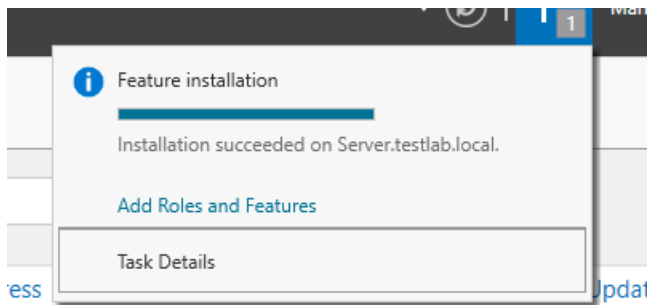
Both the server and the windows client machines can ping the Ubuntu machine.



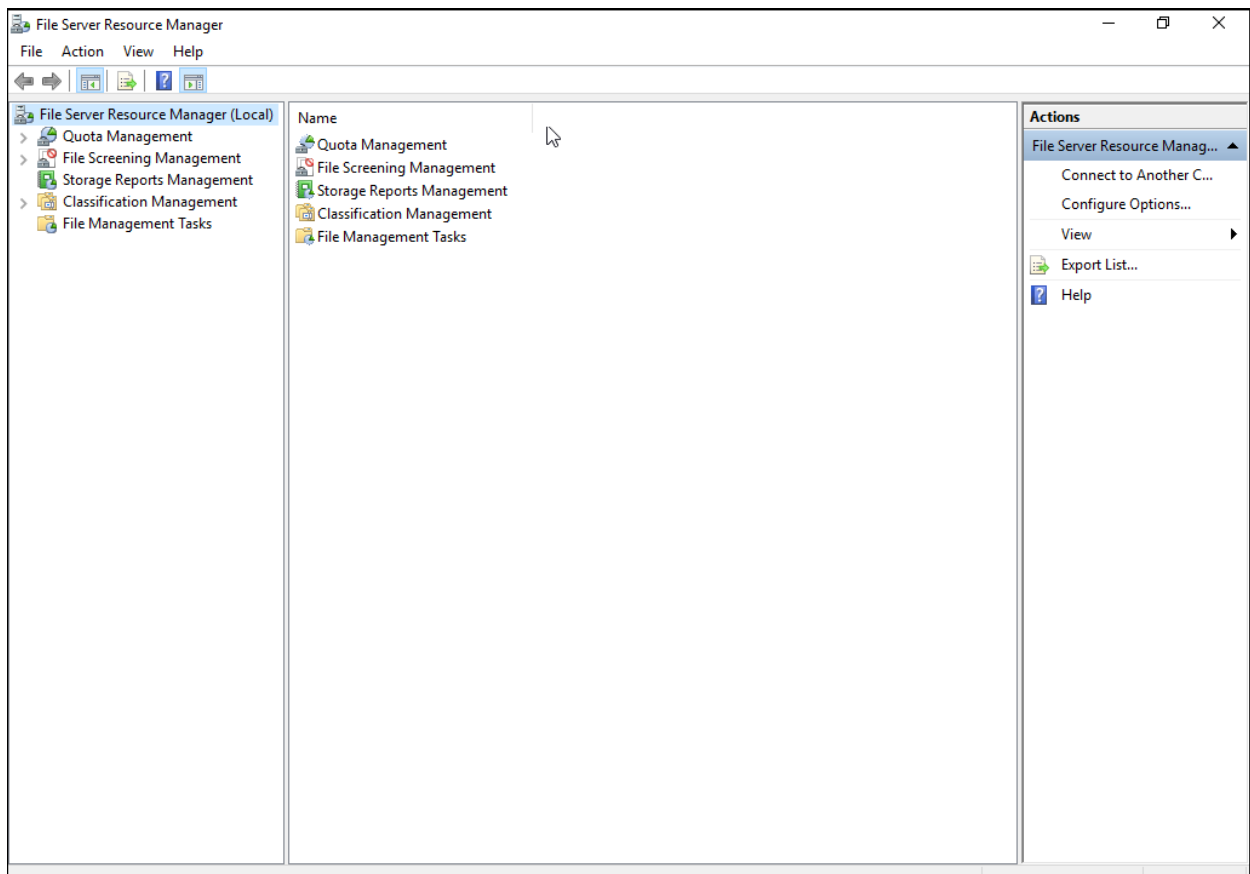
Here we can see both the Windows client machine and the Ubuntu machine are now under the server's management.



In this next part I added the Windows File Server Resource Manager to the Server Machine.



The installation was completed.



Here is the open File Server Resource Manager opened from the tools section as it is now there.

Quota Template Properties for 500MB Limit

Copy properties from quota template (optional):  
500MB Limit

Copy

Settings

Template name:  
500MB Limit

Description (optional):

Space limit

Limit:  
500.000 MB

☒ Hard quota: Do not allow users to exceed limit  
☐ Soft quota: Allow users to exceed limit (use for monitoring)

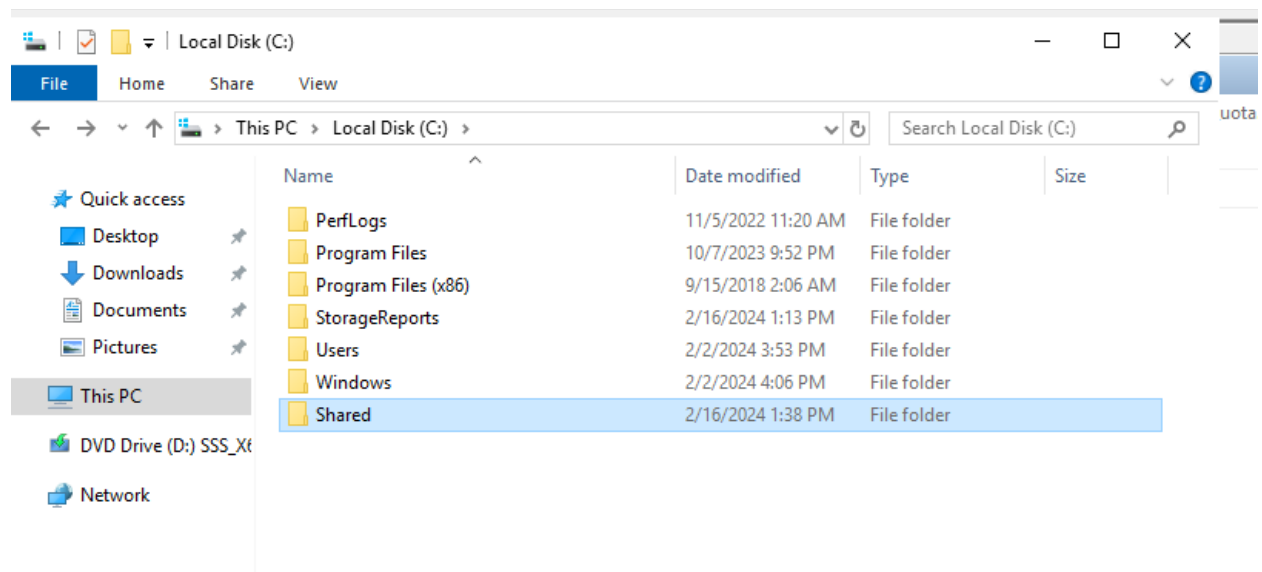
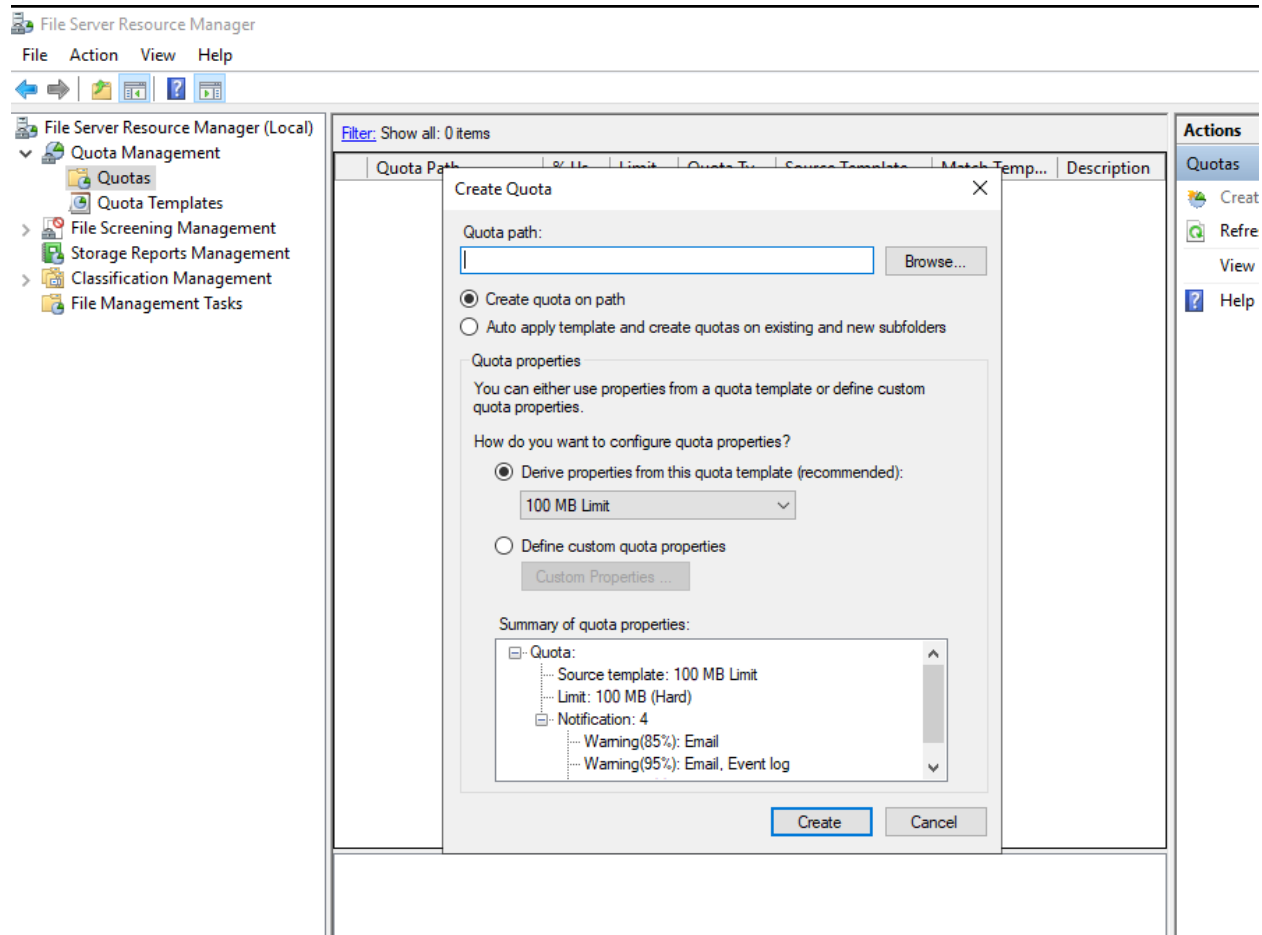
Notification thresholds

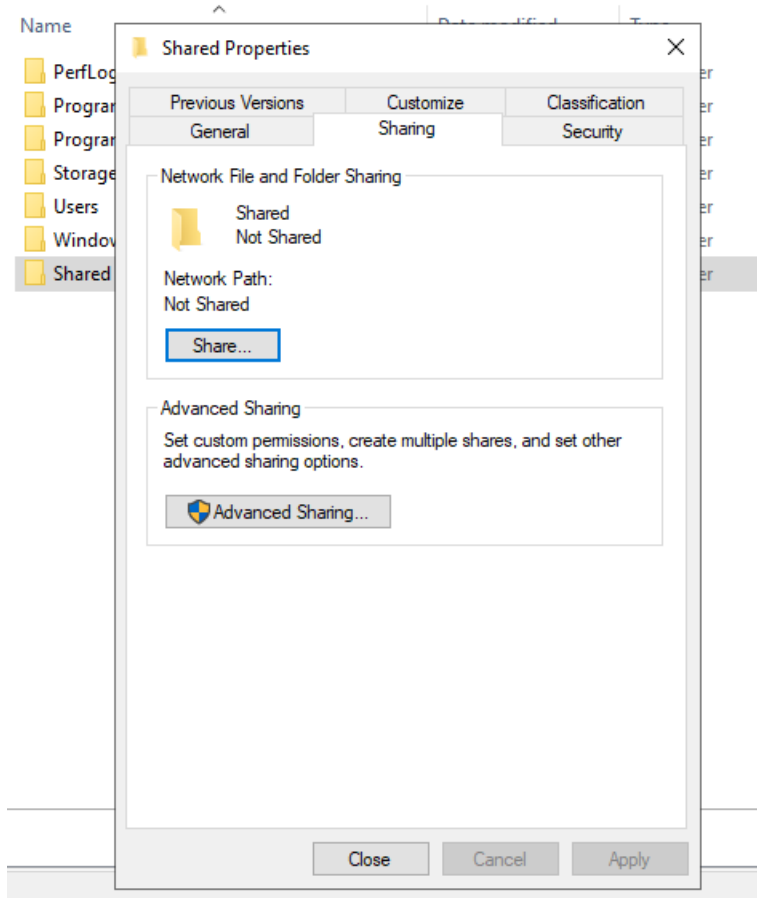
Threshold	E-mail	Event Log	Command	Report
Warning (85%)		✓		

Add... Edit... Remove

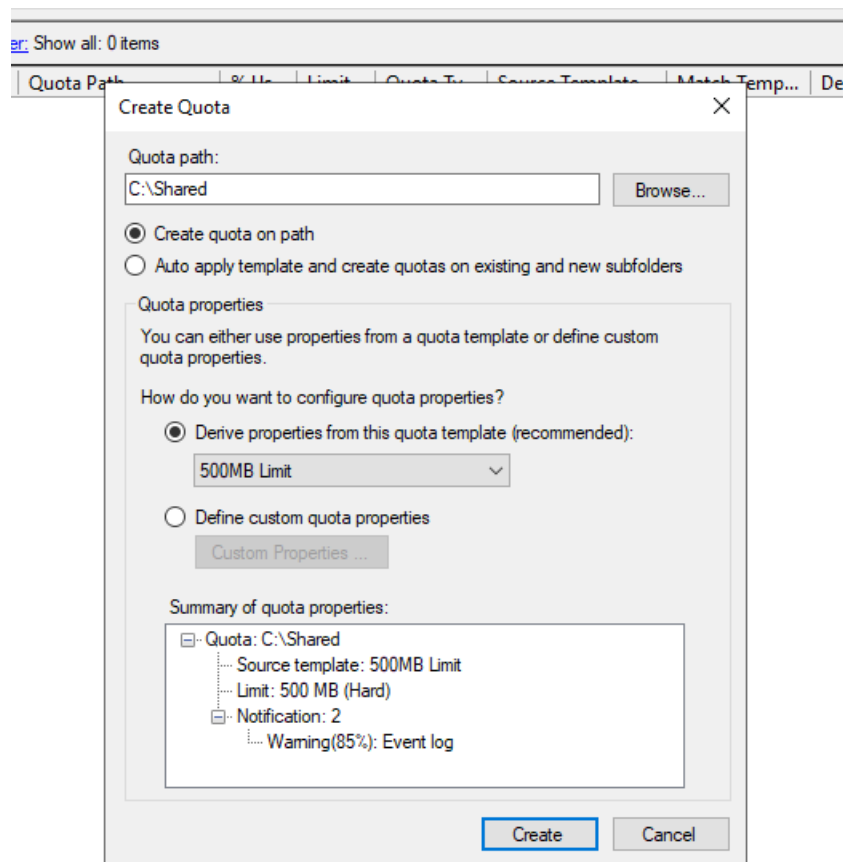
OK Cancel

Under Quota Template I made a new template to be used for server file resource management.

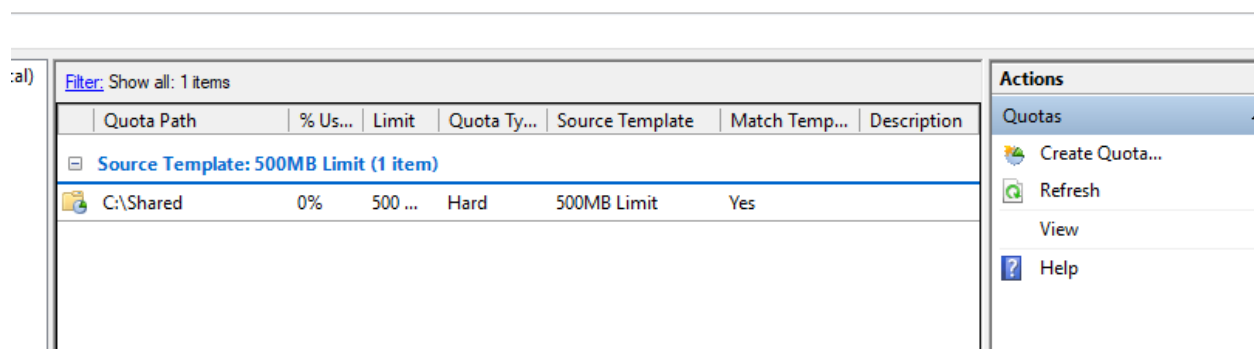




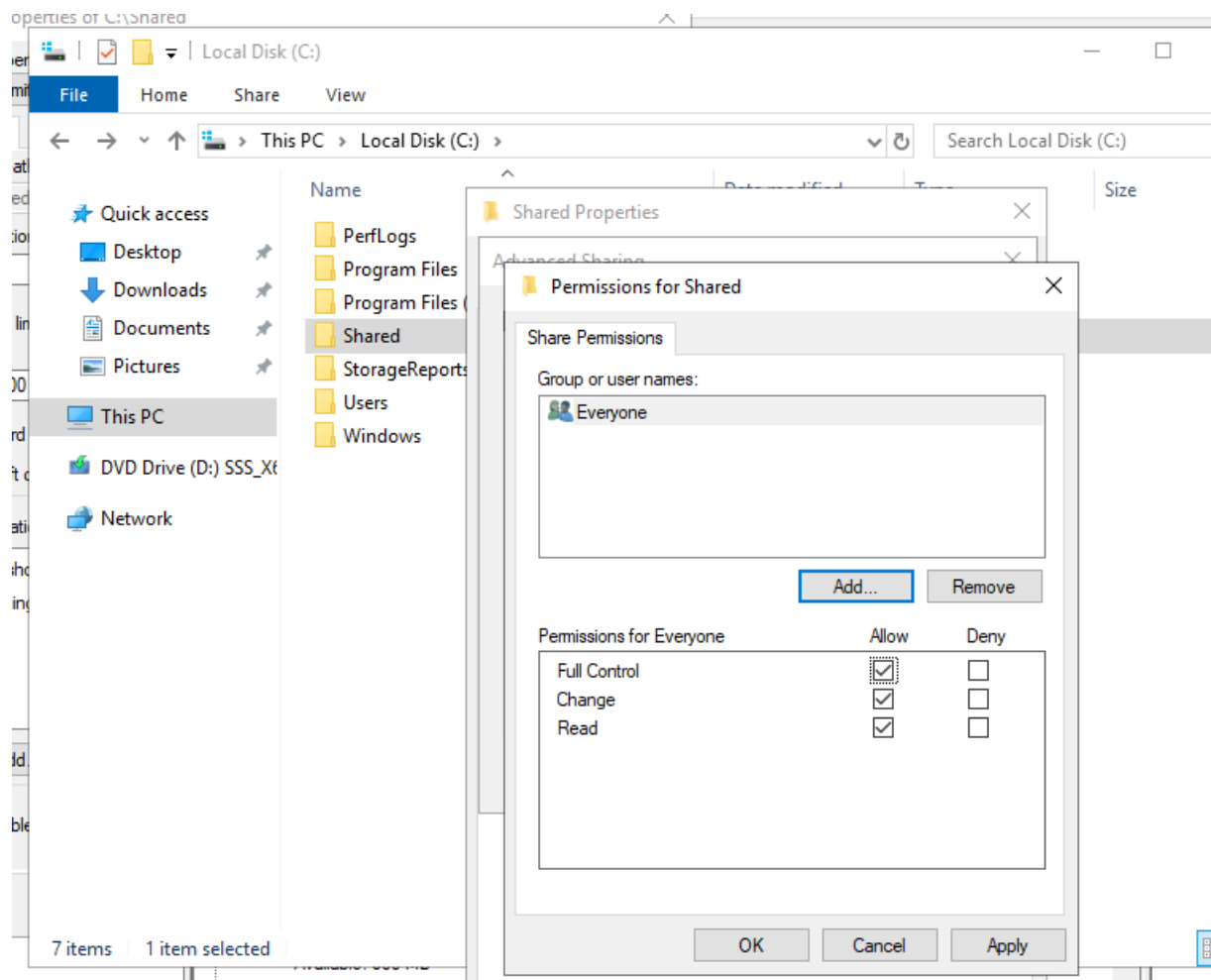




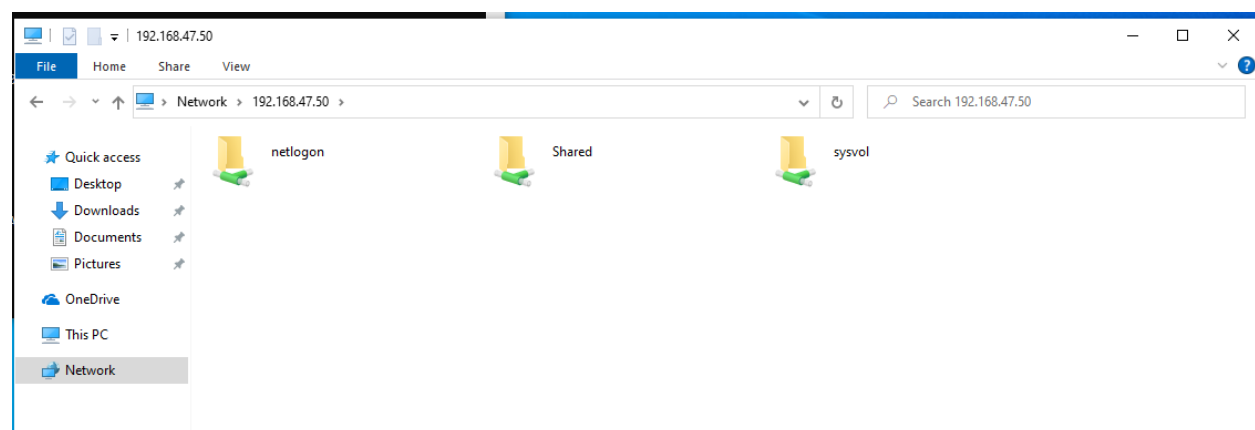
Next, I made a Quota path to the Folder in the C drive called “Shared” and selected the Quota Template I just made above (500MB Limit).



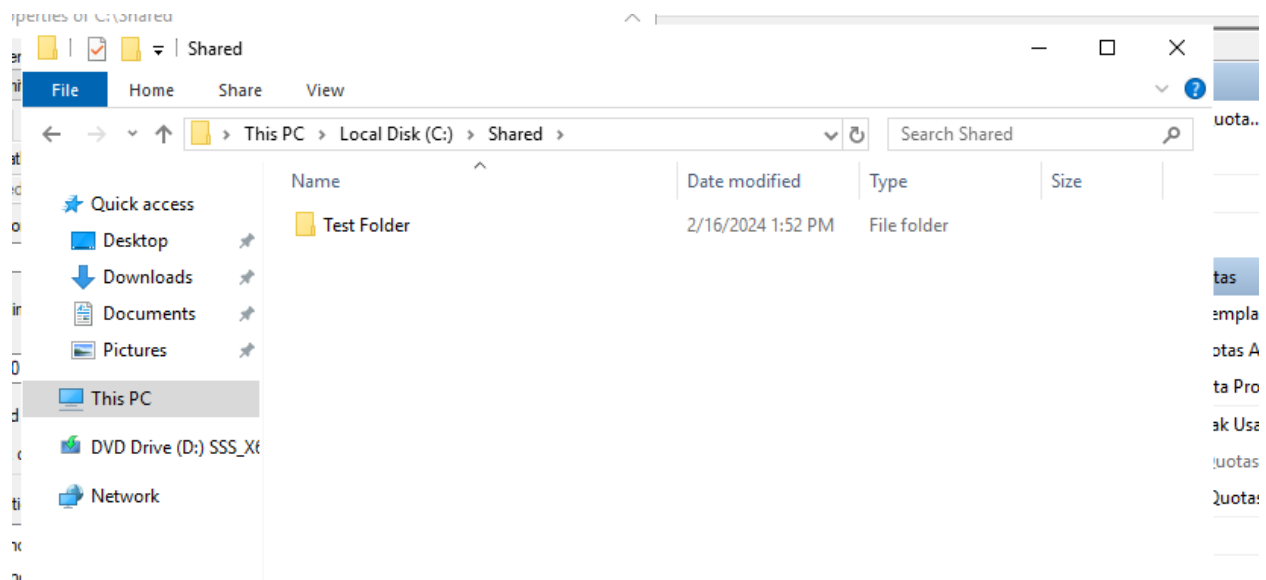
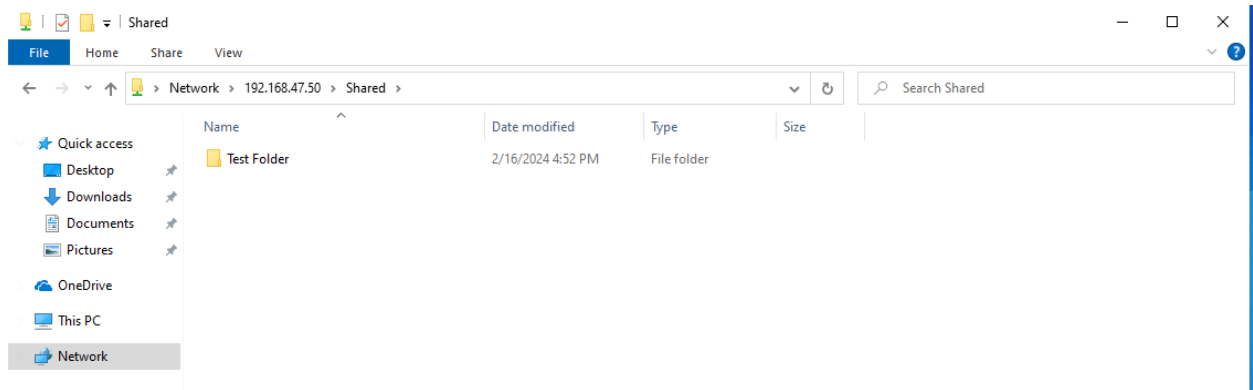
Here we can see the Quota Path is created and active.



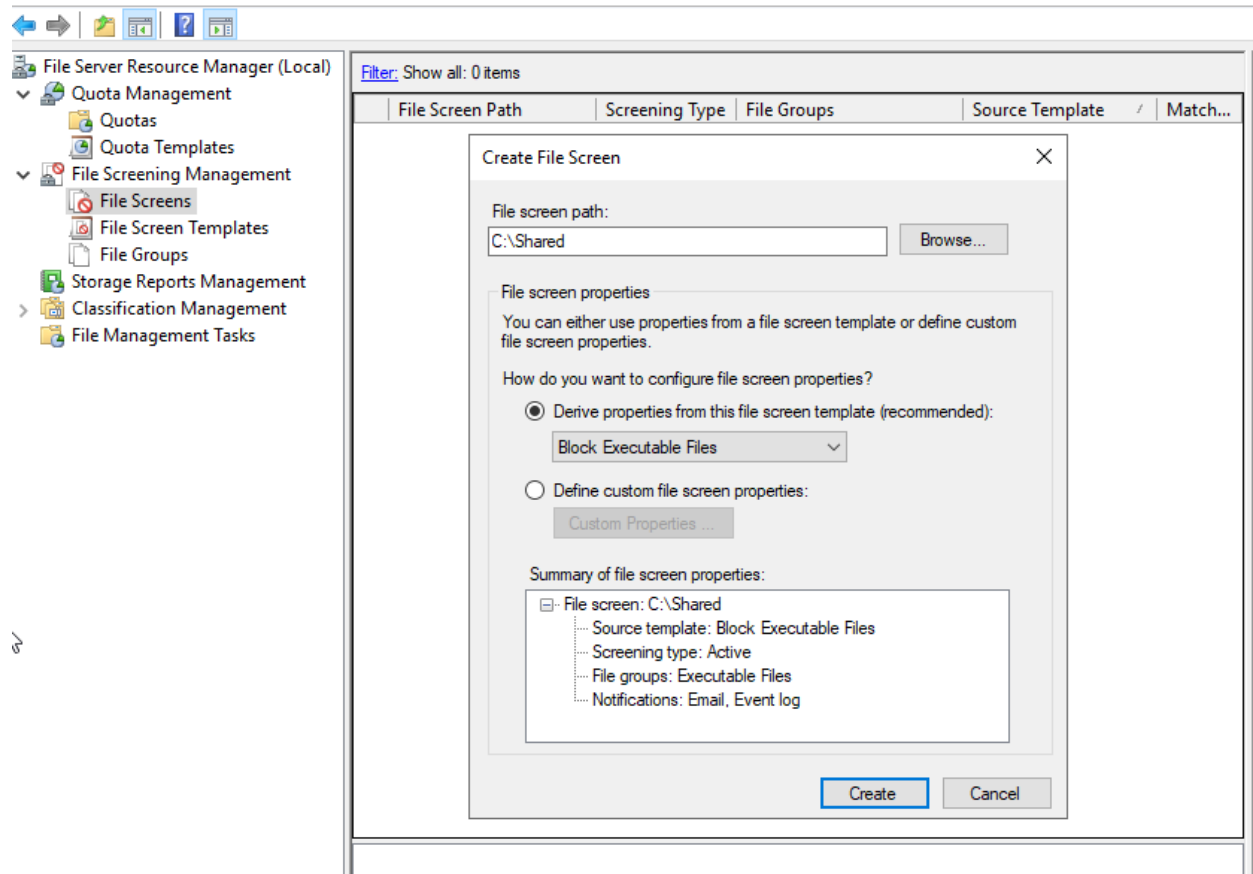
Going into the Window Server's C drive folder I located the "Shared" folder and right clicked. Went down to properties and enabled the shared permissions. This folder will now be visible to the connected network machines.



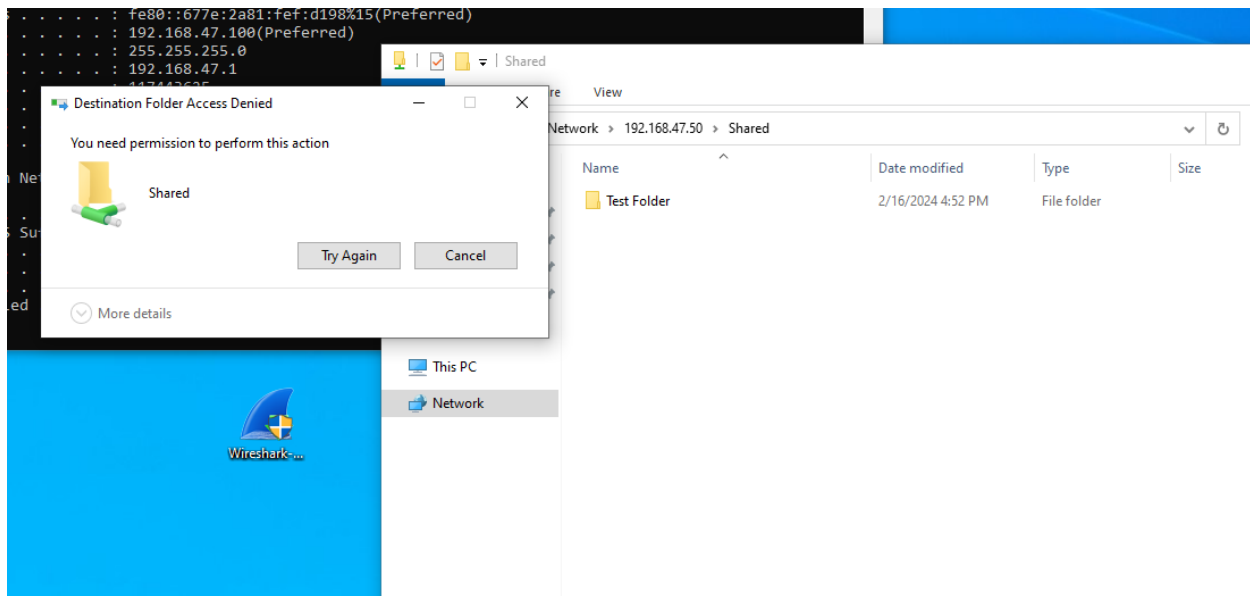
Looking at the Windows Client machine we can see the “Shared” folder appears and is accessible.



Here we can see I created a folder inside of the folder named “Shared”. This folder is accessible to all network devices on the domain.



Here I created and edited the File Screen to block executable files when they are put in the folder.



Back on the Windows Client machine we can see the Wireshark executable being copied from the desktop into the Shared network folder. This is not allowed as Wireshark is an executable application and this folder blocks executable files.

## Conclusion:

Everything went smoothly in this lab as I was able to accurately set up the three virtual machines I will be using in future labs throughout the course of the semester. I had some trouble connecting the Ubuntu machine to my Windows Server 2019 that took some time to work through. The File Server Resource Manager was nice to implement into my Windows Server as this is an important feature for global network file sharing within an organization.

## References:

[https://www.youtube.com/watch?v=b\\_f0-8CqYKU](https://www.youtube.com/watch?v=b_f0-8CqYKU)

<https://www.youtube.com/watch?v=46W2reX1OQs>

<https://www.youtube.com/watch?v=YgBh4SZVEZc&t=157s>