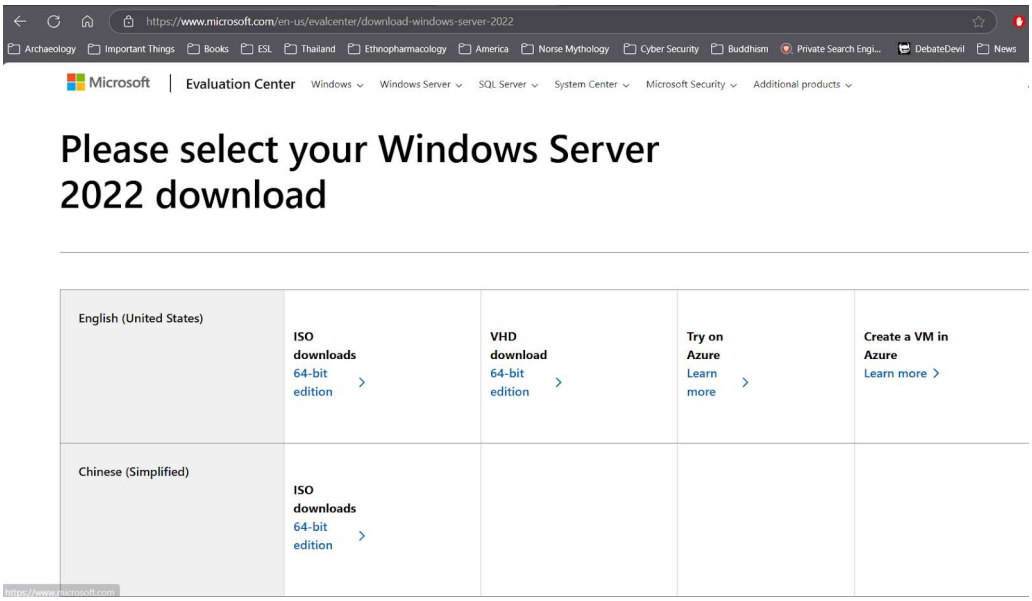
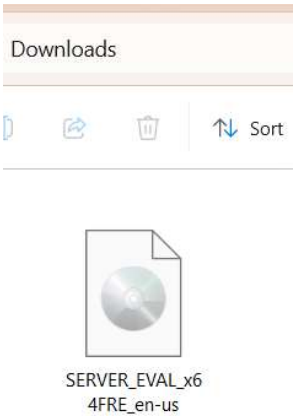
[T-Helpdesk-Lab-Series/README.md at main · Simokid/IT-Helpdesk-Lab-Series]

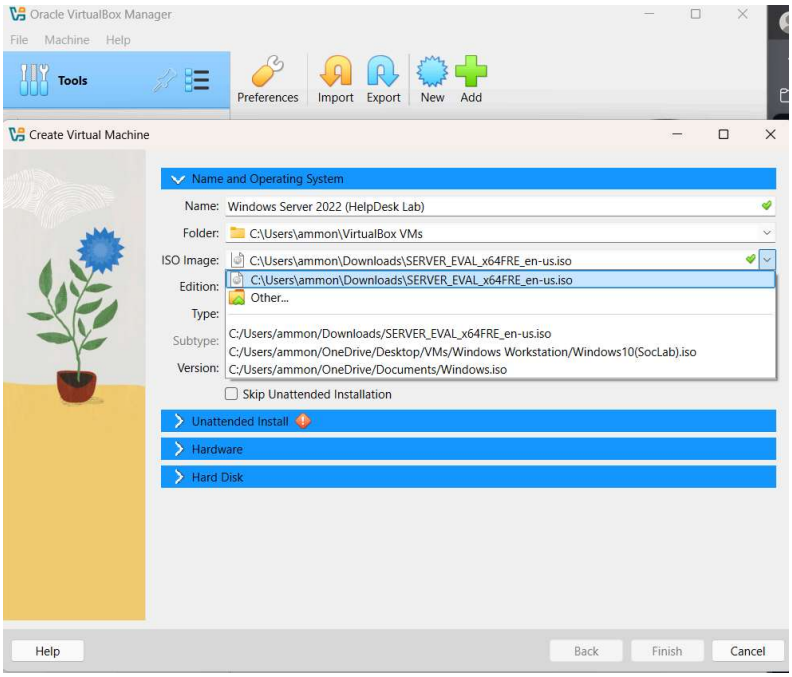
Windows Server 2022: Install & Setup

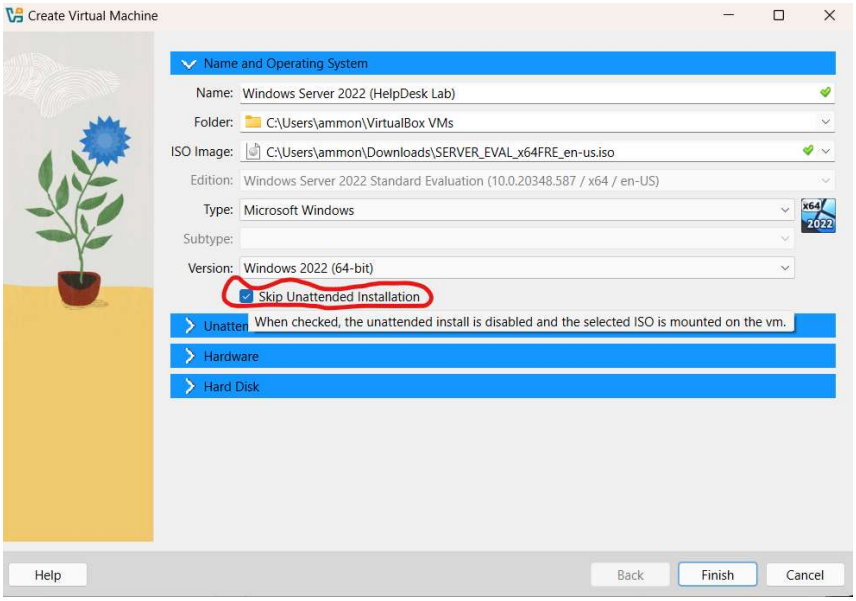
First, download the 64 Bit Edition ISO file. (You should already have VirtualBox installed)



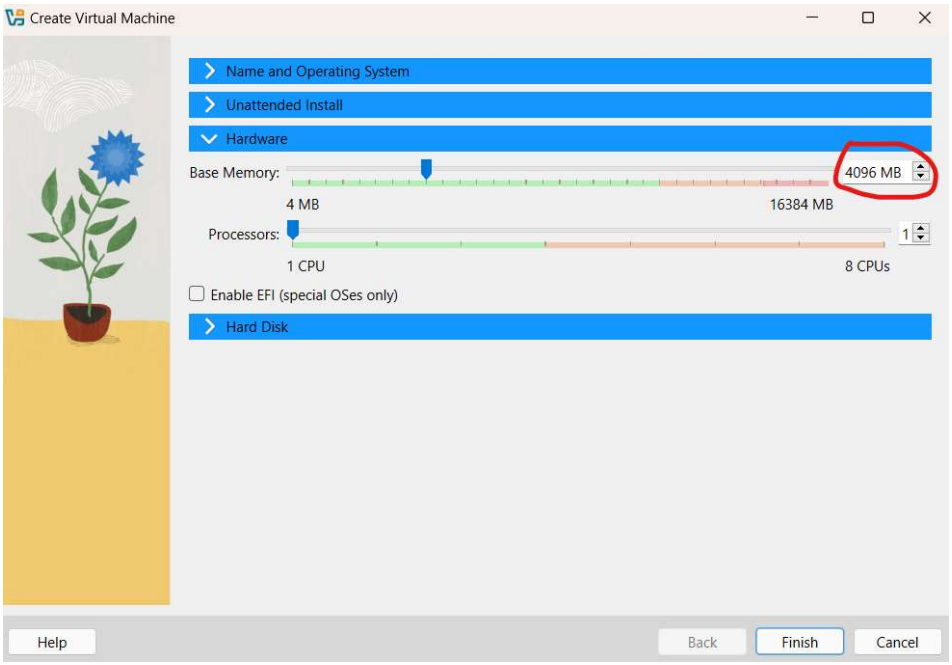


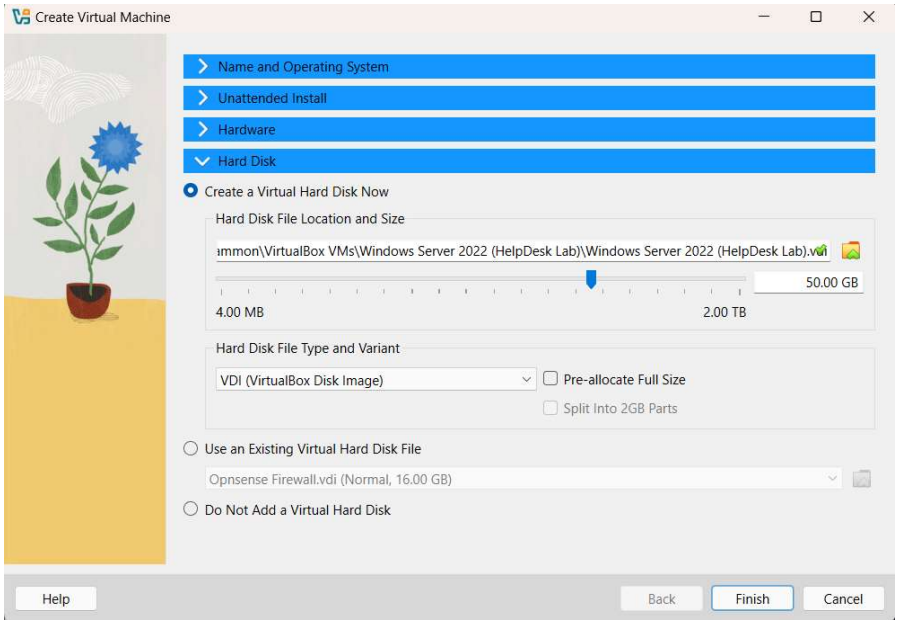
Next, click “New” in VirtualBox and set up the Windows Server 2022 machine.



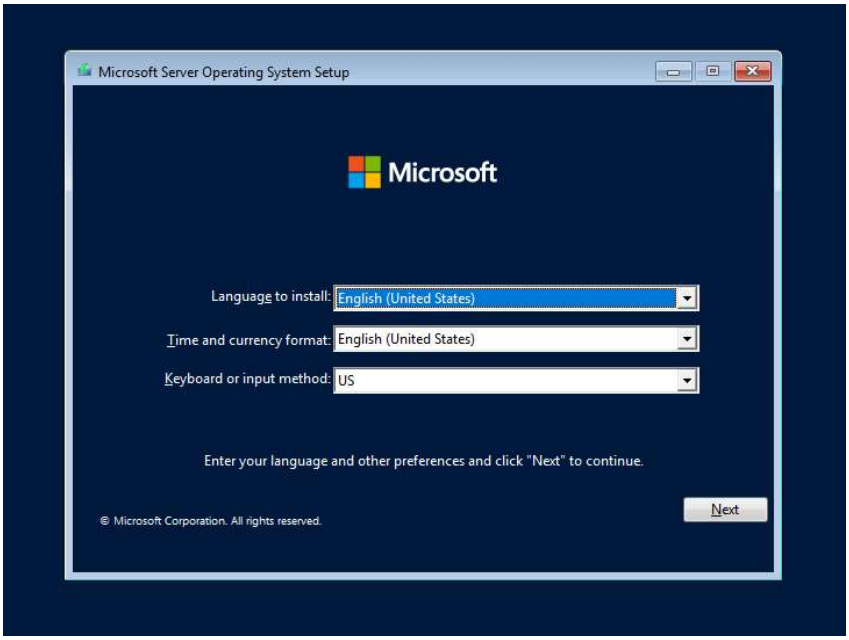


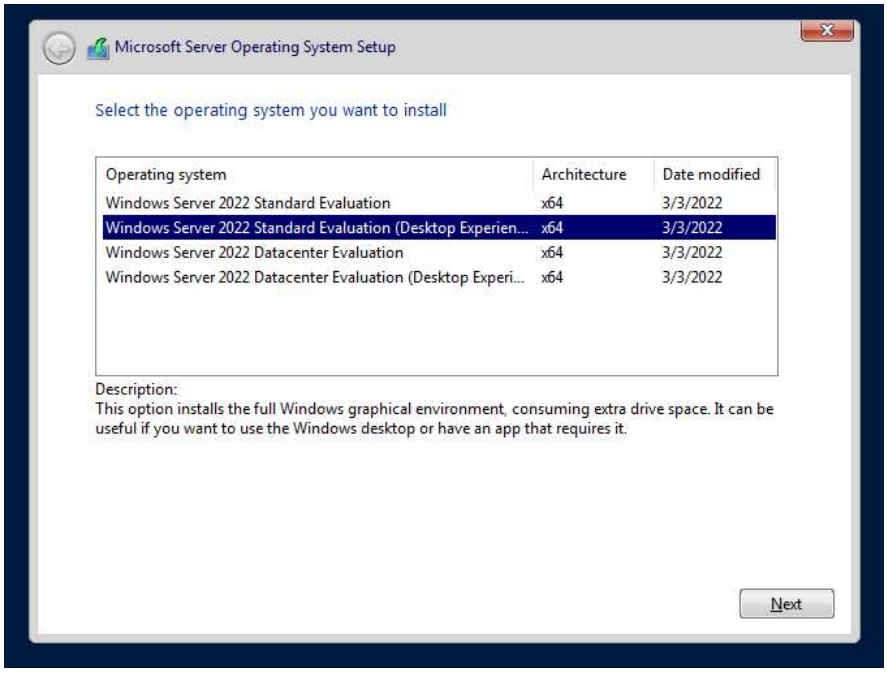
My host has 16 GB of RAM so I gave this vm 4 GB of RAM. 4GB is enough for our lab. Be careful not to assign too much RAM to your vm, or it could cause it to crash.

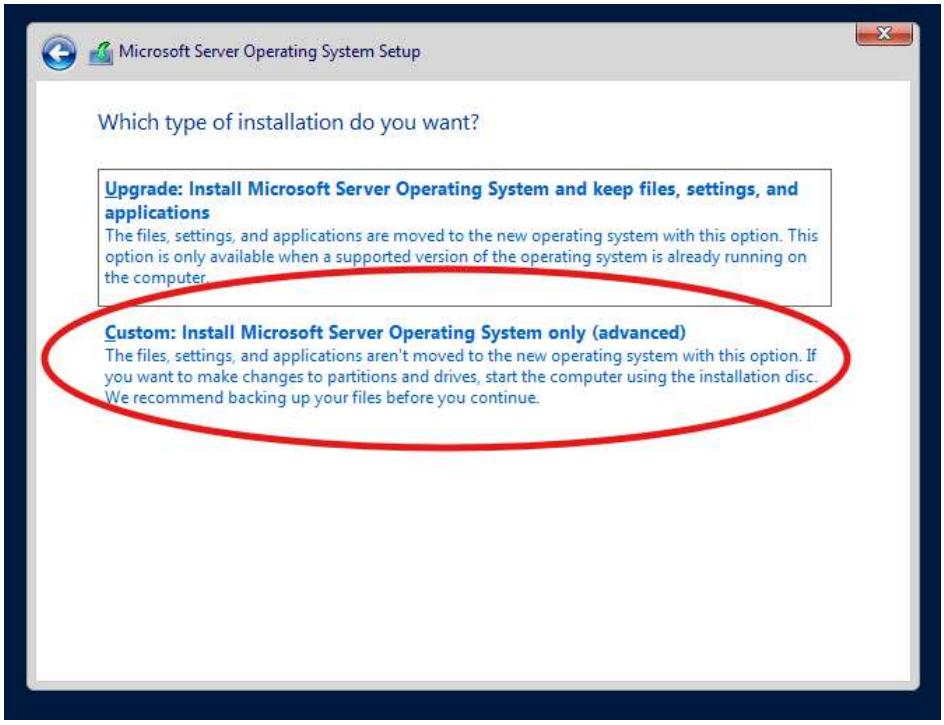


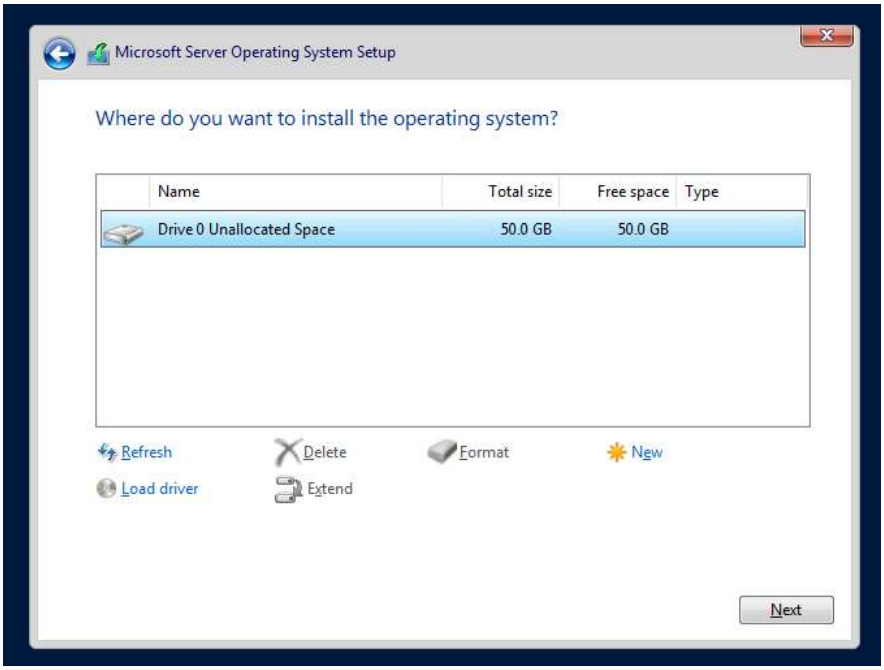


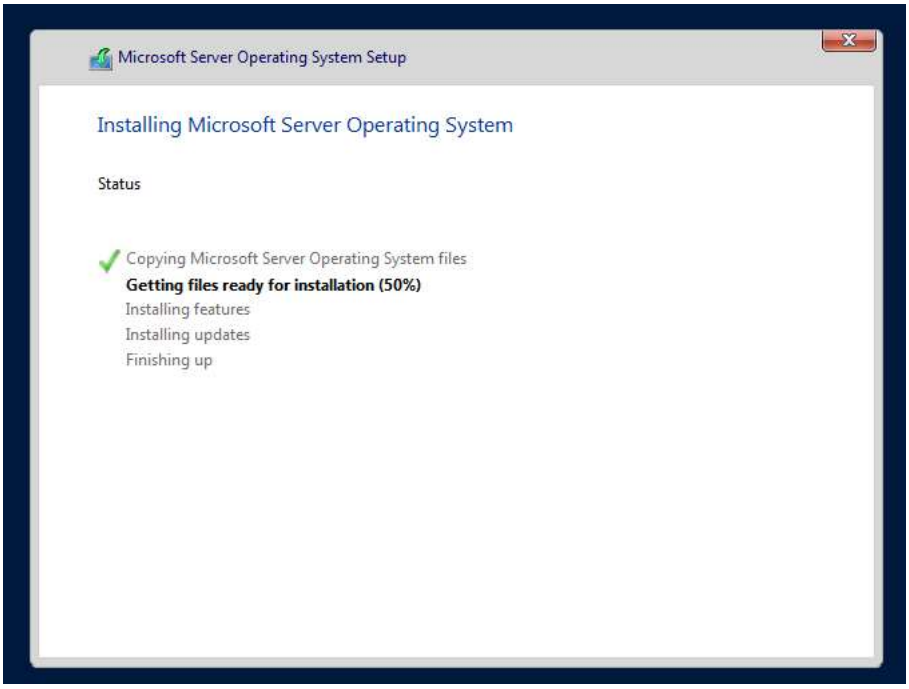
Click “Start”, and the vm will bring you to an installation page. Click “next” and then “install”. Follow the installation steps.


Microsoft Server Operating System Setup
Microsoft
Language to install: English (United States)
Time and currency format: English (United States)
Keyboard or input method: US
Enter your language and other preferences and click "Next" to continue.
© Microsoft Corporation. All rights reserved.
Next

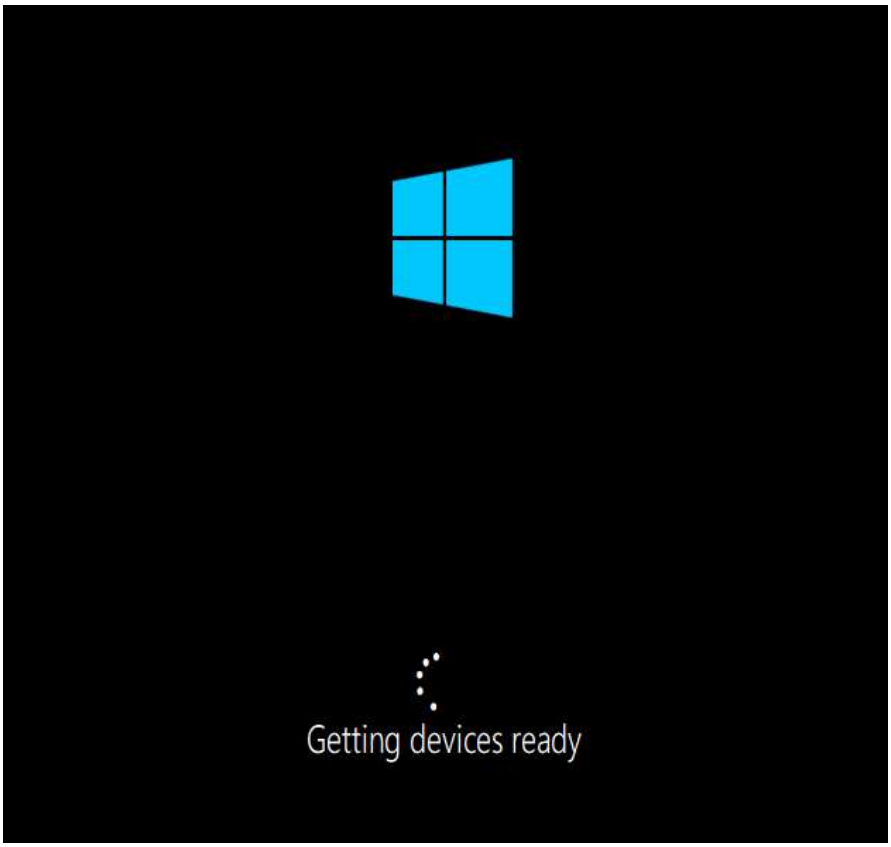

Microsoft Server Operating System Setup
Select the operating system you want to install
Operating system
Architecture
Date modified
Windows Server 2022 Standard Evaluation
x64
3/3/2022
Windows Server 2022 Standard Evaluation (Desktop Experien...
x64
3/3/2022
Windows Server 2022 Datacenter Evaluation
x64
3/3/2022
Windows Server 2022 Datacenter Evaluation (Desktop Experi...
x64
3/3/2022
Description:
This option installs the full Windows graphical environment, consuming extra drive space. It can be useful if you want to use the Windows desktop or have an app that requires it.
Next


Microsoft Server Operating System Setup
Which type of installation do you want?
Upgrade: Install Microsoft Server Operating System and keep files, settings, and applications
The files, settings, and applications are moved to the new operating system with this option. This option is only available when a supported version of the operating system is already running on the computer.
Custom: Install Microsoft Server Operating System only (advanced)
The files, settings, and applications aren't moved to the new operating system with this option. If you want to make changes to partitions and drives, start the computer using the installation disc. We recommend backing up your files before you continue.

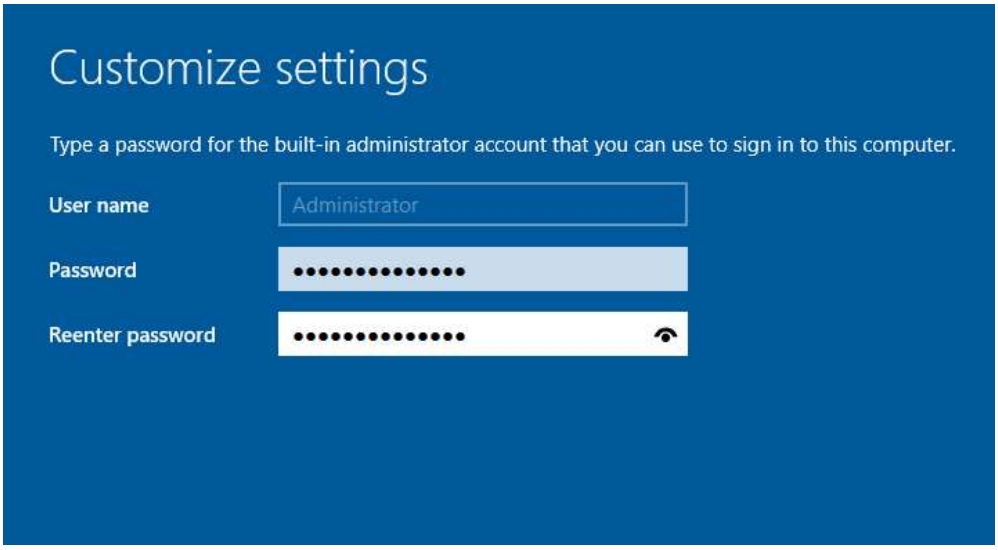

Microsoft Server Operating System Setup
Where do you want to install the operating system?
Name
Total size
Free space
Type
Drive 0 Unallocated Space
50.0 GB
50.0 GB
Refresh
Delete
Format
New
Load driver
Extend
Next

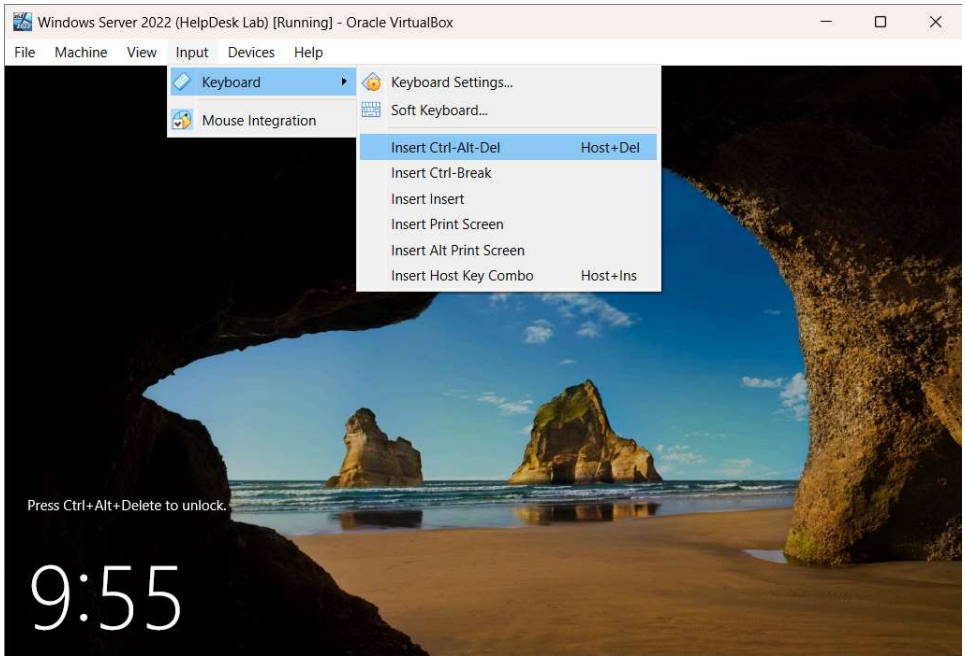


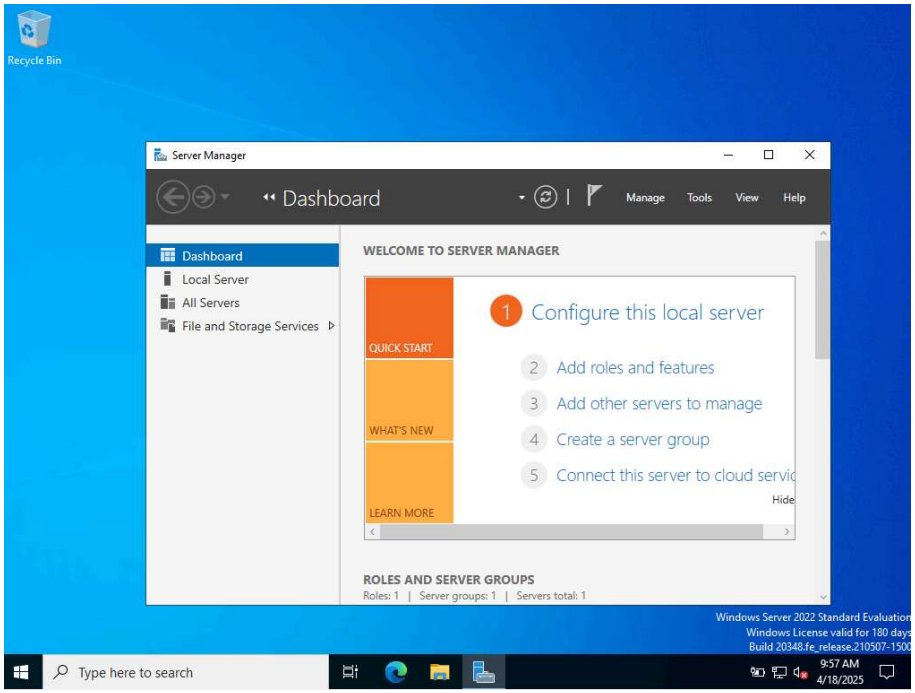
Once the installation is complete the vm will automatically restart.



Then you must create a password for the Administrator account.



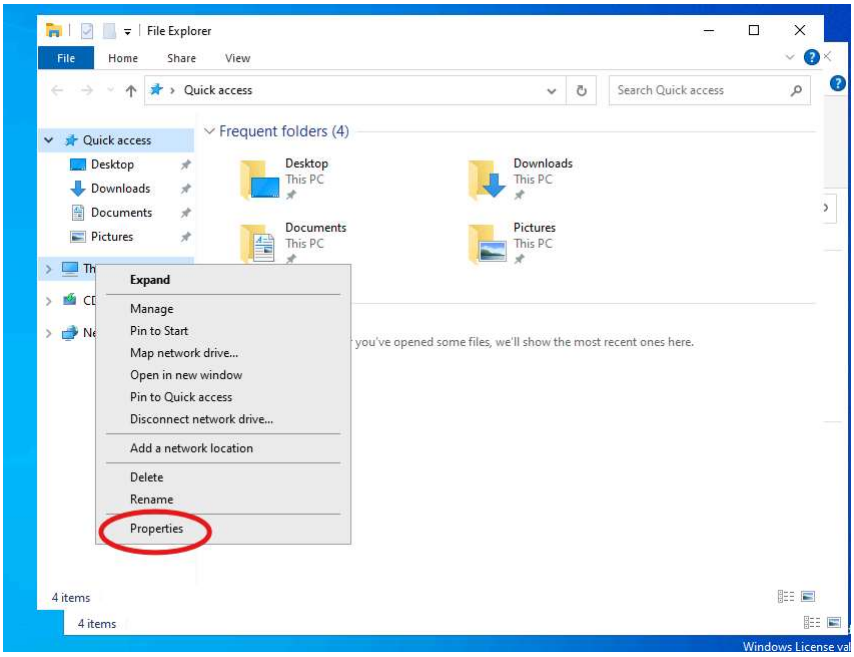


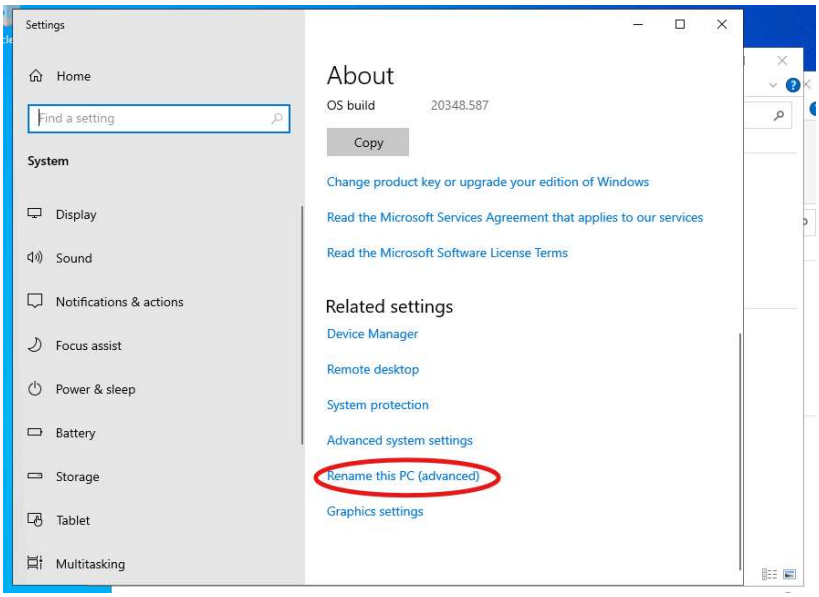

Recycle Bin
Server Manager
Dashboard
Manage
Tools
View
Help
Dashboard
Local Server
All Servers
File and Storage Services
WELCOME TO SERVER MANAGER
QUICK START
WHAT'S NEW
LEARN MORE
1 Configure this local server
2 Add roles and features
3 Add other servers to manage
4 Create a server group
5 Connect this server to cloud servic
Hide
ROLES AND SERVER GROUPS
Roles: 1 | Server groups: 1 | Servers total: 1
Windows Server 2022 Standard Evaluation
Windows License valid for 180 days
Build 20348.fe_release.210507-1500
Type here to search
9:57 AM
4/18/2025

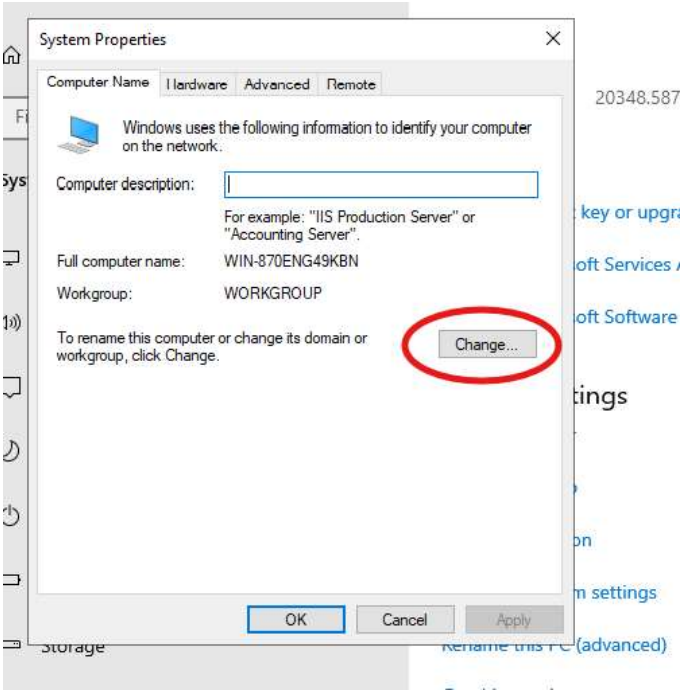
Windows Server 2022: Active Directory

For part 2, we will rename Windows Server 2022, set up Active Directory, and manage domain services.

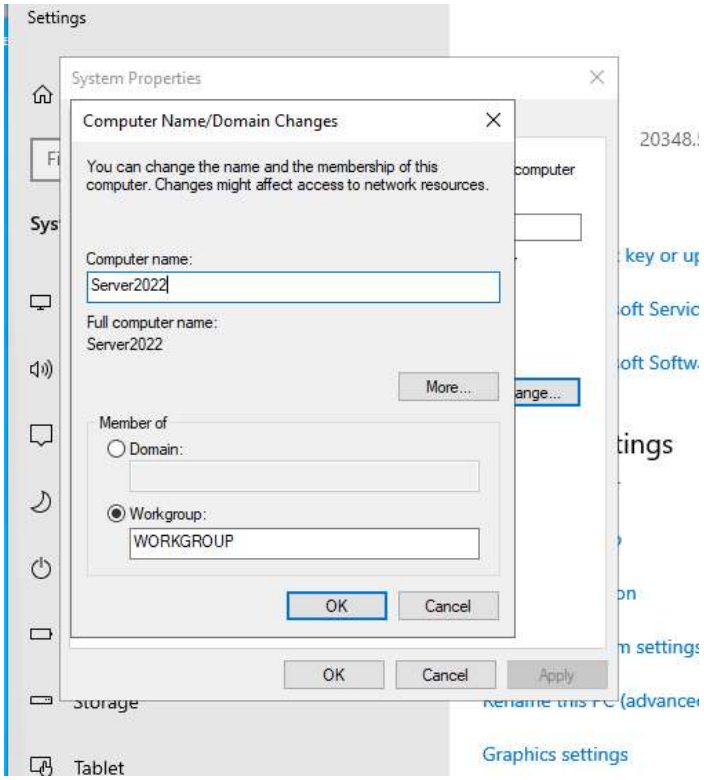
First, we will rename Windows Server 2022…



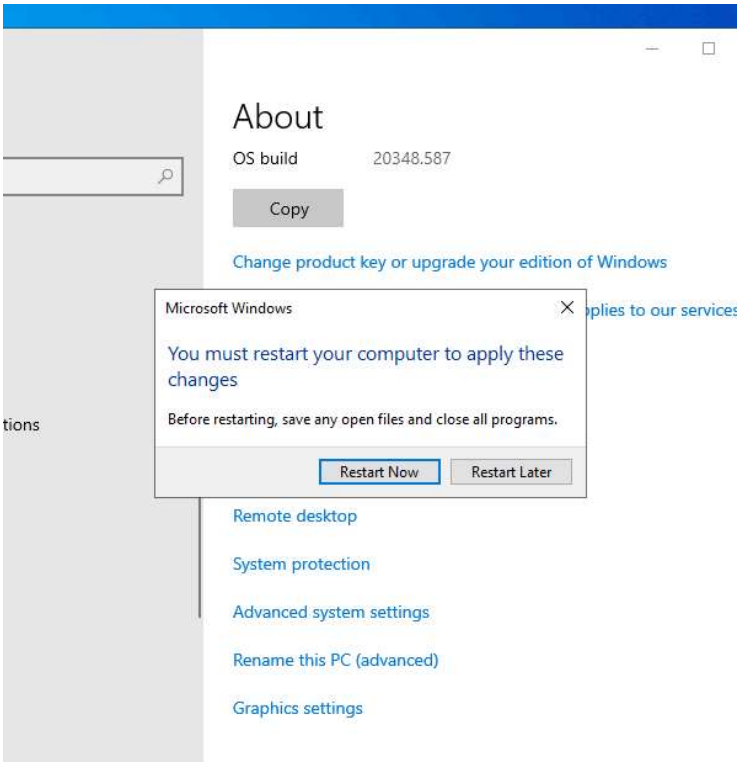




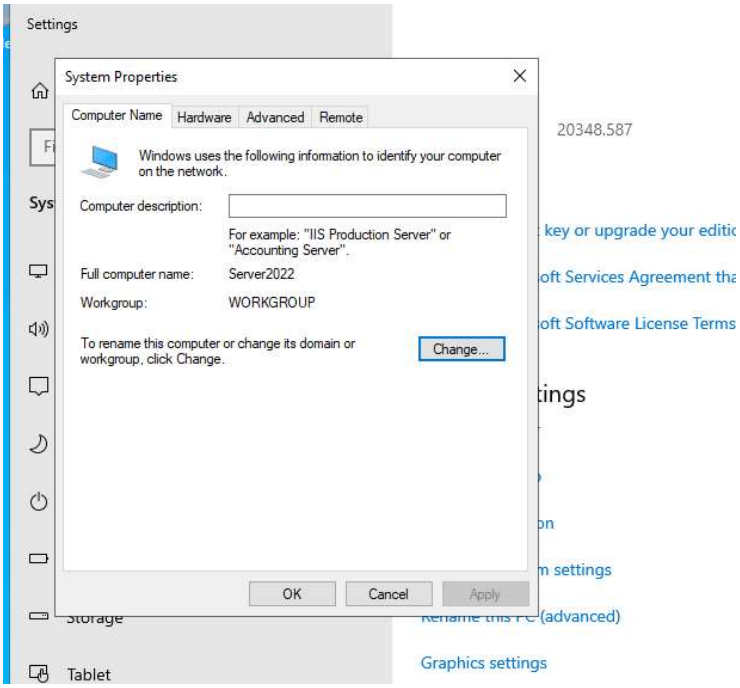
Change the “Computer name” to “Server2022”. Changing the computer name can make it easier for Help Desk to identify, manage, and support machines.



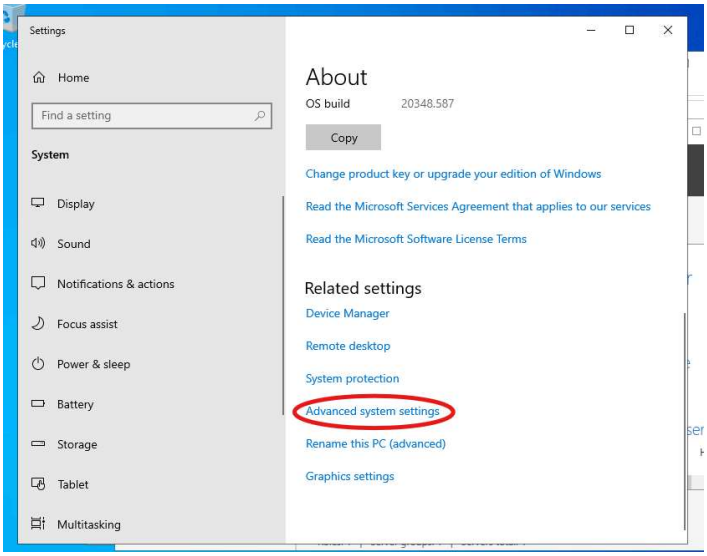
After renaming the computer the computer needs to restart.

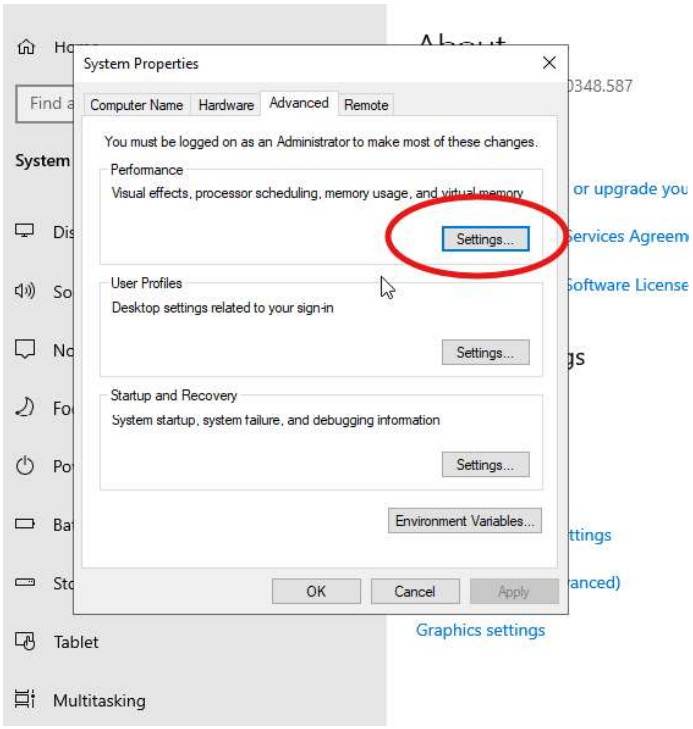


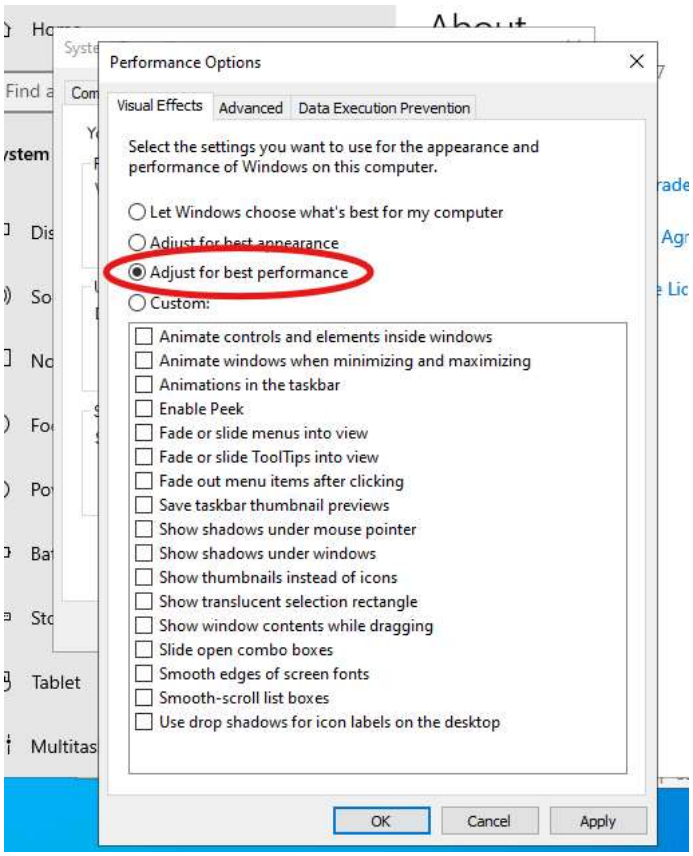
After the restart, verify that the computer name was successfully changed.



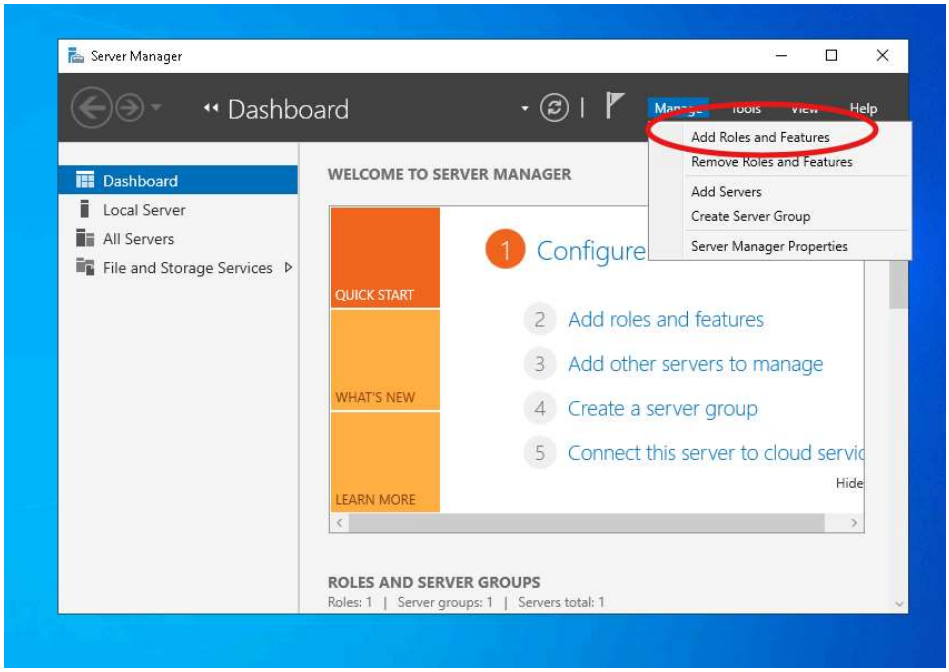
We want to improve the machine's performance and make sure our machines operate efficiently. Start by clicking "Advanced system settings" on the "About your PC" page.

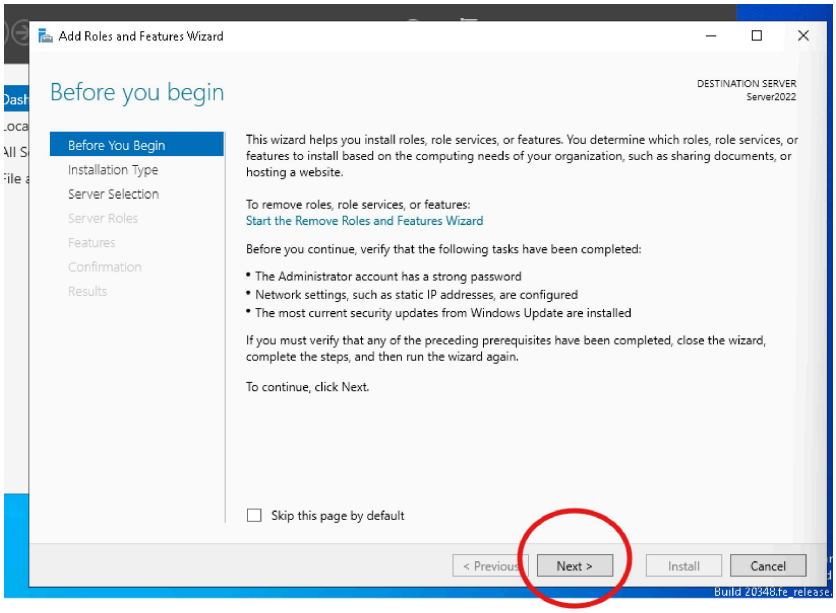


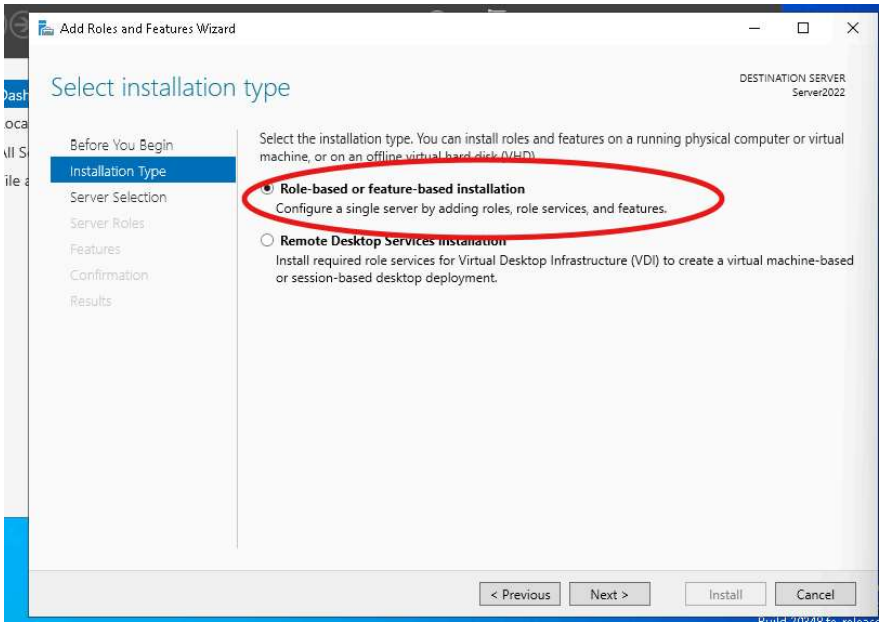

System Properties
Computer Name
Hardware
Advanced
Remote
You must be logged on as an Administrator to make most of these changes.
Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings...
User Profiles
Desktop settings related to your sign-in
Settings...
Startup and Recovery
System startup, system failure, and debugging information
Settings...
Environment Variables...
OK
Cancel
Apply
Tablet
Multitasking
Graphics settings

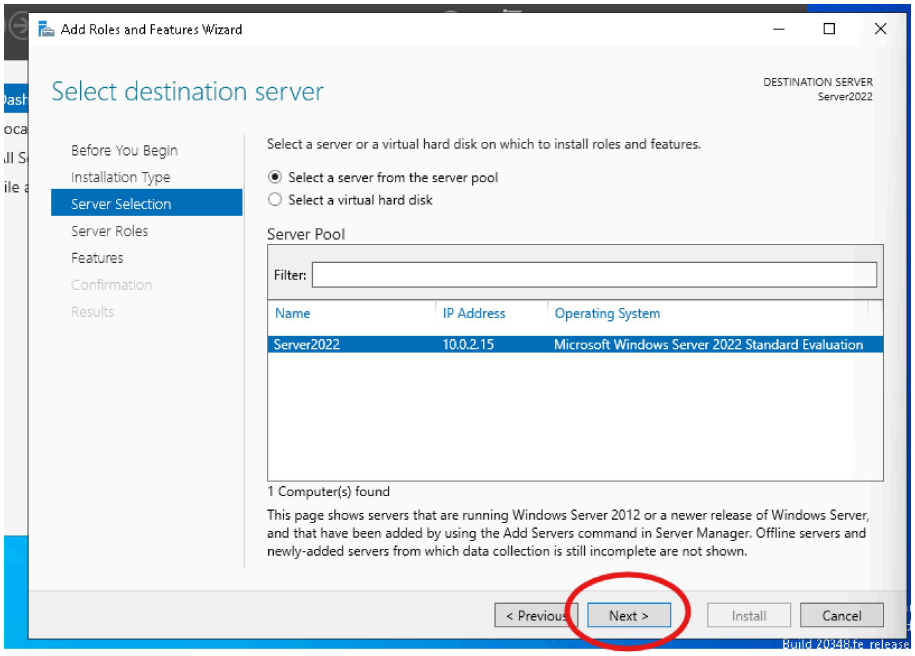

Performance Options
Visual Effects
Advanced
Data Execution Prevention
Select the settings you want to use for the appearance and performance of Windows on this computer.
Let Windows choose what's best for my computer
Adjust for best appearance
Adjust for best performance
Custom:
Animate controls and elements inside windows
Animate windows when minimizing and maximizing
Animations in the taskbar
Enable Peek
Fade or slide menus into view
Fade or slide ToolTips into view
Fade out menu items after clicking
Save taskbar thumbnail previews
Show shadows under mouse pointer
Show shadows under windows
Show thumbnails instead of icons
Show translucent selection rectangle
Show window contents while dragging
Slide open combo boxes
Smooth edges of screen fonts
Smooth-scroll list boxes
Use drop shadows for icon labels on the desktop
OK
Cancel
Apply

Now we will install Active Directory. AD is important for Help Desk because it has user account management, access permissions, security/policy enforcement, auditing/troubleshooting, and SSO support. It is an essential tool for Help Desk. To install, go to “Manage” in the top right corner of “Server Manager” and click “Add Roles and Features”. Then follow the steps.

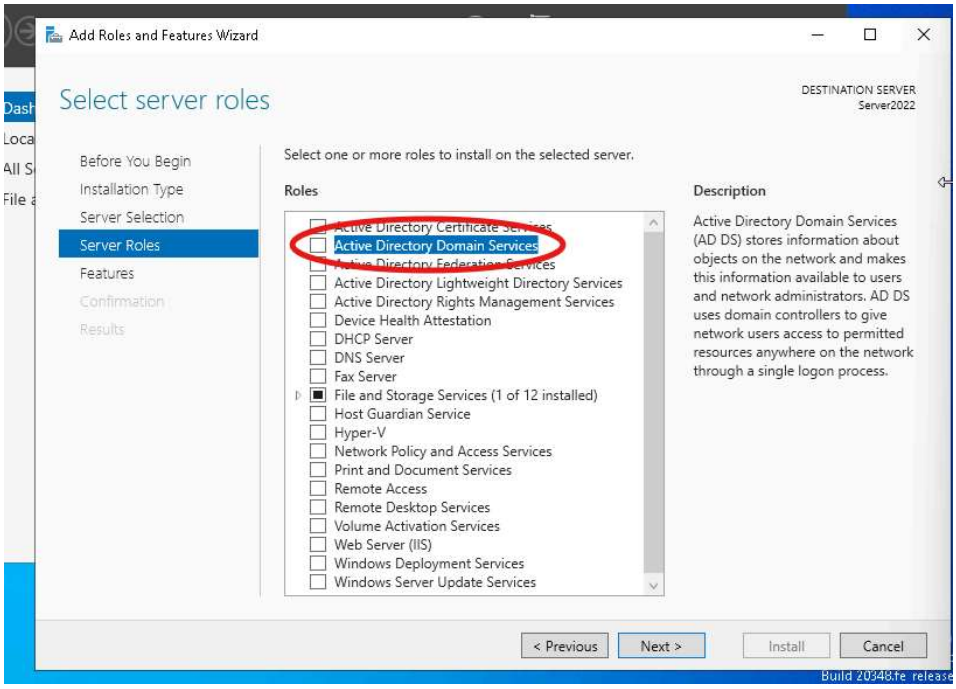


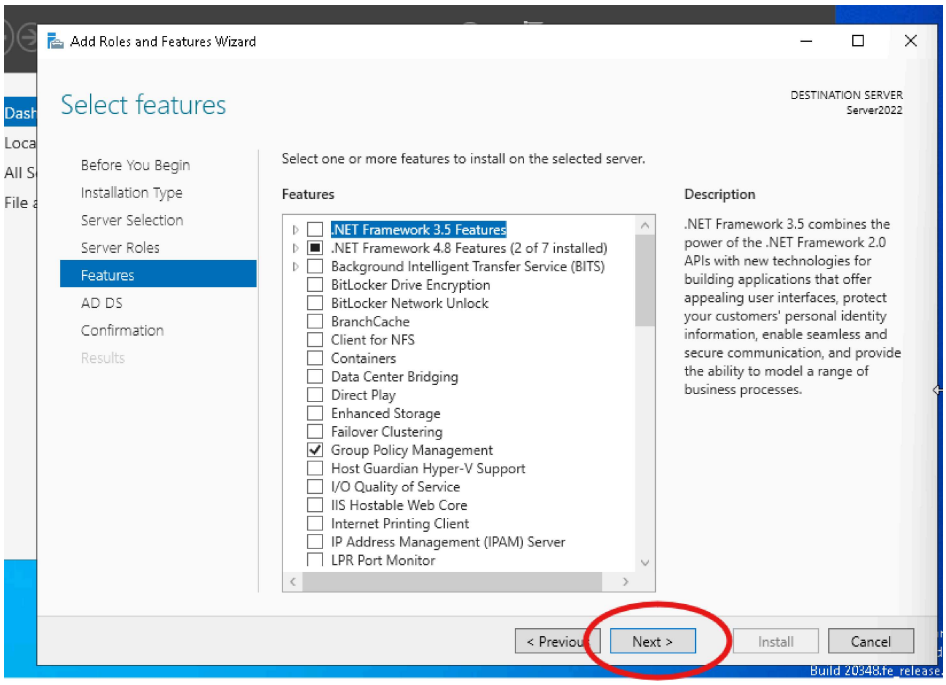


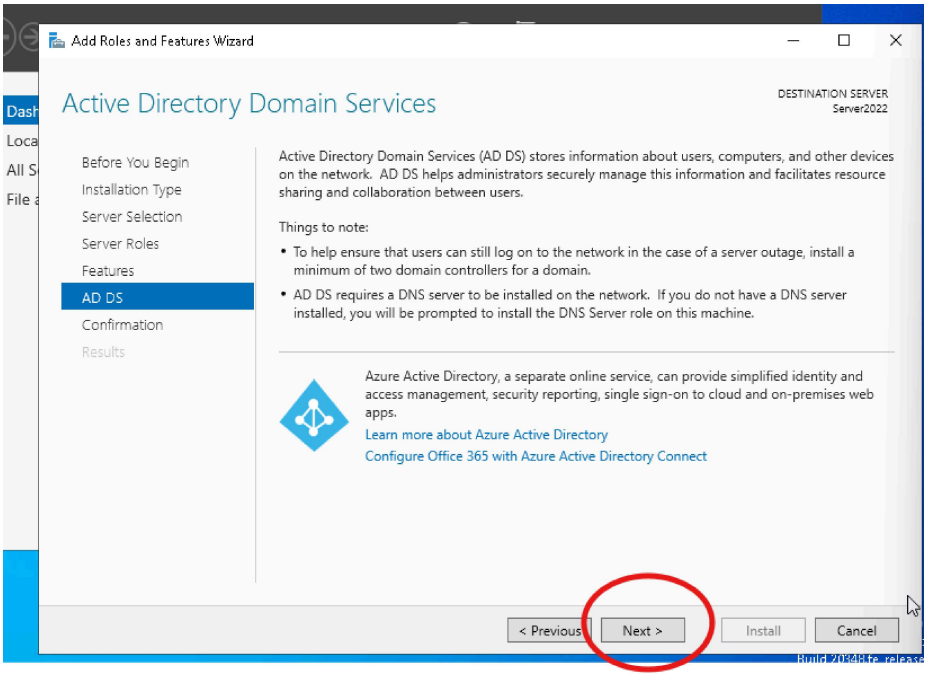


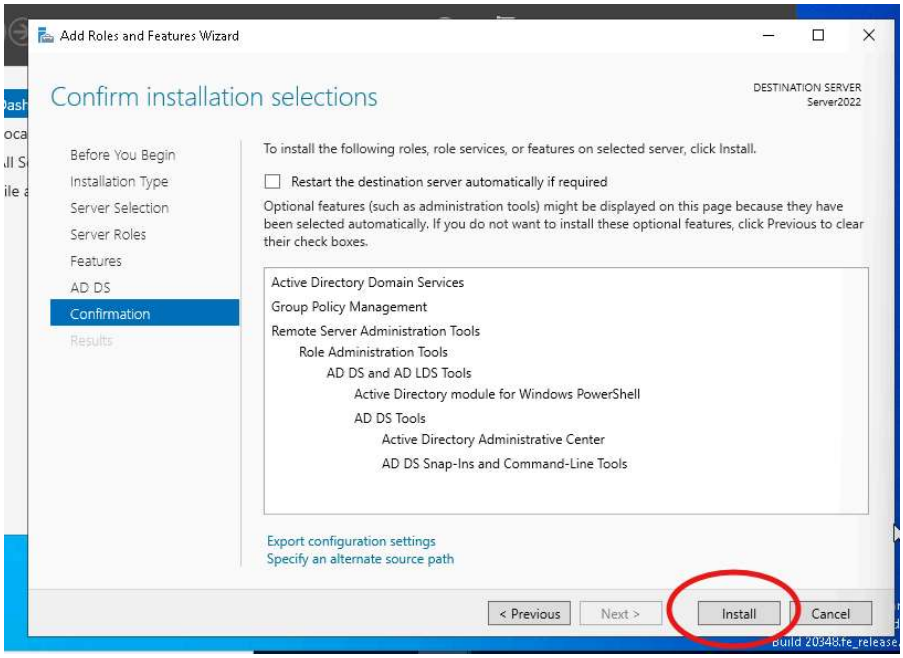


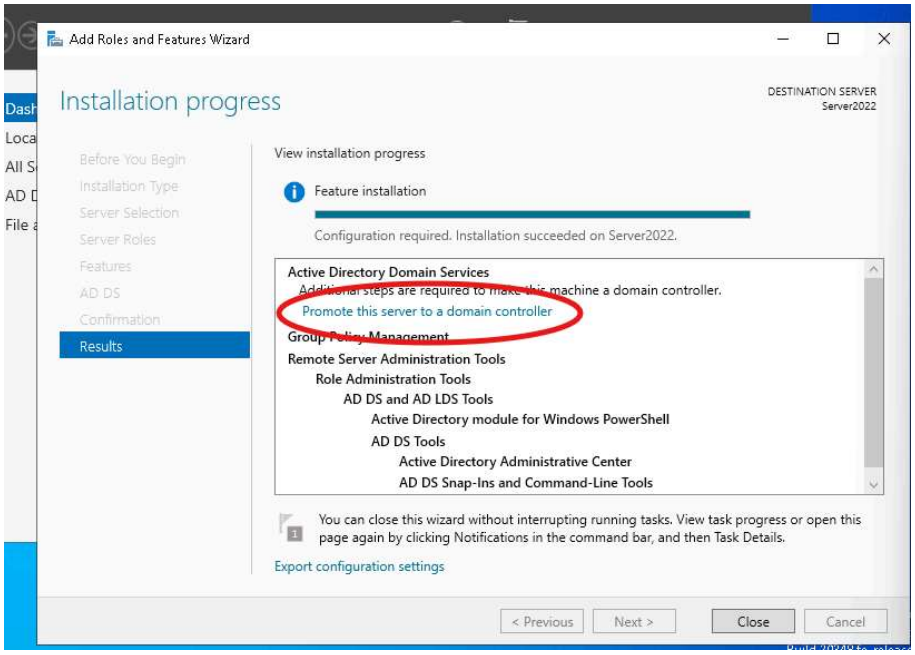
We want to install Active Directory Domain Service (AD DS) because it is the first step to establish a Windows domain that manages users, computers, and policies.

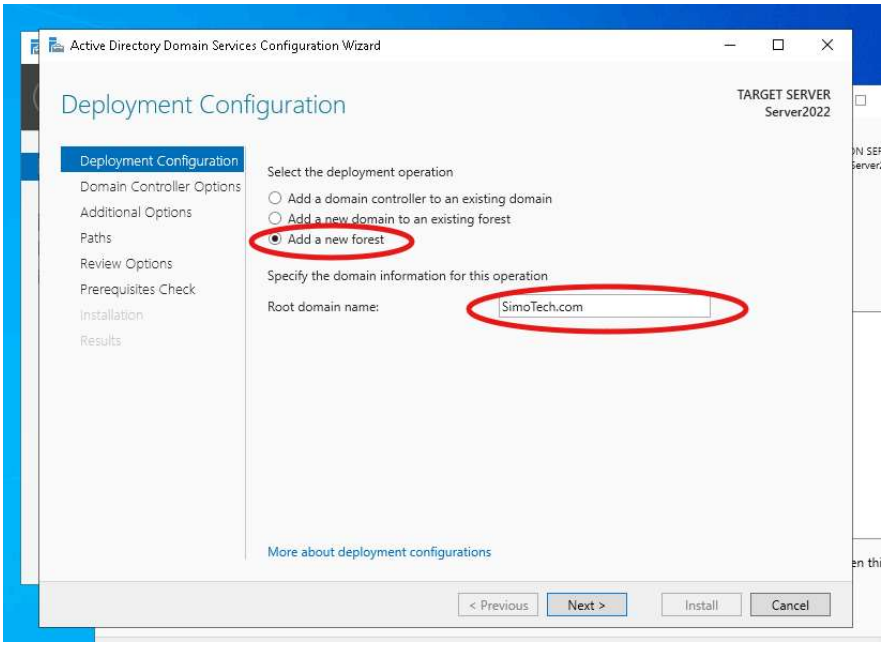

Add Roles and Features Wizard
Select server roles
DESTINATION SERVER
Server2022
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results
Select one or more roles to install on the selected server.
Roles
Active Directory Certificate Services
Active Directory Domain Services
Active Directory Federation Services
Active Directory Lightweight Directory Services
Active Directory Rights Management Services
Device Health Attestation
DHCP Server
DNS Server
Fax Server
File and Storage Services (1 of 12 installed)
Host Guardian Service
Hyper-V
Network Policy and Access Services
Print and Document Services
Remote Access
Remote Desktop Services
Volume Activation Services
Web Server (IIS)
Windows Deployment Services
Windows Server Update Services
Description
Active Directory Domain Services (AD DS) stores information about objects on the network and makes this information available to users and network administrators. AD DS uses domain controllers to give network users access to permitted resources anywhere on the network through a single logon process.
< Previous
Next >
Install
Cancel

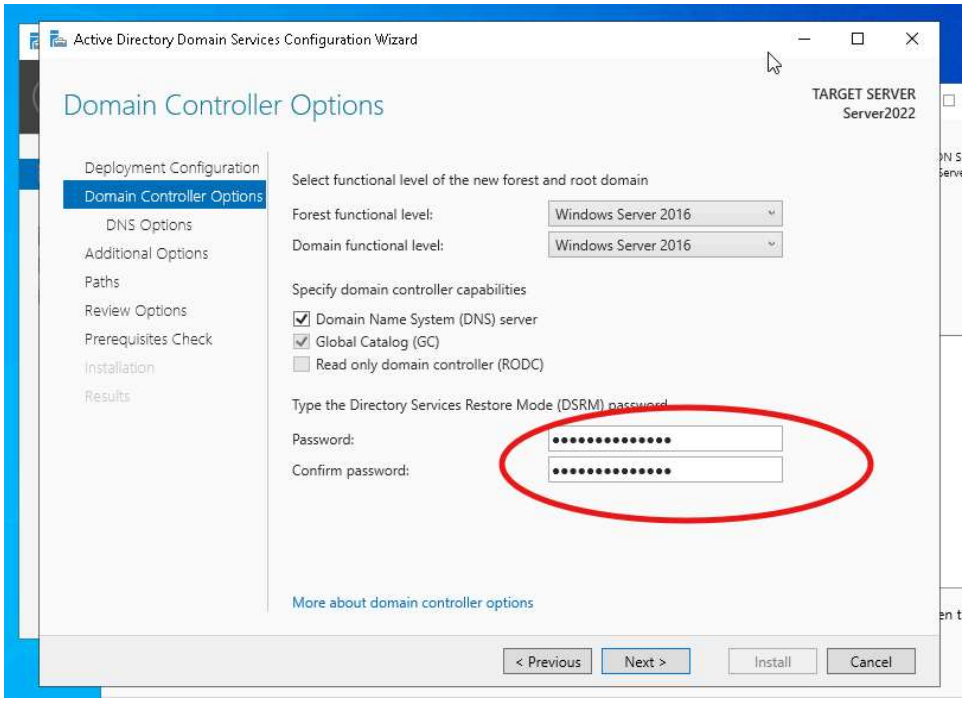

Add Roles and Features Wizard
Select features
DESTINATION SERVER
Server2022
Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
Confirmation
Results
Select one or more features to install on the selected server.
Features
.NET Framework 3.5 Features
.NET Framework 4.8 Features (2 of 7 installed)
Background Intelligent Transfer Service (BITS)
BitLocker Drive Encryption
BitLocker Network Unlock
BranchCache
Client for NFS
Containers
Data Center Bridging
Direct Play
Enhanced Storage
Failover Clustering
Group Policy Management
Host Guardian Hyper-V Support
I/O Quality of Service
IIS Hostable Web Core
Internet Printing Client
IP Address Management (IPAM) Server
LPR Port Monitor
Description
.NET Framework 3.5 combines the power of the .NET Framework 2.0 APIs with new technologies for building applications that offer appealing user interfaces, protect your customers' personal identity information, enable seamless and secure communication, and provide the ability to model a range of business processes.
Next >
Install
Cancel

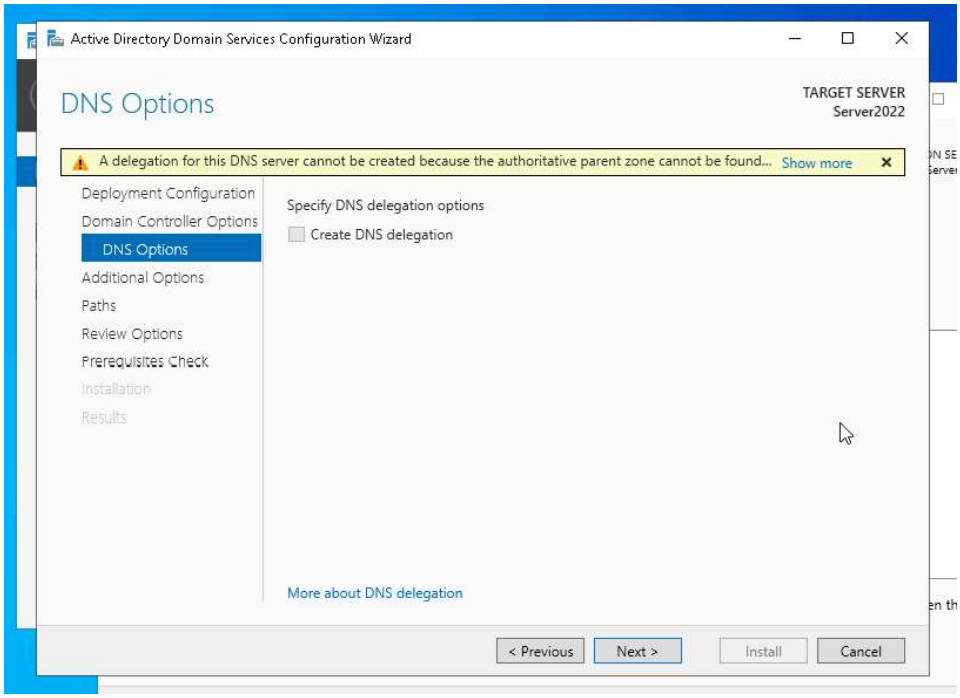

Add Roles and Features Wizard
Active Directory Domain Services
DESTINATION SERVER
Server2022
Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
Confirmation
Results
Active Directory Domain Services (AD DS) stores information about users, computers, and other devices on the network. AD DS helps administrators securely manage this information and facilitates resource sharing and collaboration between users.
Things to note:
• To help ensure that users can still log on to the network in the case of a server outage, install a minimum of two domain controllers for a domain.
• AD DS requires a DNS server to be installed on the network. If you do not have a DNS server installed, you will be prompted to install the DNS Server role on this machine.
Azure Active Directory, a separate online service, can provide simplified identity and access management, security reporting, single sign-on to cloud and on-premises web apps.
Learn more about Azure Active Directory
Configure Office 365 with Azure Active Directory Connect
< Previous
Next >
Install
Cancel

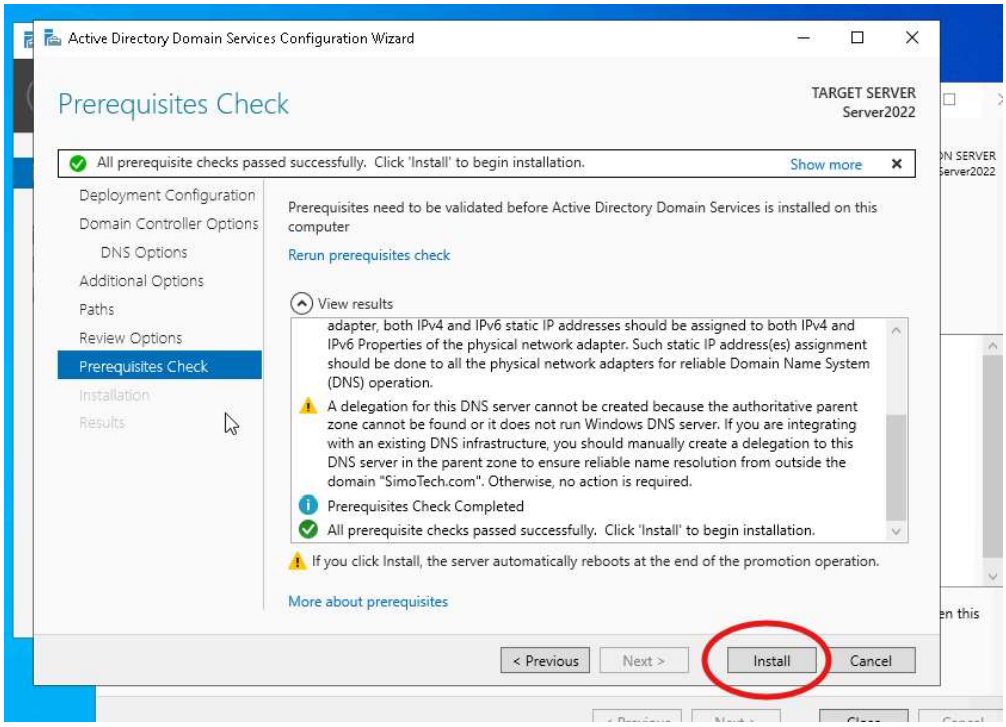

Add Roles and Features Wizard
Confirm installation selections
DESTINATION SERVER
Server2022
Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
Confirmation
Results
To install the following roles, role services, or features on selected server, click Install.
Restart the destination server automatically if required
Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.
Active Directory Domain Services
Group Policy Management
Remote Server Administration Tools
Role Administration Tools
AD DS and AD LDS Tools
Active Directory module for Windows PowerShell
AD DS Tools
Active Directory Administrative Center
AD DS Snap-Ins and Command-Line Tools
Export configuration settings
Specify an alternate source path
< Previous
Next >
Install
Cancel


Add Roles and Features Wizard
Installation progress
DESTINATION SERVER
Server2022
Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
Confirmation
Results
View installation progress
Feature installation
Configuration required. Installation succeeded on Server2022.
Active Directory Domain Services
Promote this server to a domain controller
Group Policy Management
Remote Server Administration Tools
Role Administration Tools
AD DS and AD LDS Tools
Active Directory module for Windows PowerShell
AD DS Tools
Active Directory Administrative Center
AD DS Snap-Ins and Command-Line Tools
You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.
Export configuration settings
< Previous
Next >
Close
Cancel

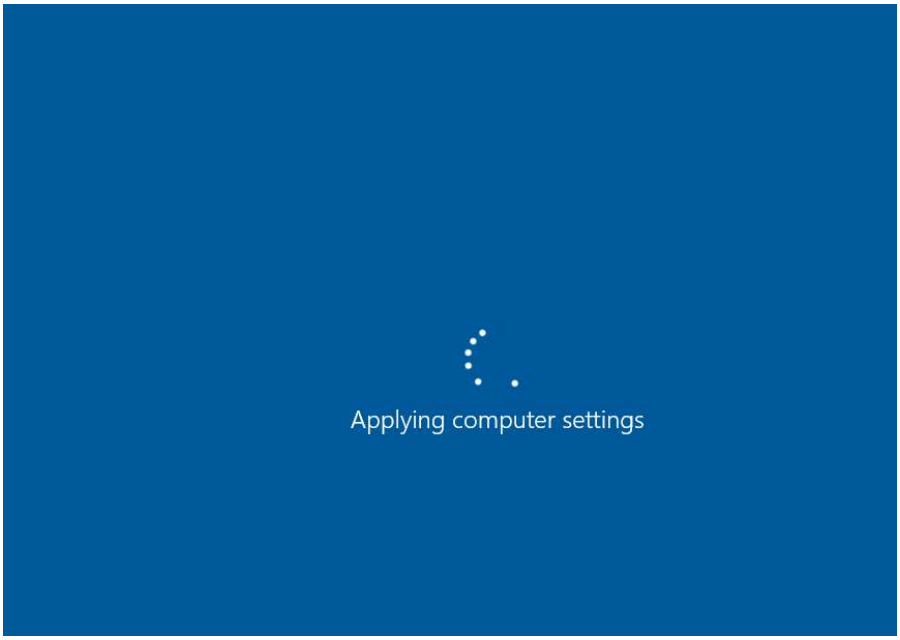

Active Directory Domain Services Configuration Wizard
Deployment Configuration
TARGET SERVER
Server2022
Deployment Configuration
Domain Controller Options
Additional Options
Paths
Review Options
Prerequisites Check
Installation
Results
Select the deployment operation
Add a domain controller to an existing domain
Add a new domain to an existing forest
Add a new forest
Specify the domain information for this operation
Root domain name:
SimoTech.com
More about deployment configurations
< Previous
Next >
Install
Cancel


Active Directory Domain Services Configuration Wizard
Domain Controller Options
TARGET SERVER
Server2022
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


Active Directory Domain Services Configuration Wizard
DNS Options
TARGET SERVER
Server2022
A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found...
Show more
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

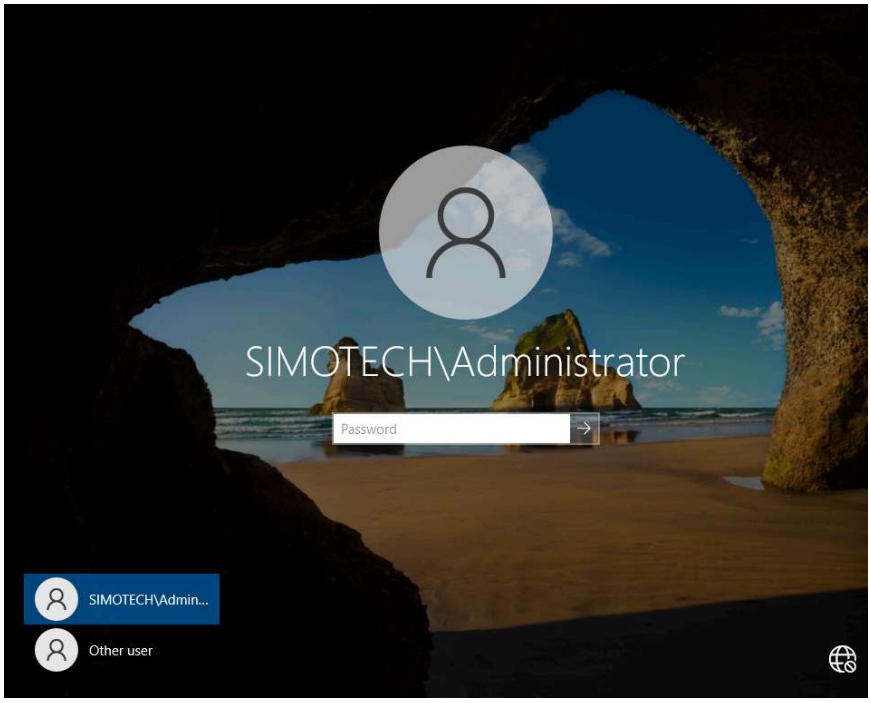


The machine will need to restart to complete the installation.

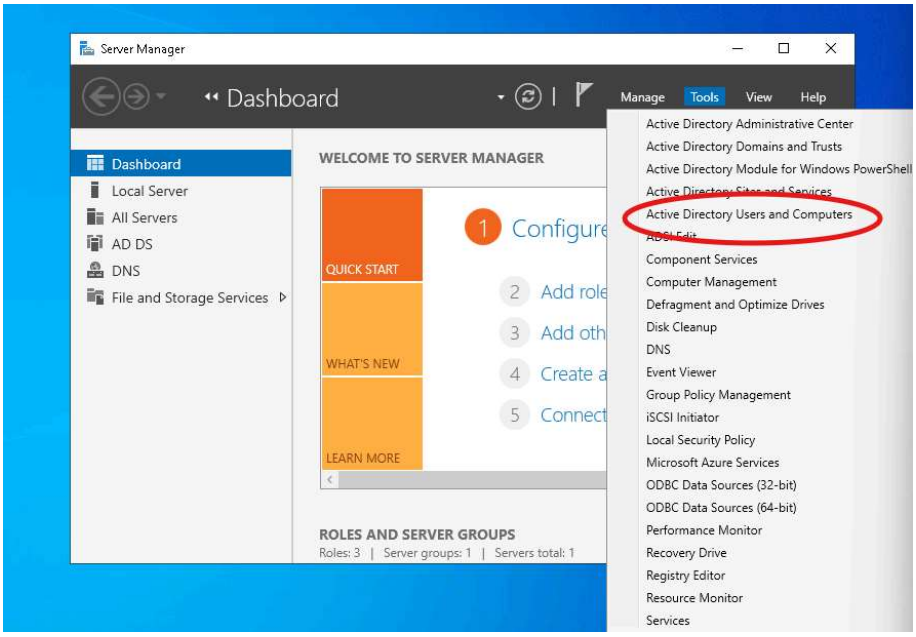


After installation, it will take you to the login screen. We see that the Domain Controller name has been successfully changed to

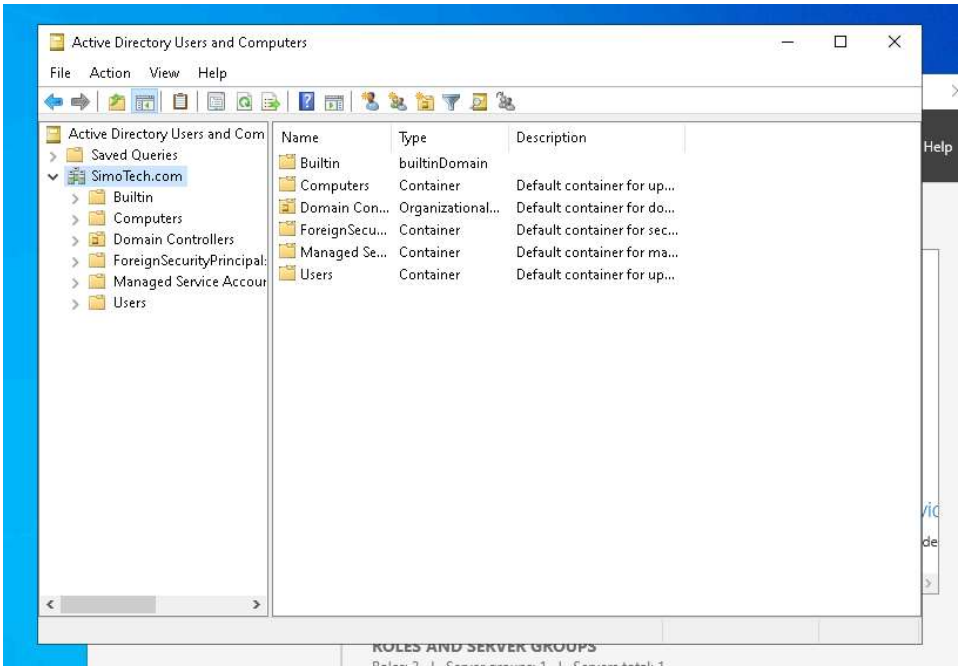
“SIMOTECH\Administrator”. Now you can log in using the Domain Credentials you created before.



After logging in go to “Tools” in “Server Manager” and click “Active Directory Users and Computers”



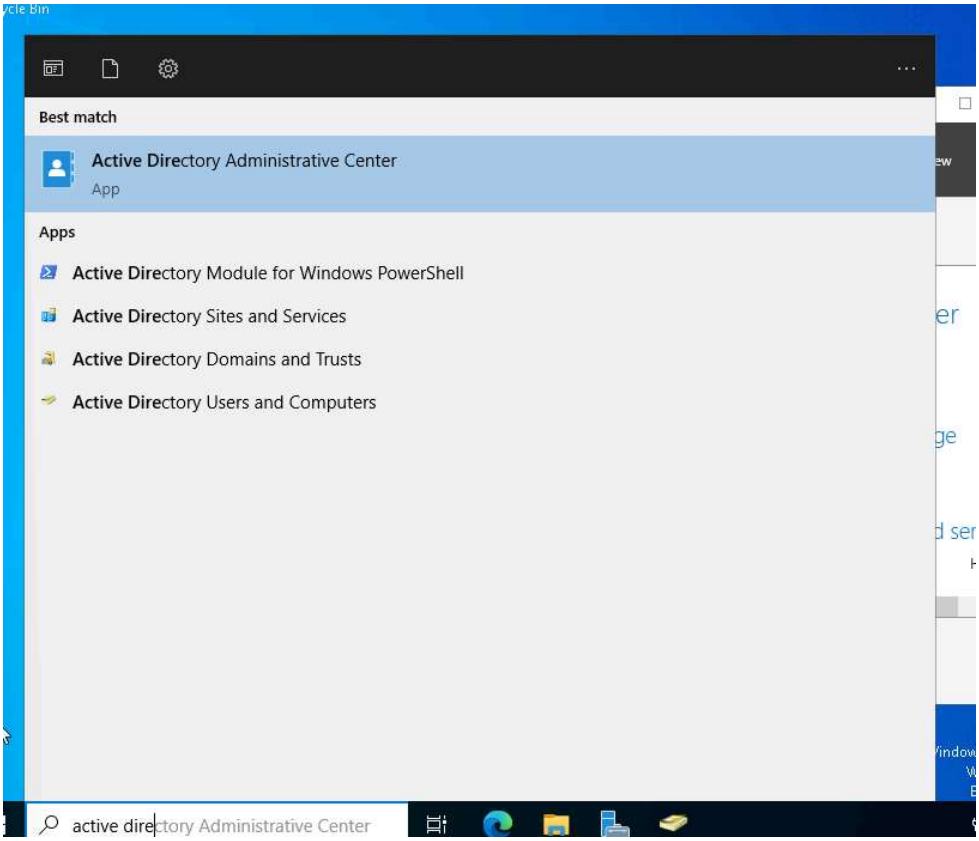
Now we can see that we have successfully established the domain controller (SimoTech.com) with Active Directory



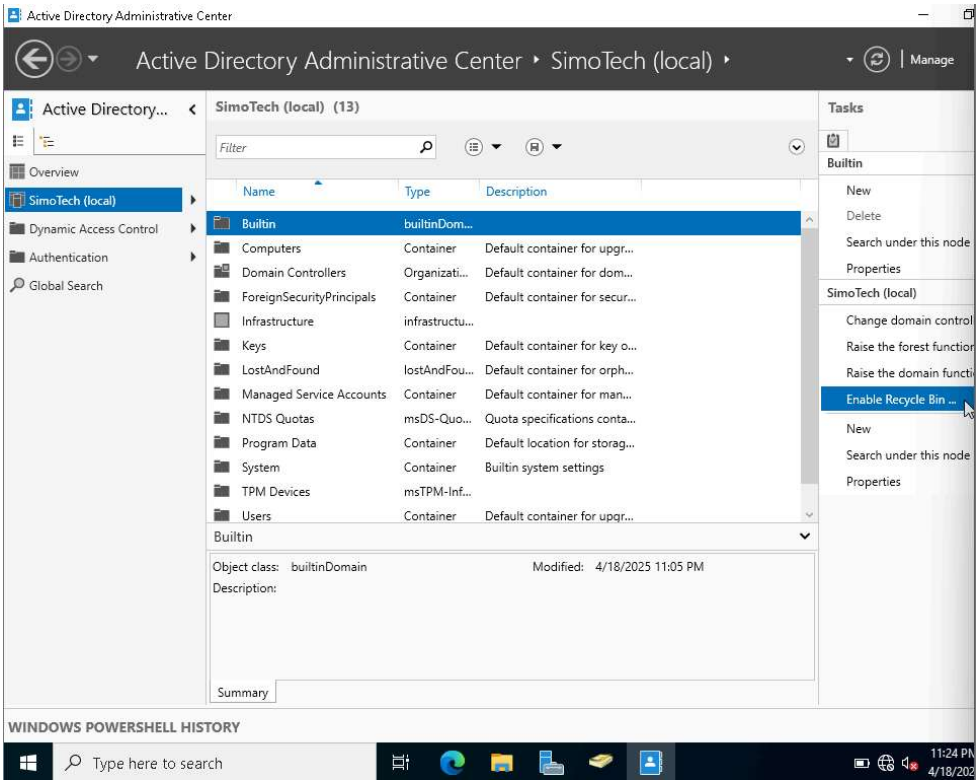
Windows Server 2022: Creating a Help Desk Account

Part 3 covers creating a dedicated Help Desk account in Active Directory using CMD for automation and verification. It demonstrates how to assign proper permissions for common admin tasks like password resets and user management. It also includes enabling the AD Recycle Bin for improved account recovery.

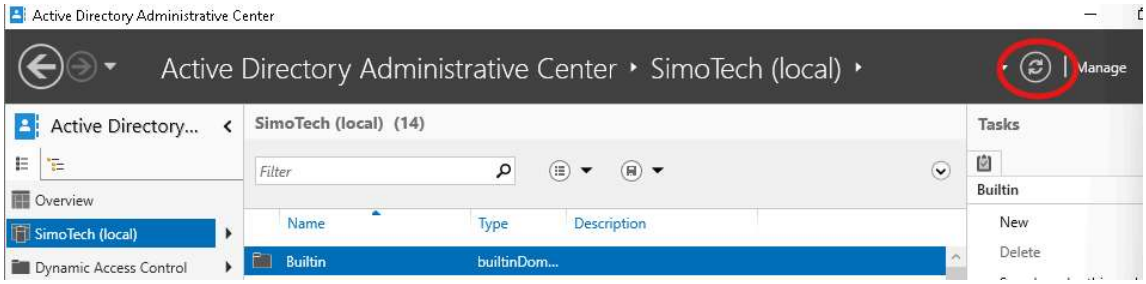
First we will activate the Recycle Bin just in case we need to restore a deleted file.



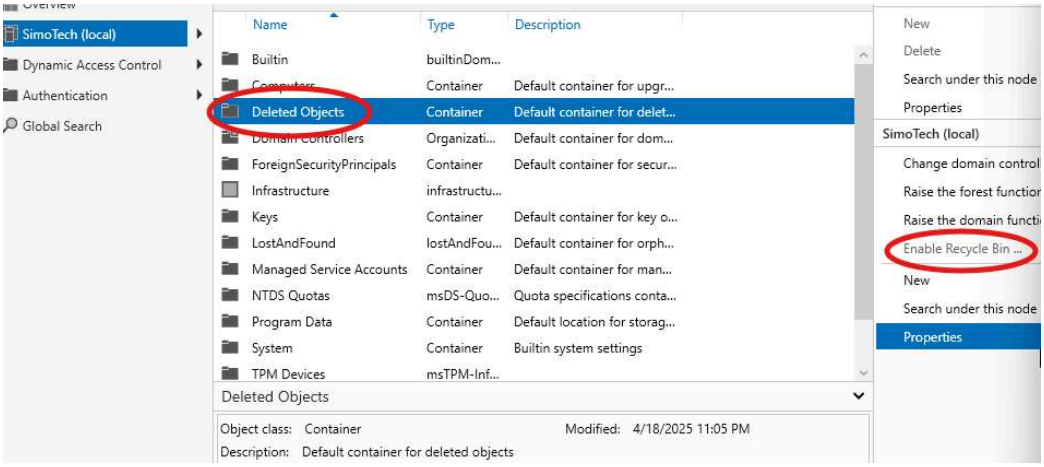
Go to “SimoTech (local)” and on the far right side of the screen click “Enable Recycle Bin”.



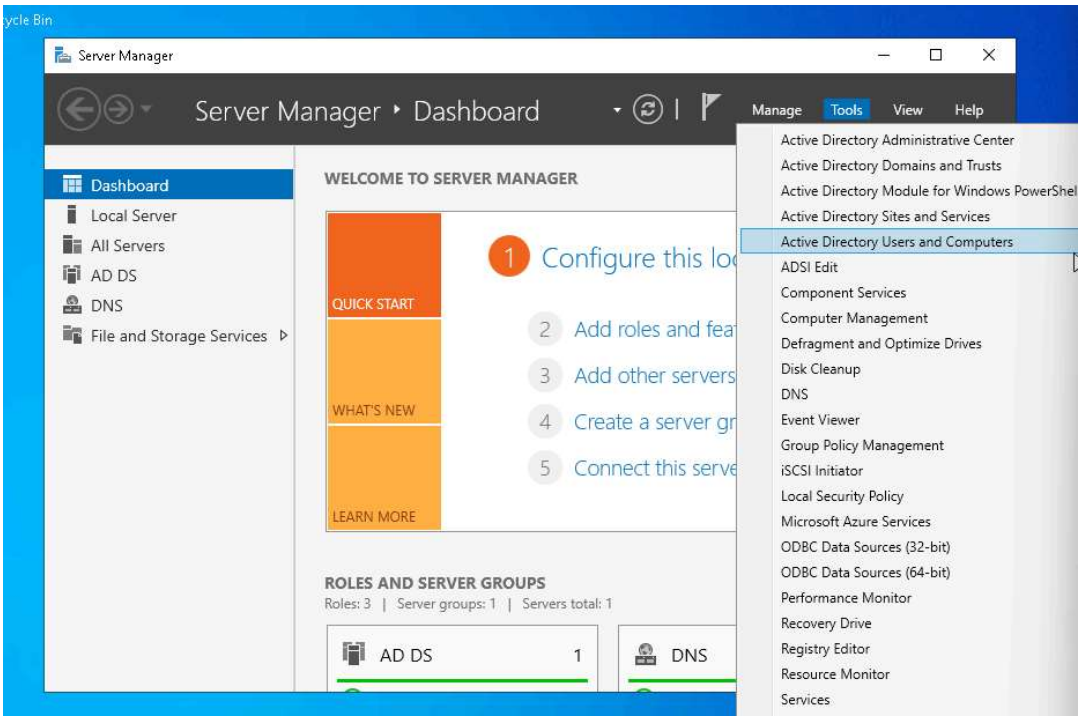
After clicking “Enable Recycle Bin” you need to refresh the Active Directory Administrative Center.

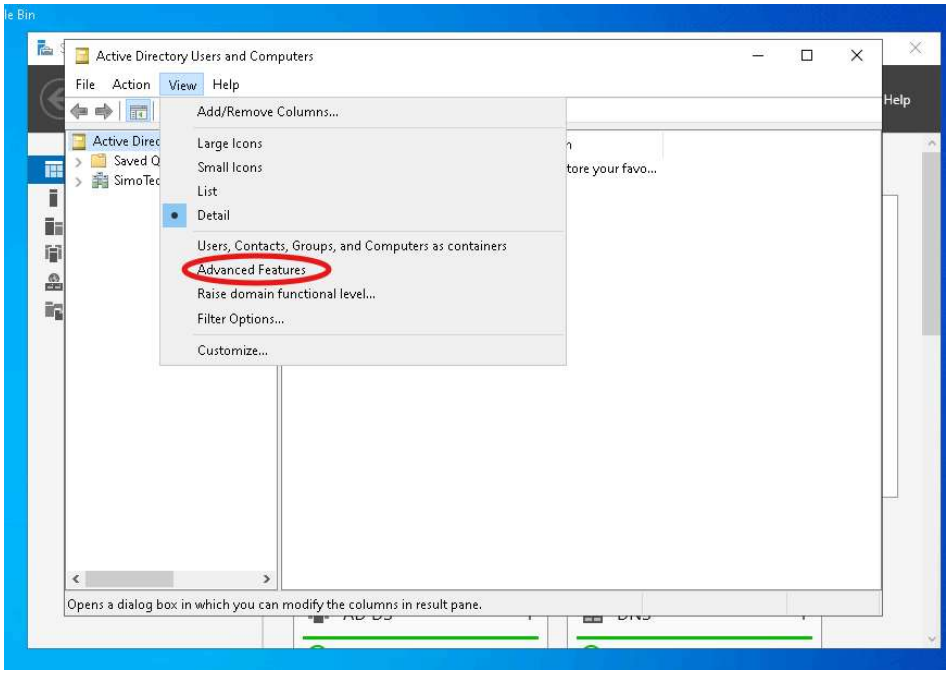


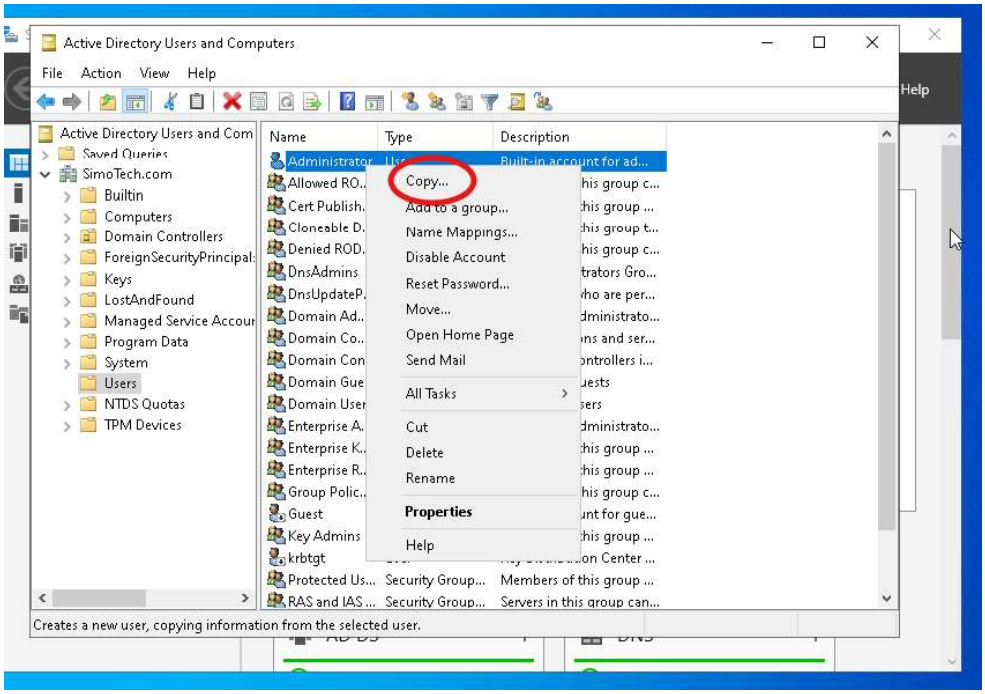
These confirm that the activation was successful.

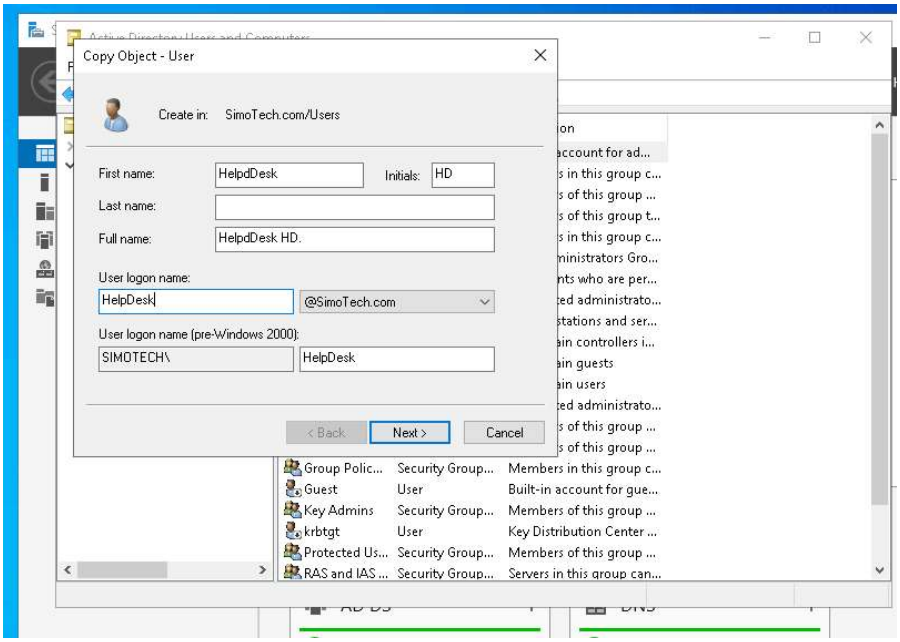


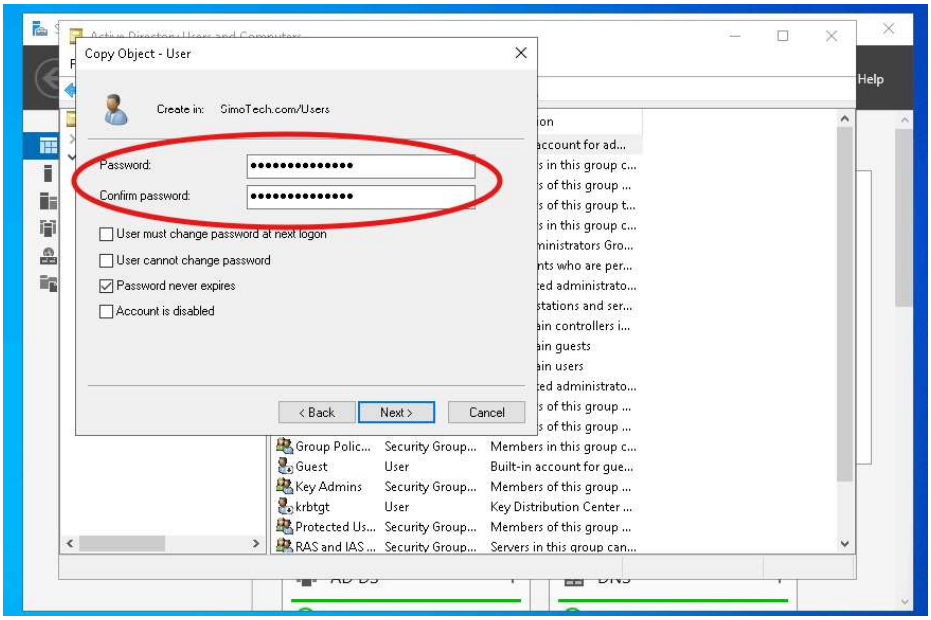
Next we will go to “Tools” in the “Server Manager” and go to “Active Directory Users and Computers”. Then we will proceed to establish the Help Desk account. Follow the steps.

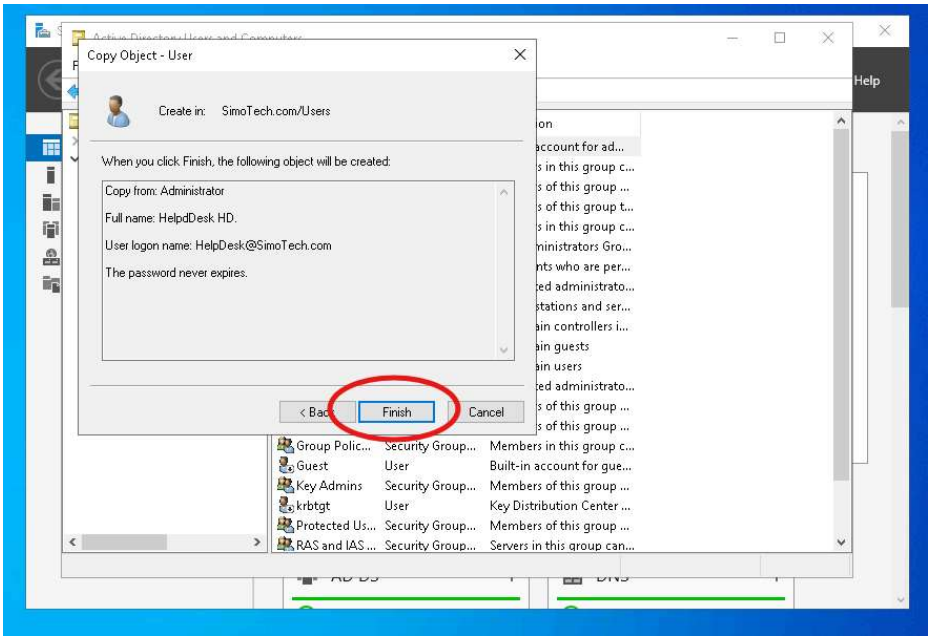



Active Directory Users and Computers
File Action View Help
Add/Remove Columns...
Large Icons
Small Icons
List
Detail
Users, Contacts, Groups, and Computers as containers
Advanced Features
Raise domain functional level...
Filter Options...
Customize...
Opens a dialog box in which you can modify the columns in result pane.

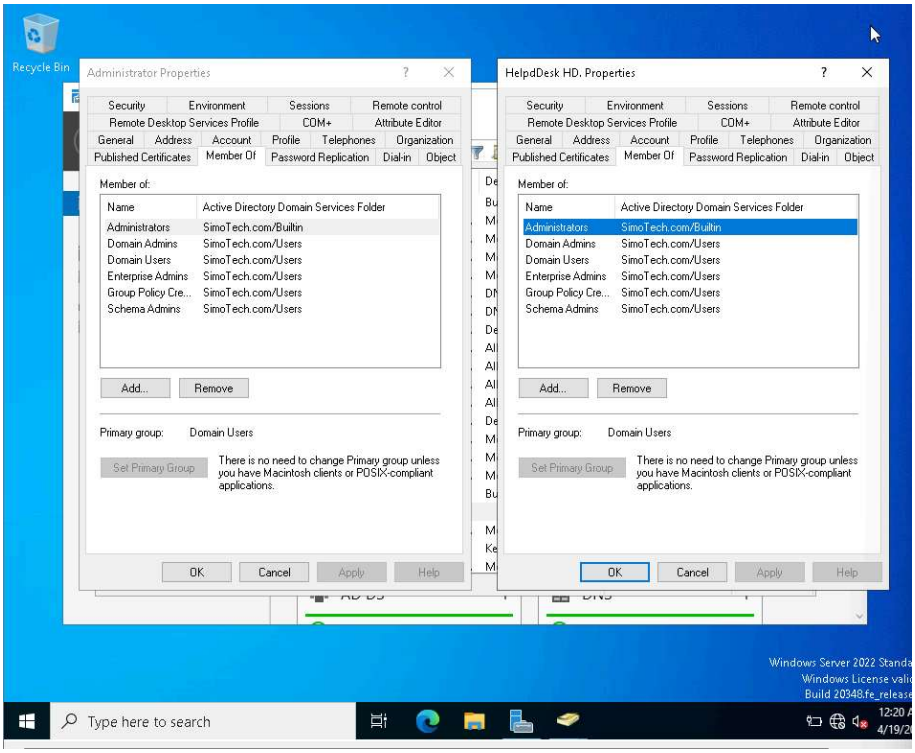

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal
Keys
LostAndFound
Managed Service Accou
Program Data
System
Users
NTDS Quotas
TPM Devices
Name
Type
Description
Administrator
Built-in account for ad...
Copy...
Add to a group...
Name Mappings...
Disable Account
Reset Password...
Move...
Open Home Page
Send Mail
All Tasks
Cut
Delete
Rename
Properties
Help
Creates a new user, copying information from the selected user.


Copy Object - User
Create in: SimoTech.com/Users
First name: HelpdDesk
Initials: HD
Last name:
Full name: HelpdDesk HD.
User logon name:
HelpDesk
@SimoTech.com
User logon name (pre-Windows 2000):
SIMOTECH\
HelpDesk
< Back
Next >
Cancel


Copy Object - User
Create in: SimoTech.com/Users
Password:
Confirm password:
User must change password at next logon
User cannot change password
Password never expires
Account is disabled
< Back
Next >
Cancel

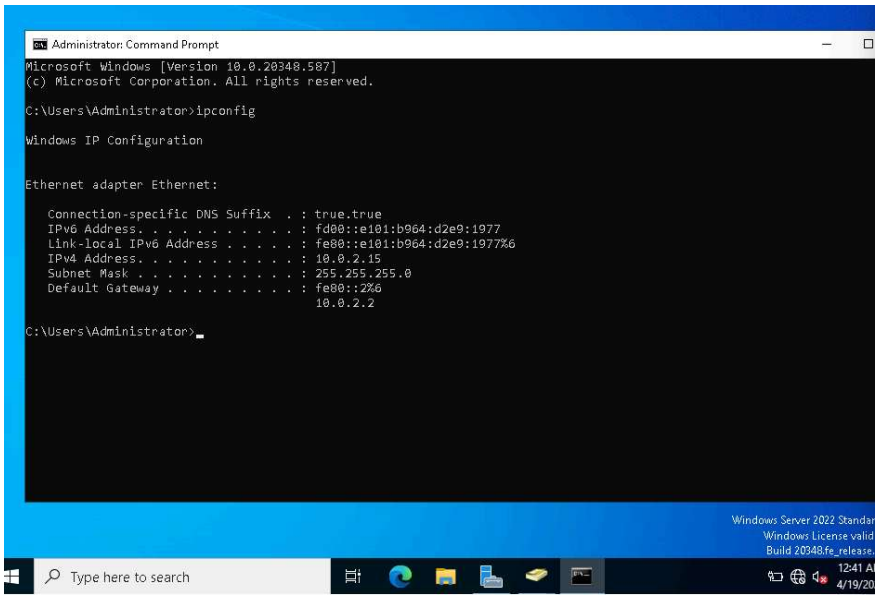


Now we can see that the Help Desk account we just created and the Administrator account are part of the same group, “Administrators”.

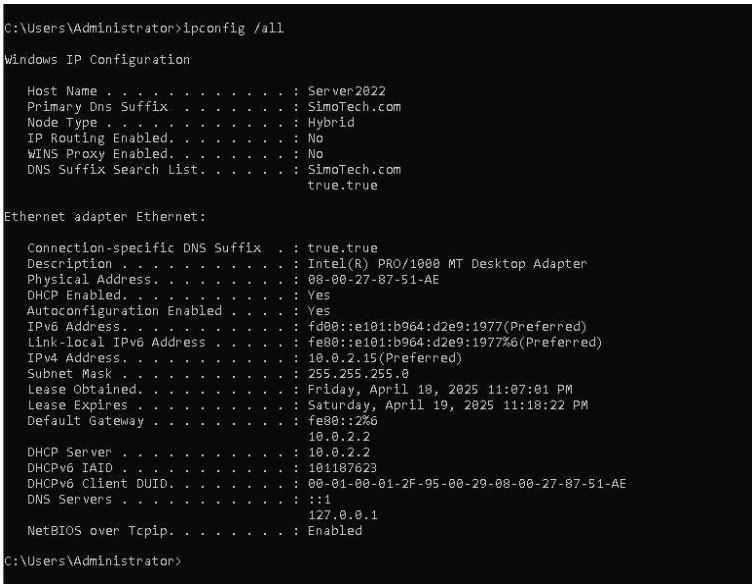


Since we have successfully established the Help Desk account we are going to perform some Help Desk/Admin tasks with CMD.

The first command is “ipconfig”, which will display basic network information regarding the machine.

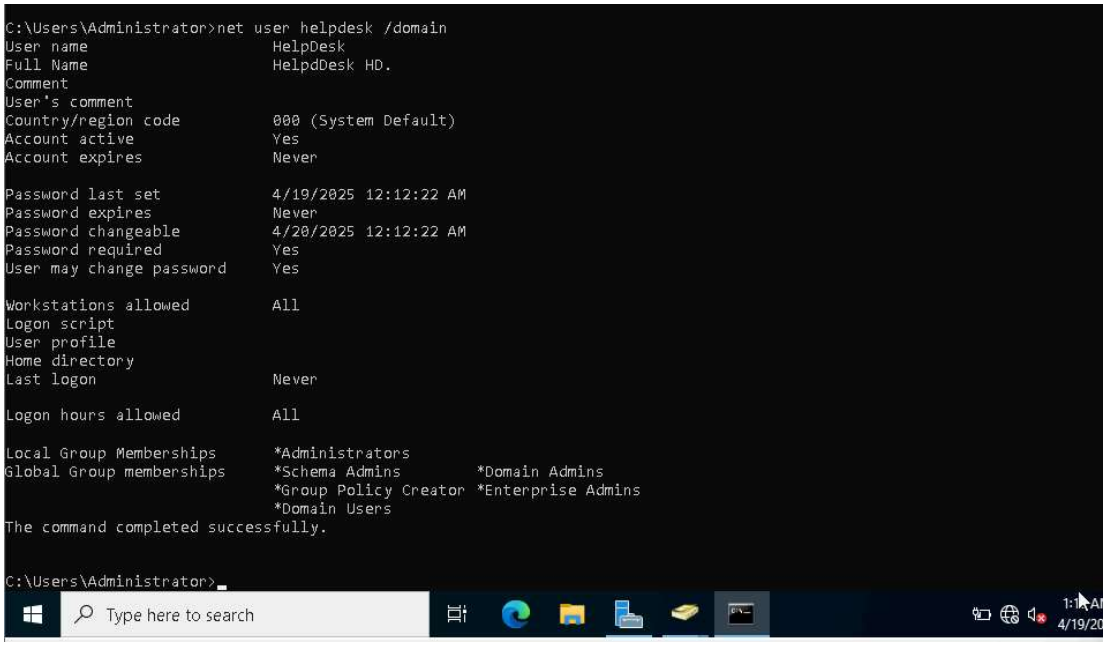


The next command “ipconfig /all” displays more detailed network information.



The next command, “net use”, allows Help Desk to connect to shared network resources, such as shared folders or drives, using specified credentials. It can be used to map a network drive or check existing network connections. This is useful for troubleshooting, accessing logs, or managing files on remote systems. We haven’t done anything to our network yet so there are no entries yet.

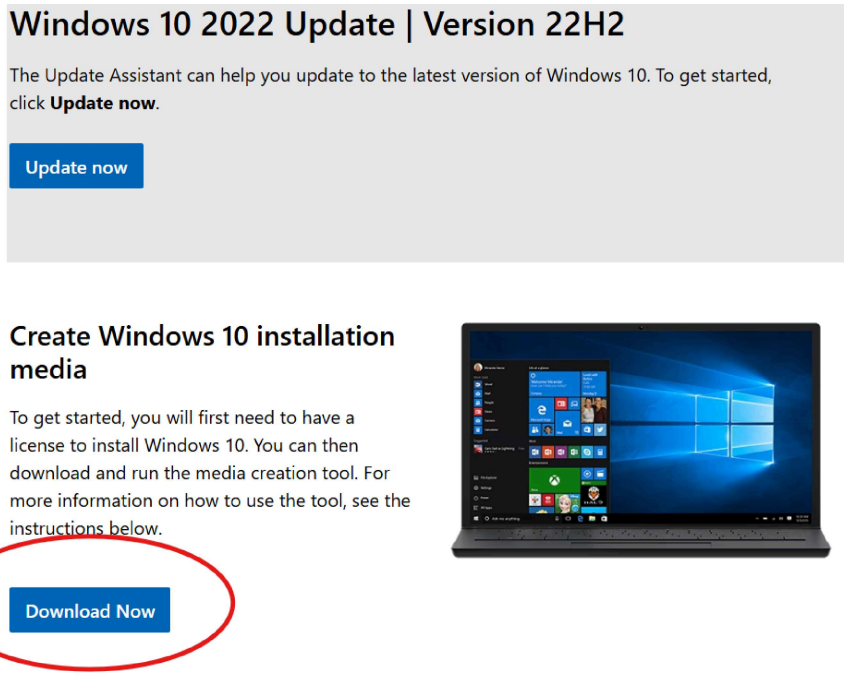
The last command we will focus on is “net user helpdesk /domain”. This command displays detailed information about the Help Desk account within the domain. It helps verify account settings such as group membership, login permissions, and password policies. This is important for Help Desk admins to quickly check account status and ensure proper configuration for support tasks.

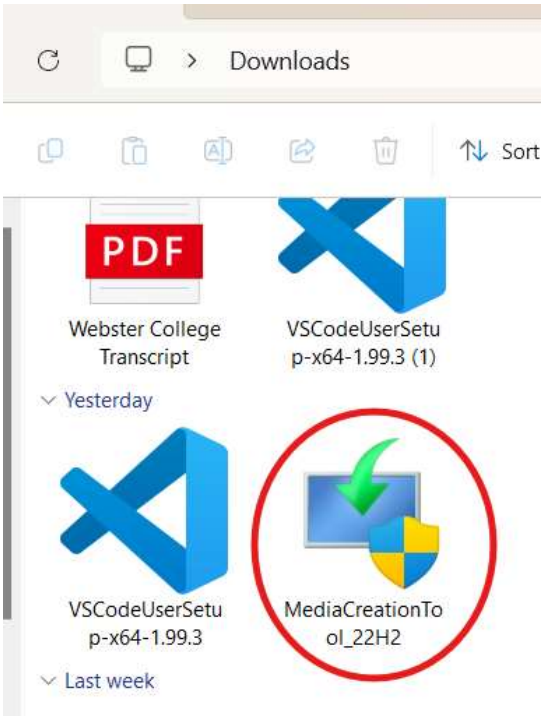


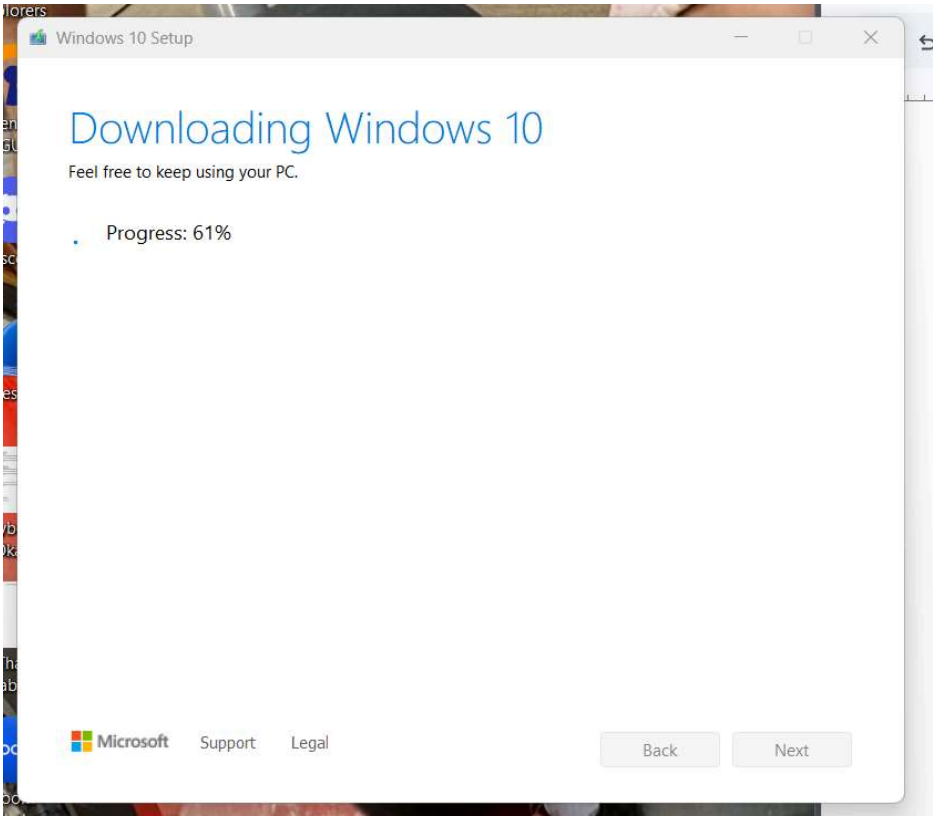
Windows 10 (Helpdesk): Join PC to Domain, RSAT Tool, Server Manager

For Part 4, we will create a new Windows 10 VM. We will join the Windows 10 machine to the SimoTech.com domain, use the RSAT tool to perform some administrative tasks, and utilize Server Manager to manage the domain and roles in the server.

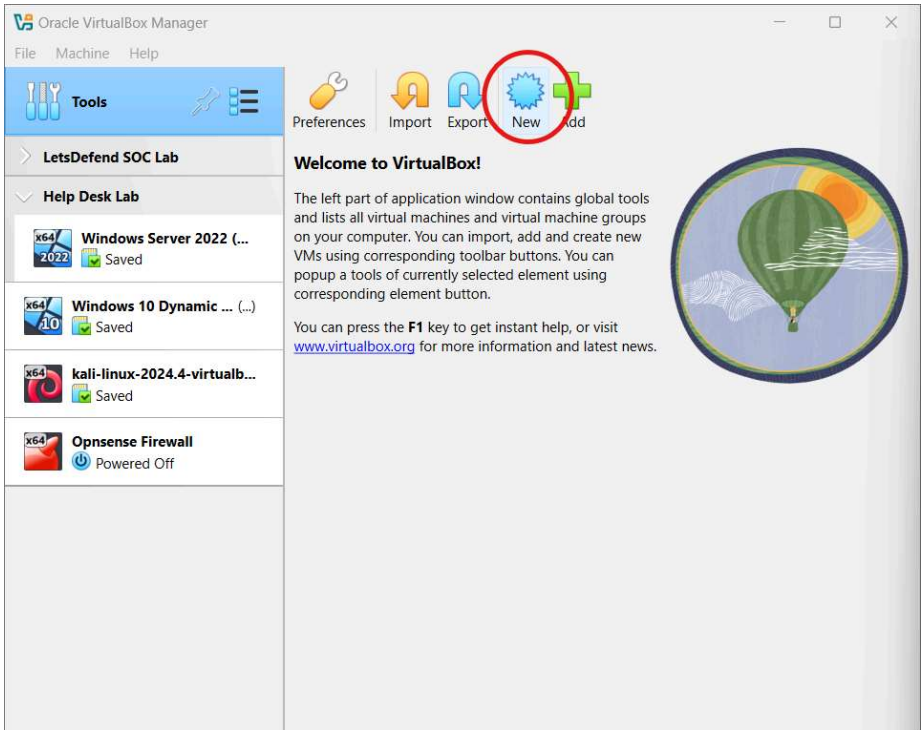
The first step is to download a Windows 10 *.iso* file. You can download it here: https://www.microsoft.com/en-us/software-download/windows10

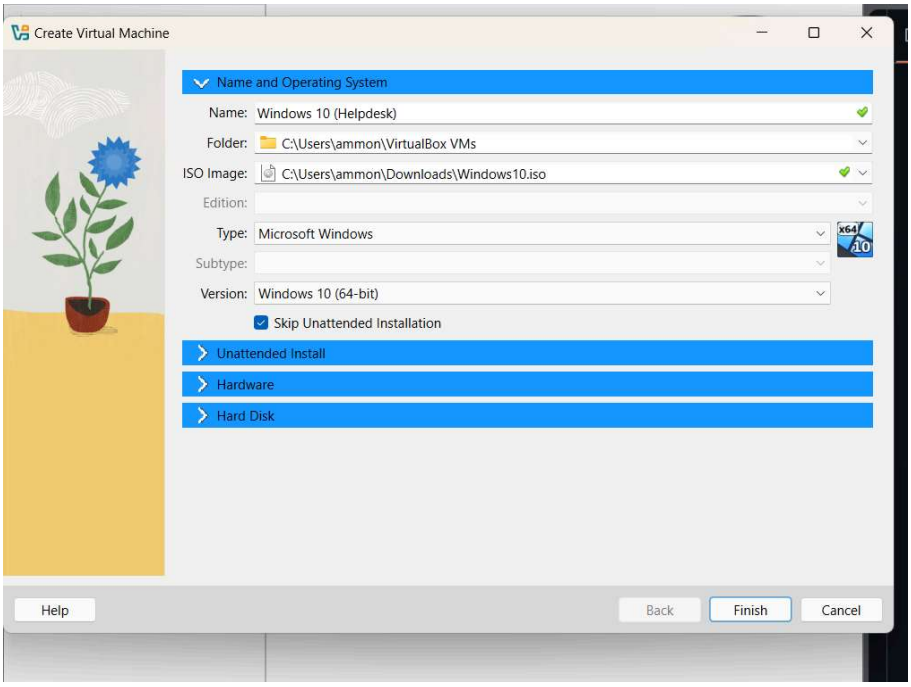


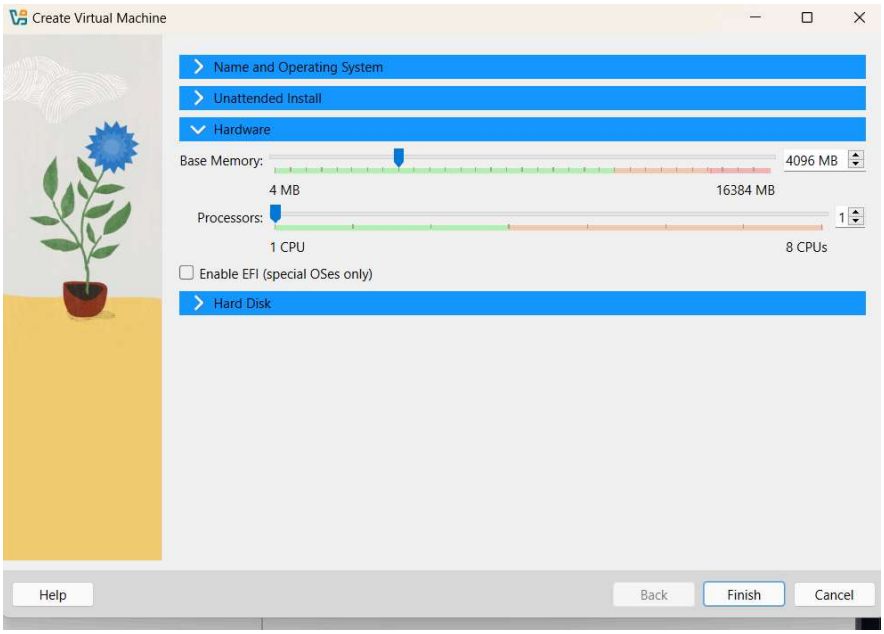

Downloads
Sort
PDF
Webster College Transcript
VSCodeUserSetup-x64-1.99.3 (1)
Yesterday
VSCodeUserSetup-x64-1.99.3
MediaCreationTool_22H2
Last week


Windows 10 Setup
Downloading Windows 10
Feel free to keep using your PC.
Progress: 61%
Microsoft
Support
Legal
Back
Next

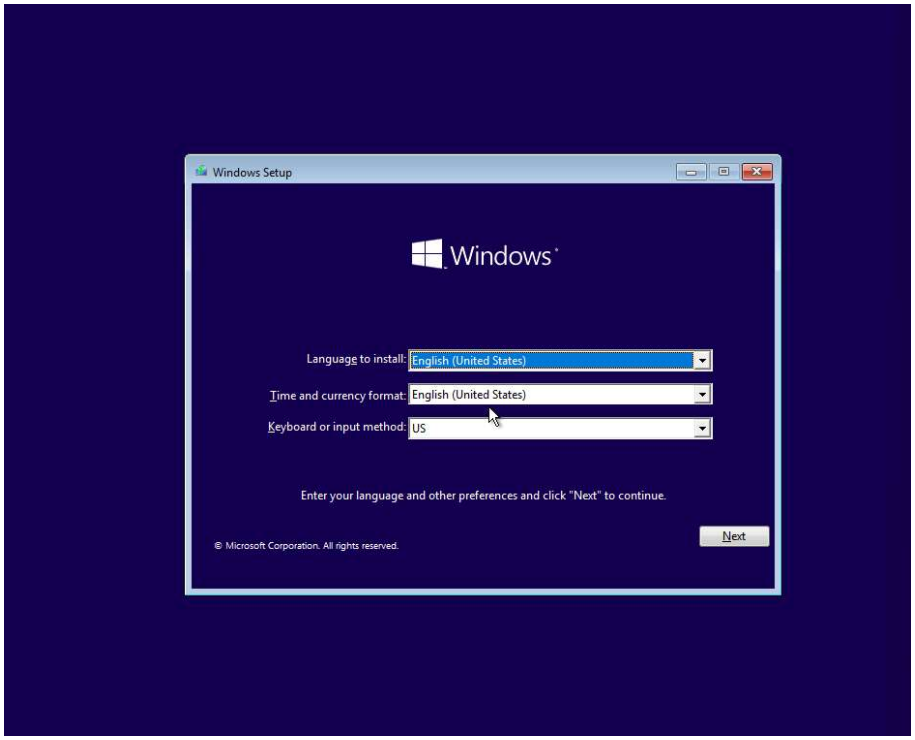
Once it’s finished downloading we create a new machine in VirtualBox.

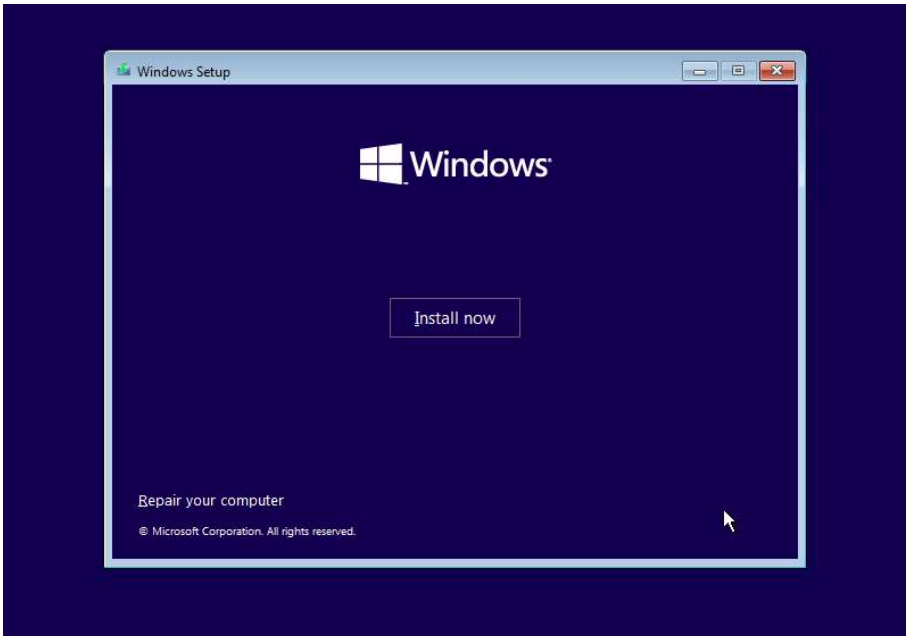


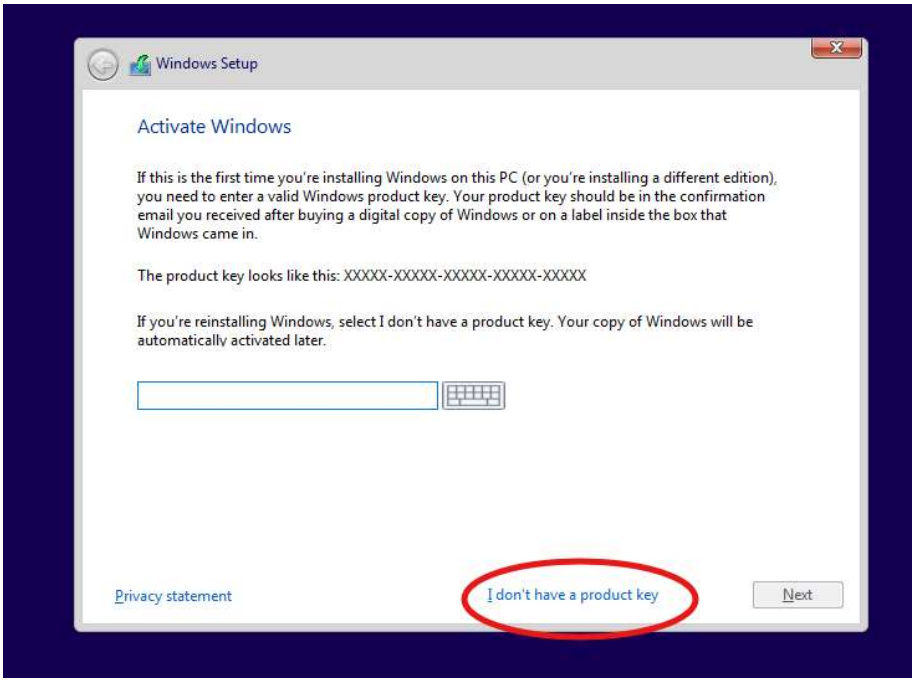


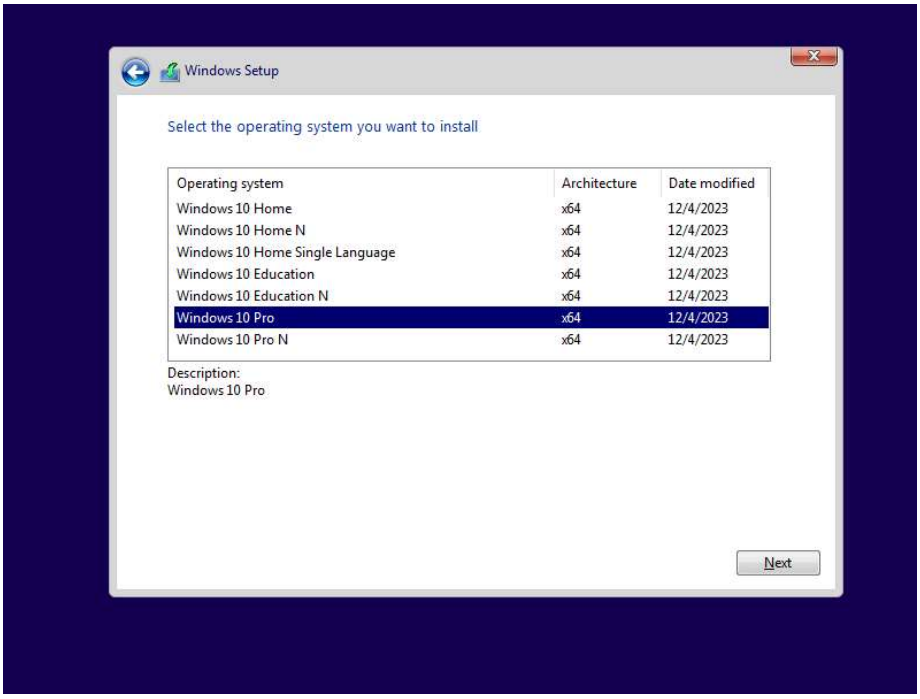


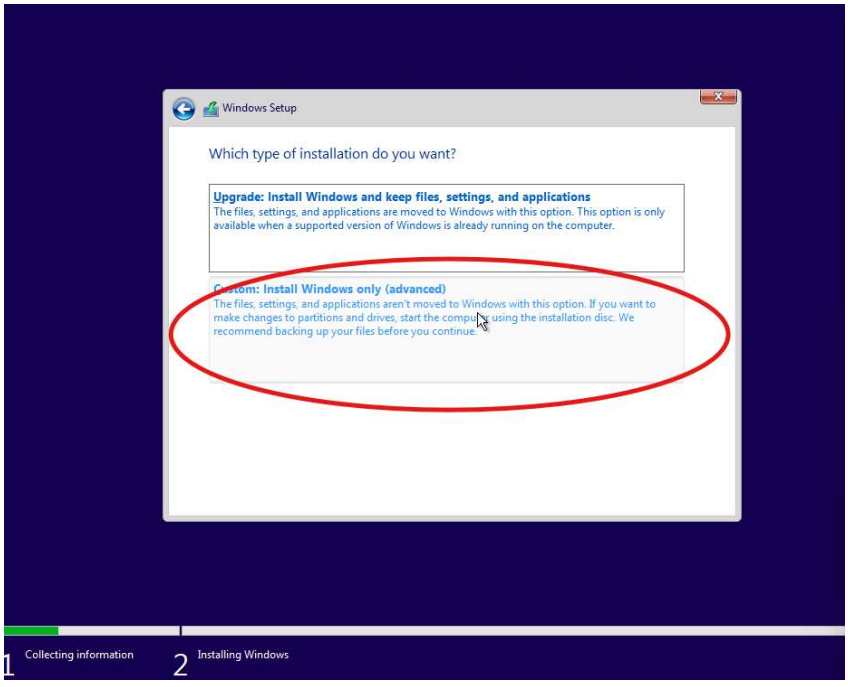
After this, click “Finish” and then start the machine. Now it’s time to install Windows 10.

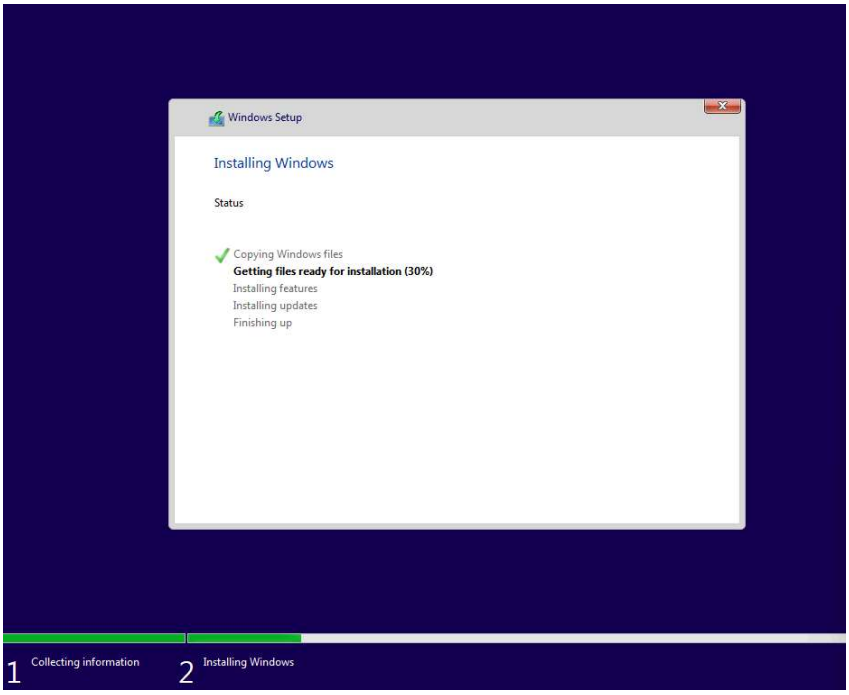



Windows Setup
Windows
Install now
Repair your computer
© Microsoft Corporation. All rights reserved.

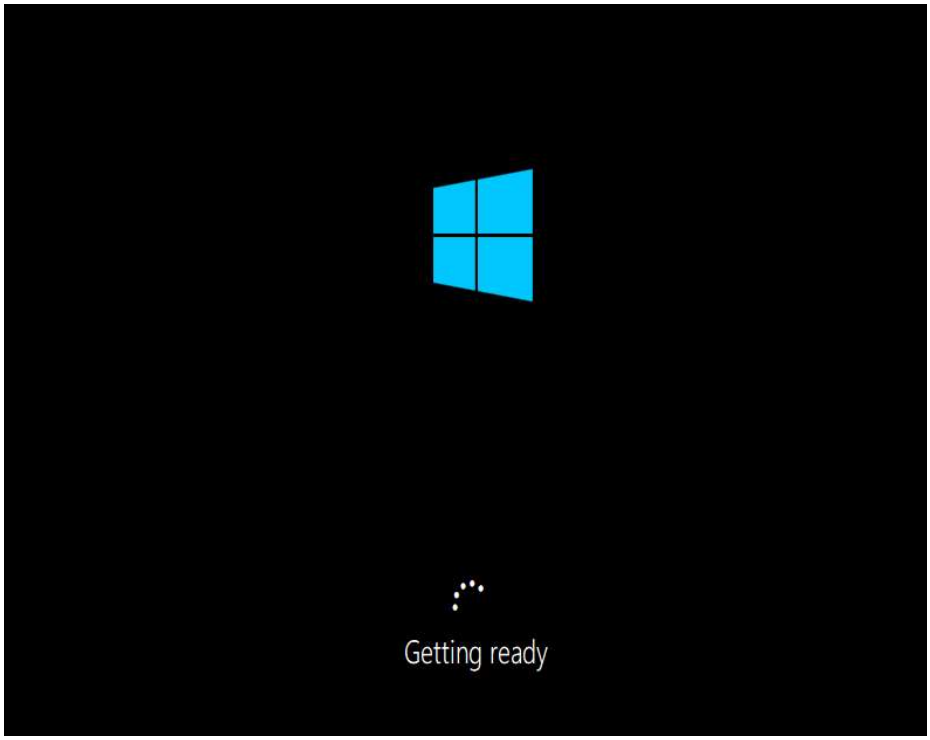

Windows Setup
Activate Windows
If this is the first time you're installing Windows on this PC (or you're installing a different edition), you need to enter a valid Windows product key. Your product key should be in the confirmation email you received after buying a digital copy of Windows or on a label inside the box that Windows came in.
The product key looks like this: XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
If you're reinstalling Windows, select I don't have a product key. Your copy of Windows will be automatically activated later.
Privacy statement
I don't have a product key
Next

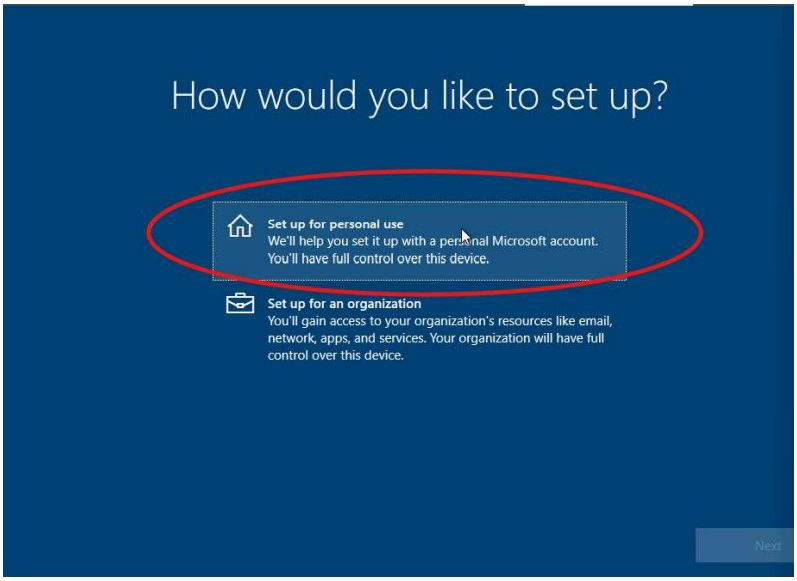

Windows Setup
Select the operating system you want to install
Operating system
Architecture
Date modified
Windows 10 Home
x64
12/4/2023
Windows 10 Home N
x64
12/4/2023
Windows 10 Home Single Language
x64
12/4/2023
Windows 10 Education
x64
12/4/2023
Windows 10 Education N
x64
12/4/2023
Windows 10 Pro
x64
12/4/2023
Windows 10 Pro N
x64
12/4/2023
Description:
Windows 10 Pro
Next

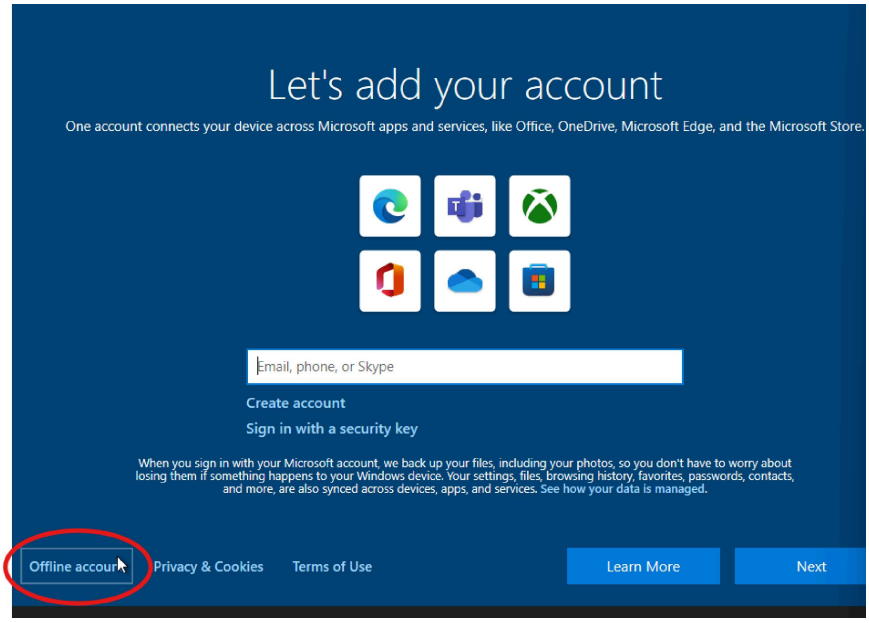

Windows Setup
Which type of installation do you want?
Upgrade: Install Windows and keep files, settings, and applications
The files, settings, and applications are moved to Windows with this option. This option is only available when a supported version of Windows is already running on the computer.
Custom: Install Windows only (advanced)
The files, settings, and applications aren't moved to Windows with this option. If you want to make changes to partitions and drives, start the computer using the installation disc. We recommend backing up your files before you continue.
1 Collecting information
2 Installing Windows

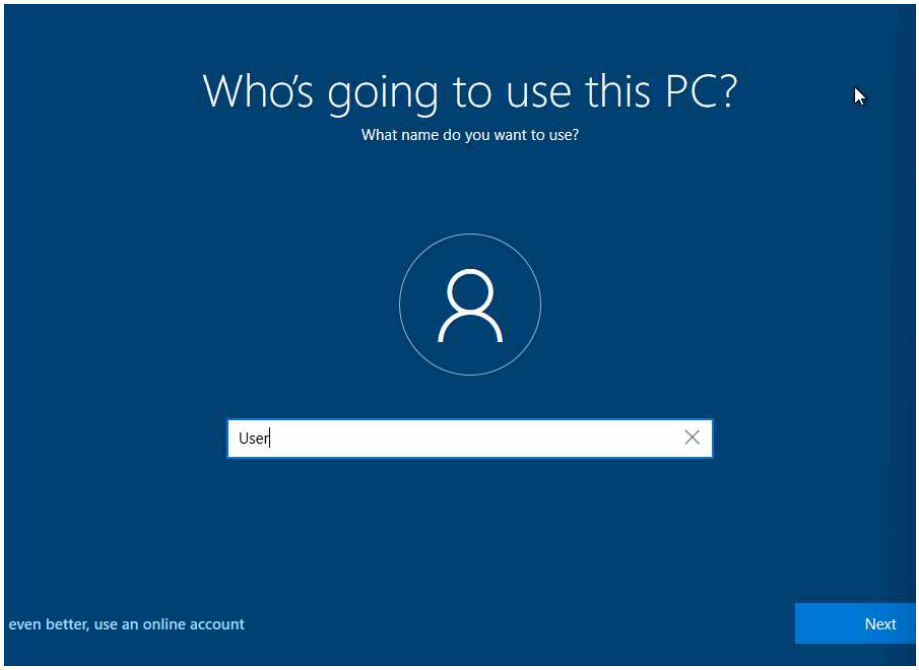


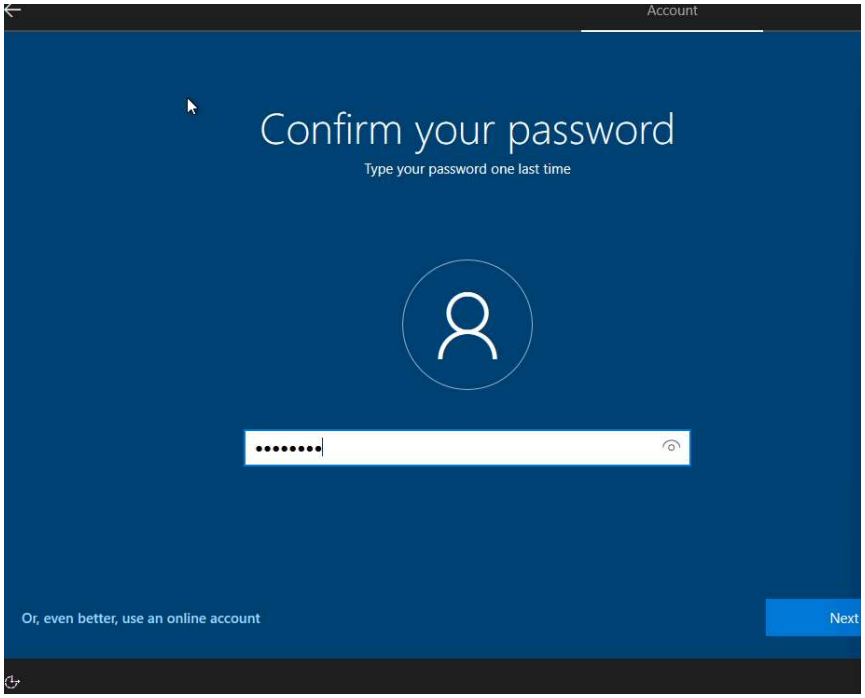
After installing, the machine will automatically restart.



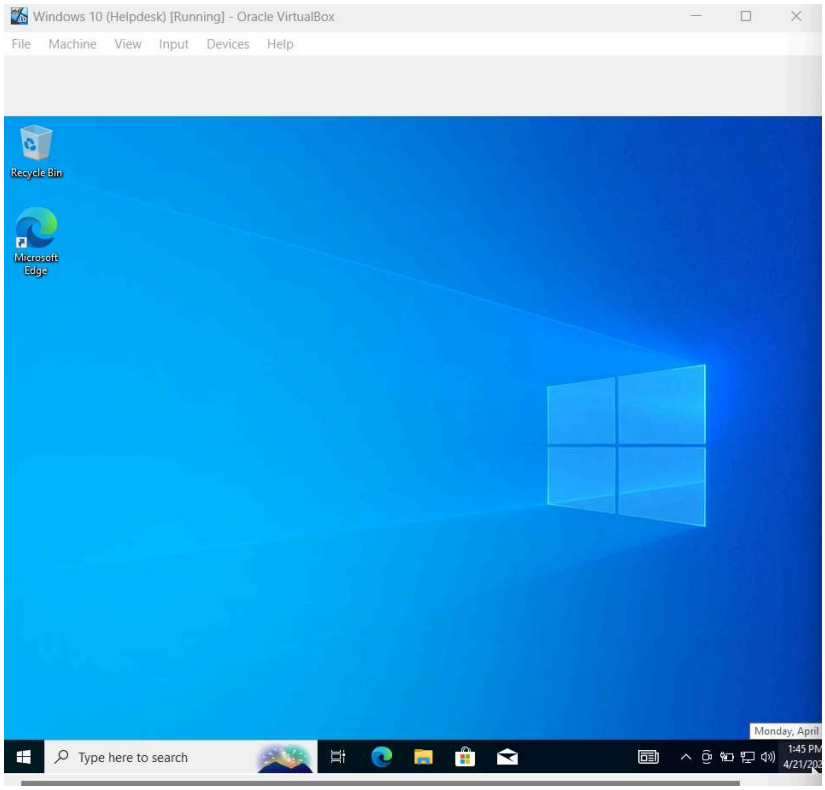

How would you like to set up?
Set up for personal use
We'll help you set it up with a personal Microsoft account.
You'll have full control over this device.
Set up for an organization
You'll gain access to your organization's resources like email, network, apps, and services. Your organization will have full control over this device.
Next


Let's add your account
One account connects your device across Microsoft apps and services, like Office, OneDrive, Microsoft Edge, and the Microsoft Store.
Email, phone, or Skype
Create account
Sign in with a security key
When you sign in with your Microsoft account, we back up your files, including your photos, so you don't have to worry about losing them if something happens to your Windows device. Your settings, files, browsing history, favorites, passwords, contacts, and more, are also synced across devices, apps, and services. See how your data is managed.
Offline account
Privacy & Cookies
Terms of Use
Learn More
Next

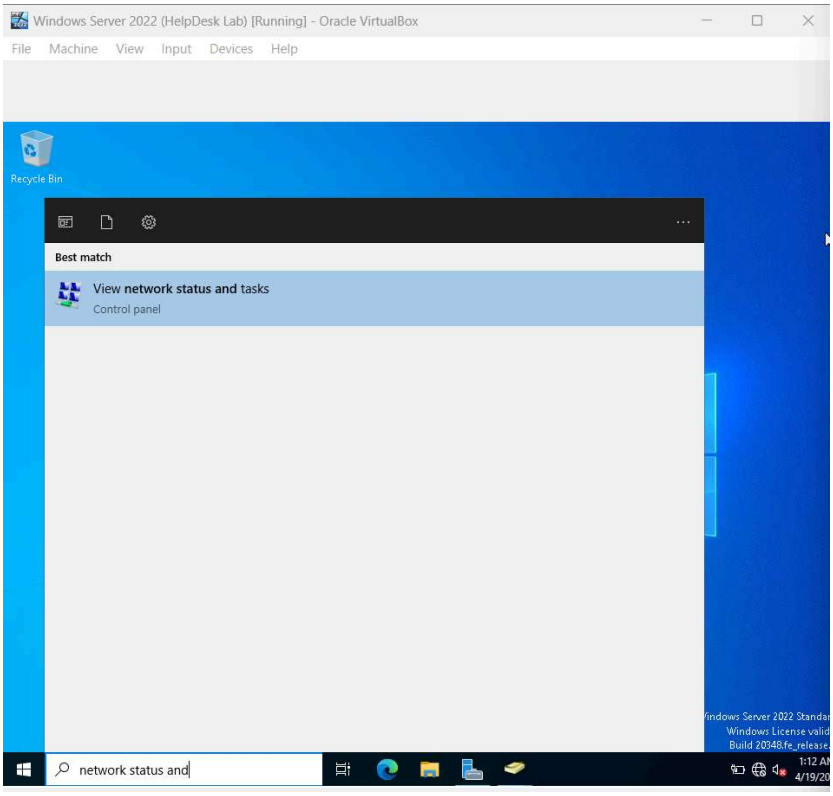


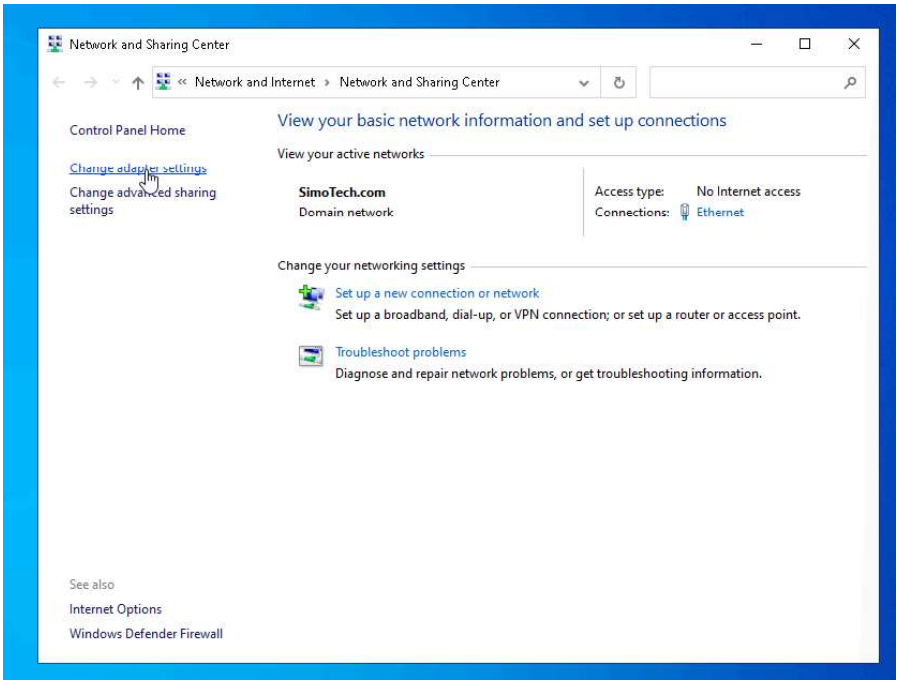


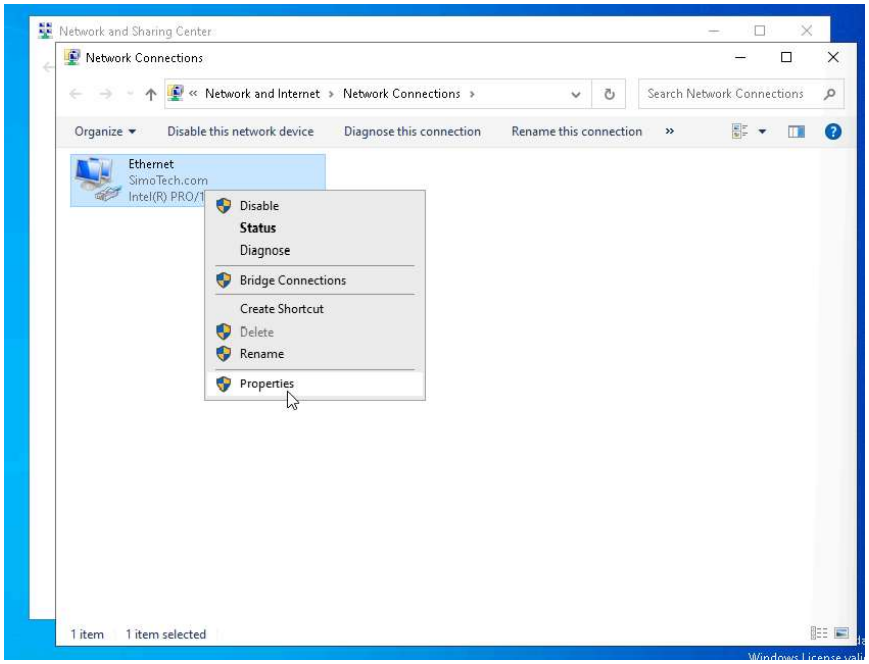
Now our Windows 10 virtual machine is ready.

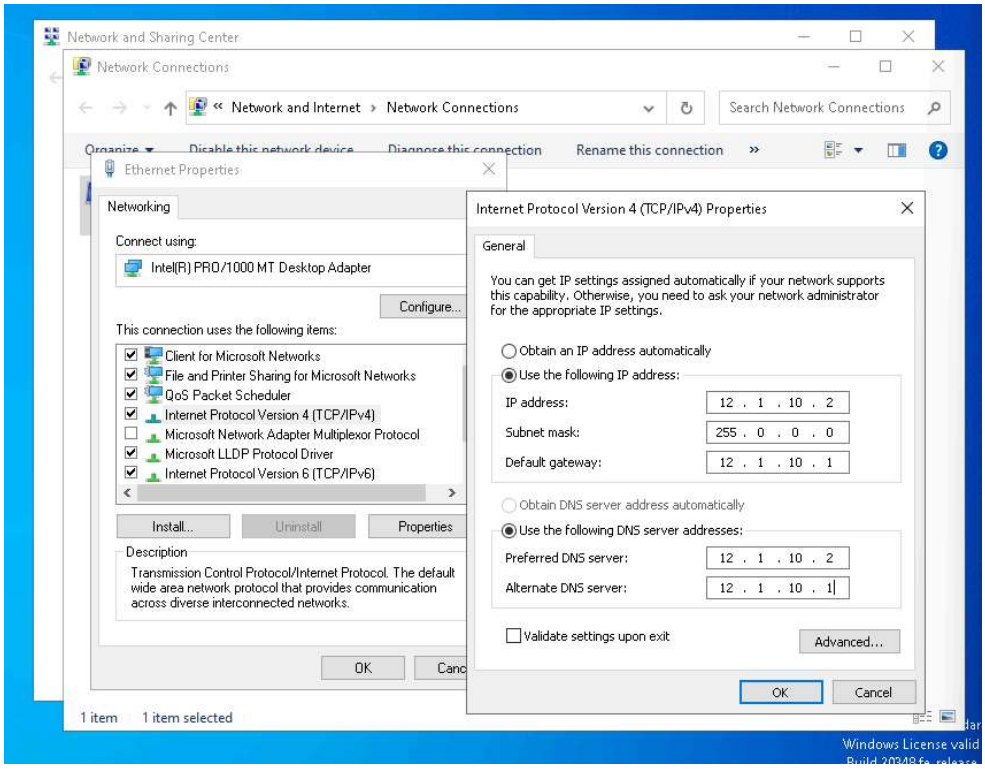


Now that we have both of our virtual machines, we want to configure the network so that our WIndows 10 machine is in the domain and both machines can interact with each other. So, close Windows 10 and open Windows Server 2022.

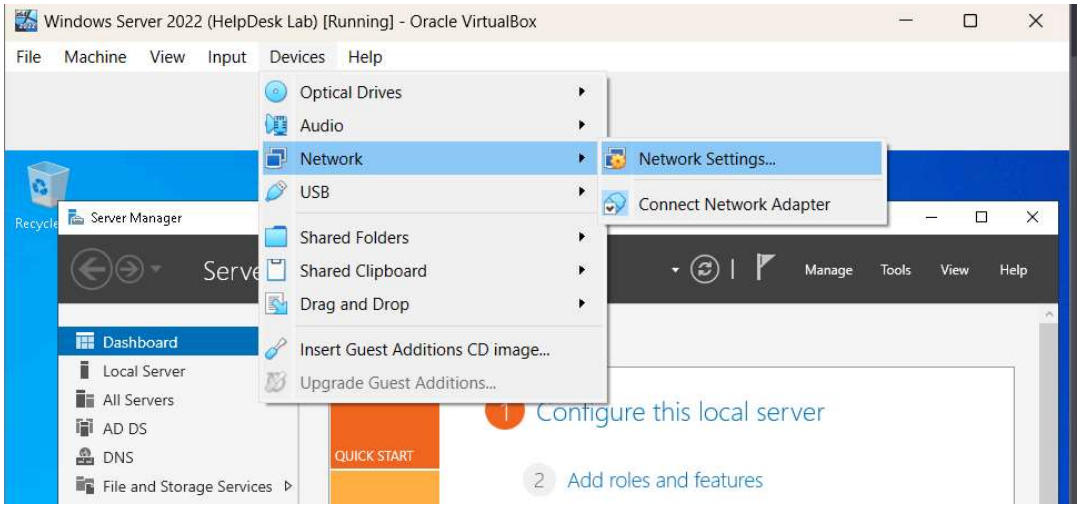

Windows Server 2022 (HelpDesk Lab) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Recycle Bin
Best match
View network status and tasks
Control panel
network status and


Network and Sharing Center
Network and Internet › Network and Sharing Center
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
View your active networks
SimoTech.com
Domain network
Access type: No Internet access
Connections: Ethernet
Change your networking settings
Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
Internet Options
Windows Defender Firewall

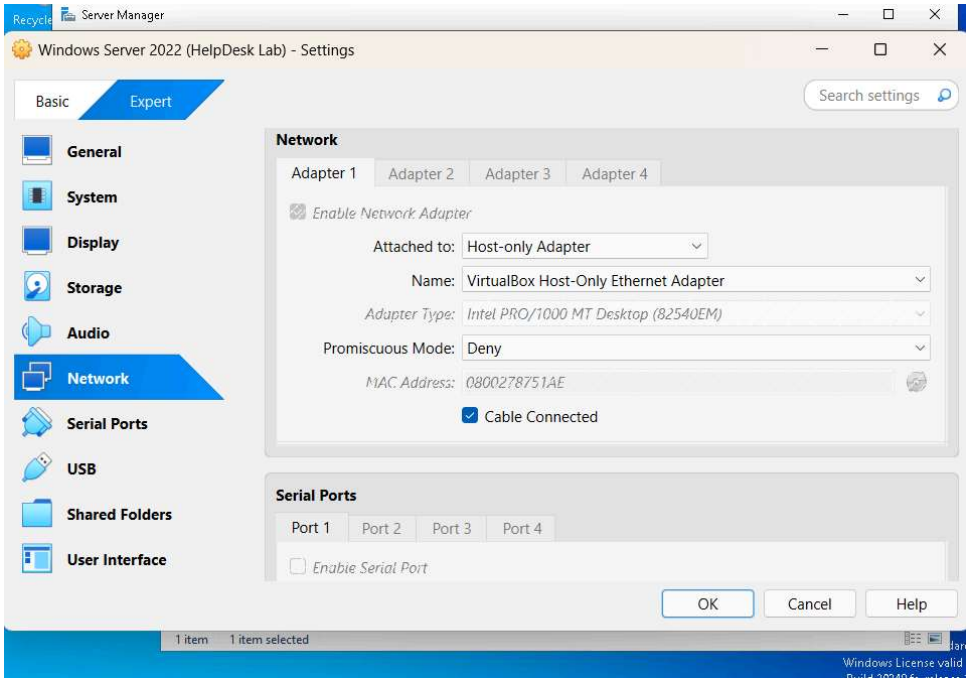




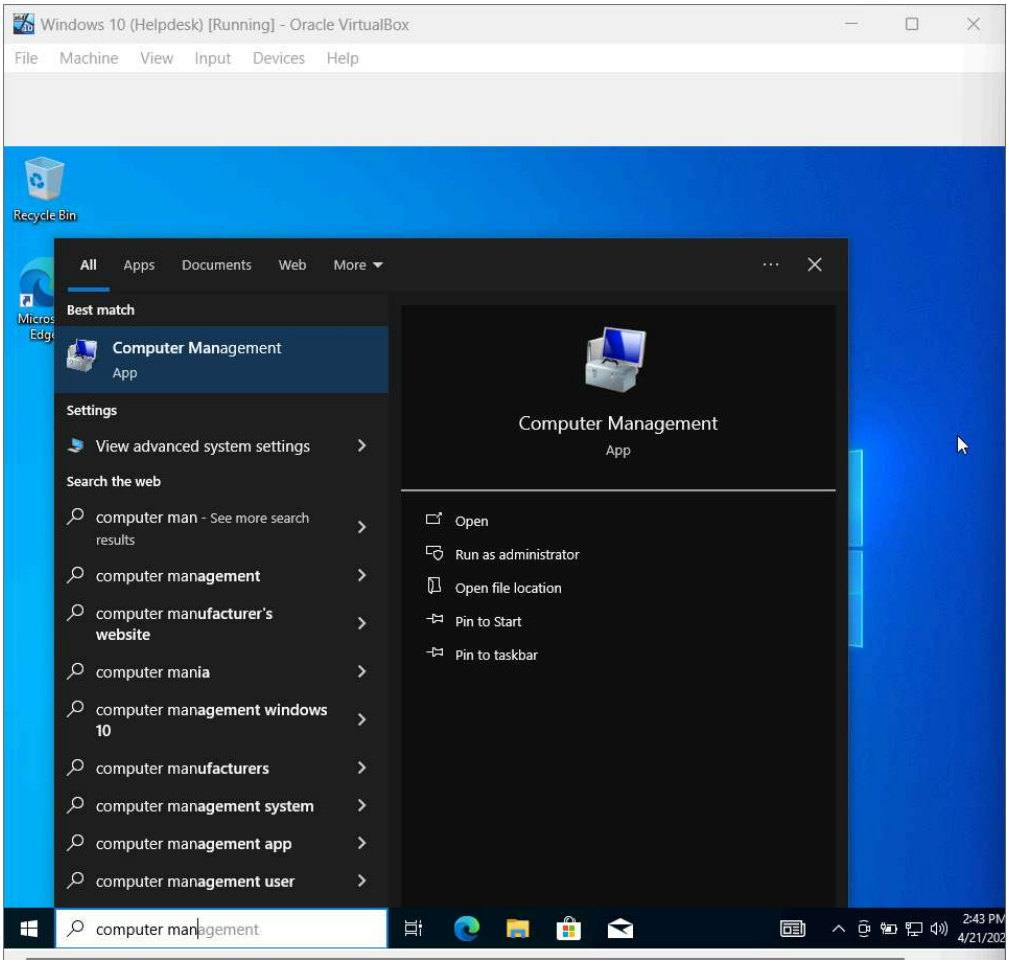
Now, we are going to modify the network settings for the virtual machine. Click “Devices” in the VM taskbar.

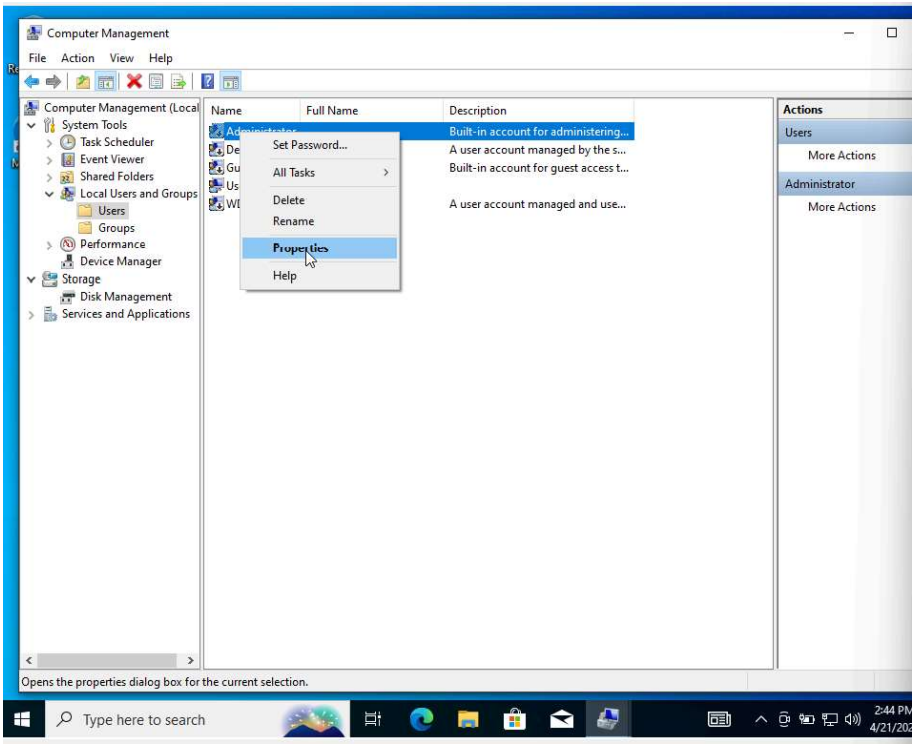


Change Adapter 1 from “Attached to: NAT” to “Attached to: Host-only Adapter”.

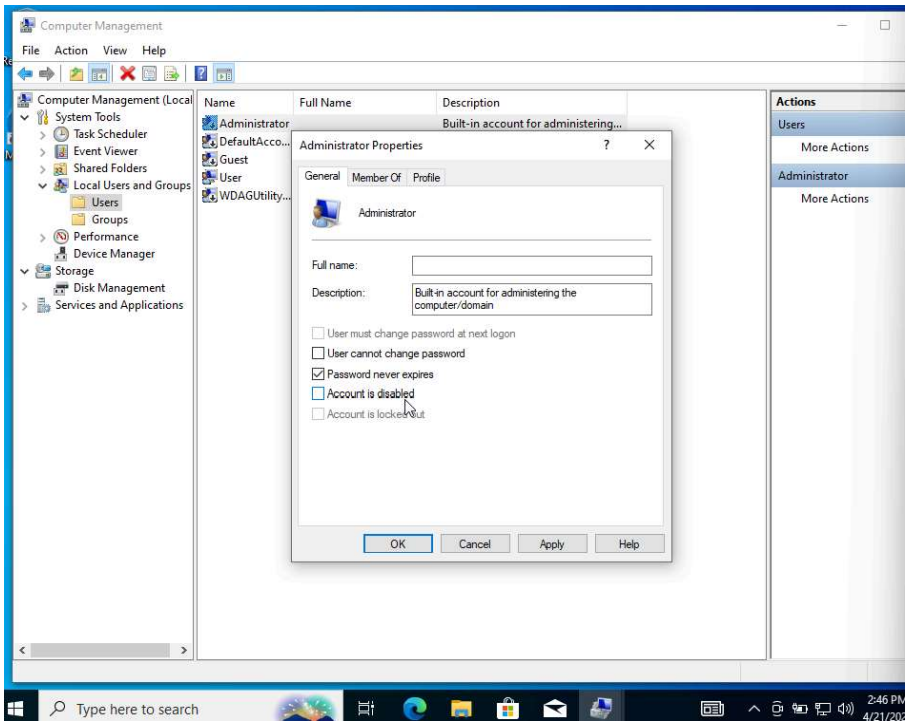


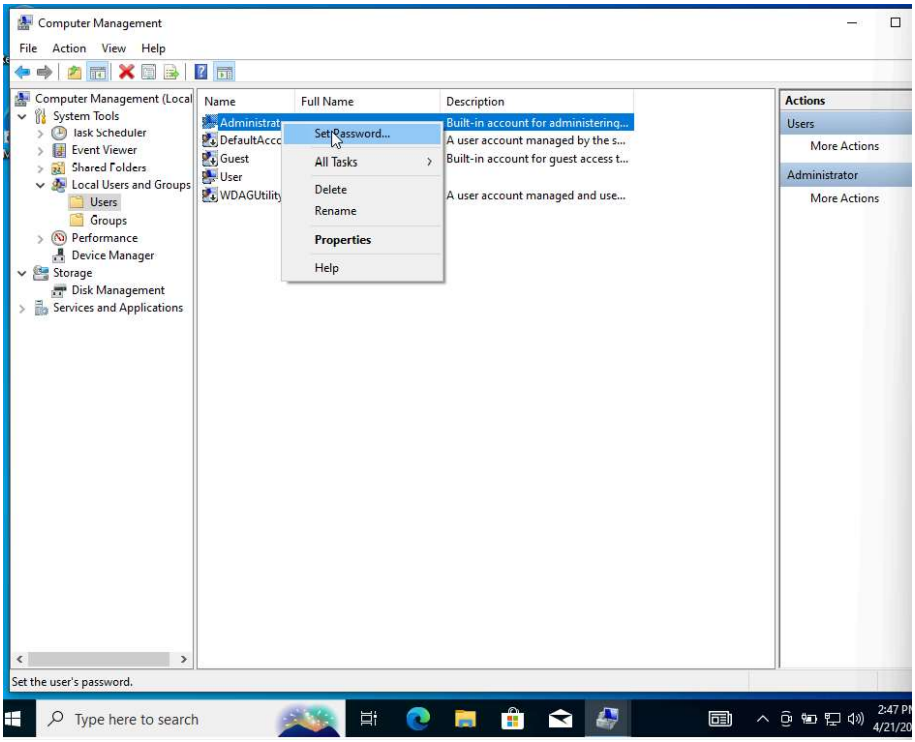
After this, open Windows 10 and go to “Computer Management”.

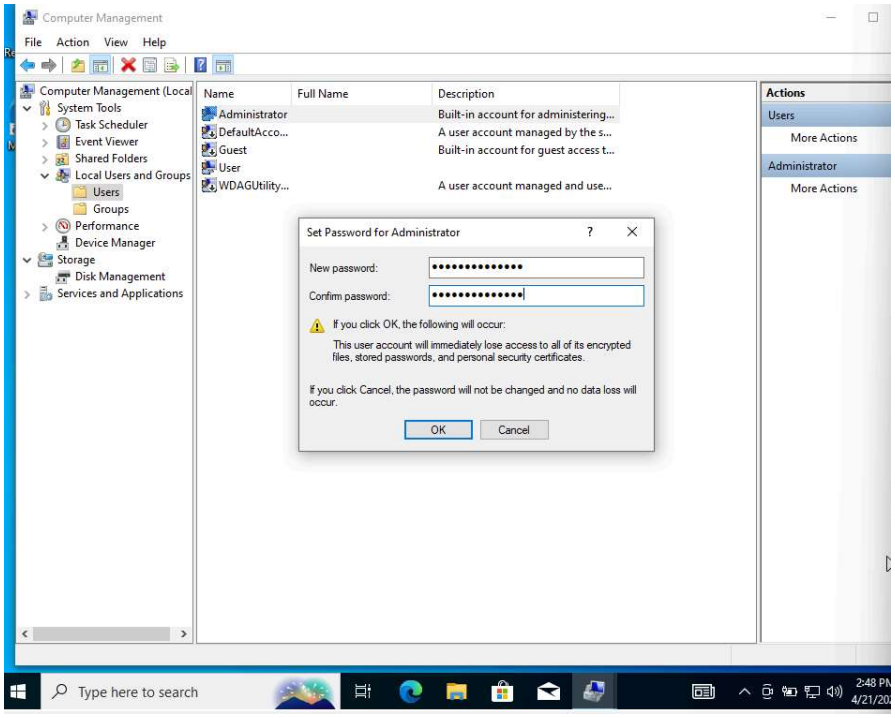

Windows 10 (Helpdesk) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Recycle Bin
All Apps Documents Web More
Best match
Computer Management
App
Settings
View advanced system settings
Search the web
computer man - See more search results
computer management
computer manufacturer's website
computer mania
computer management windows 10
computer manufacturers
computer management system
computer management app
computer management user
Computer Management
App
Open
Run as administrator
Open file location
Pin to Start
Pin to taskbar
computer management
2:43 PM
4/21/202



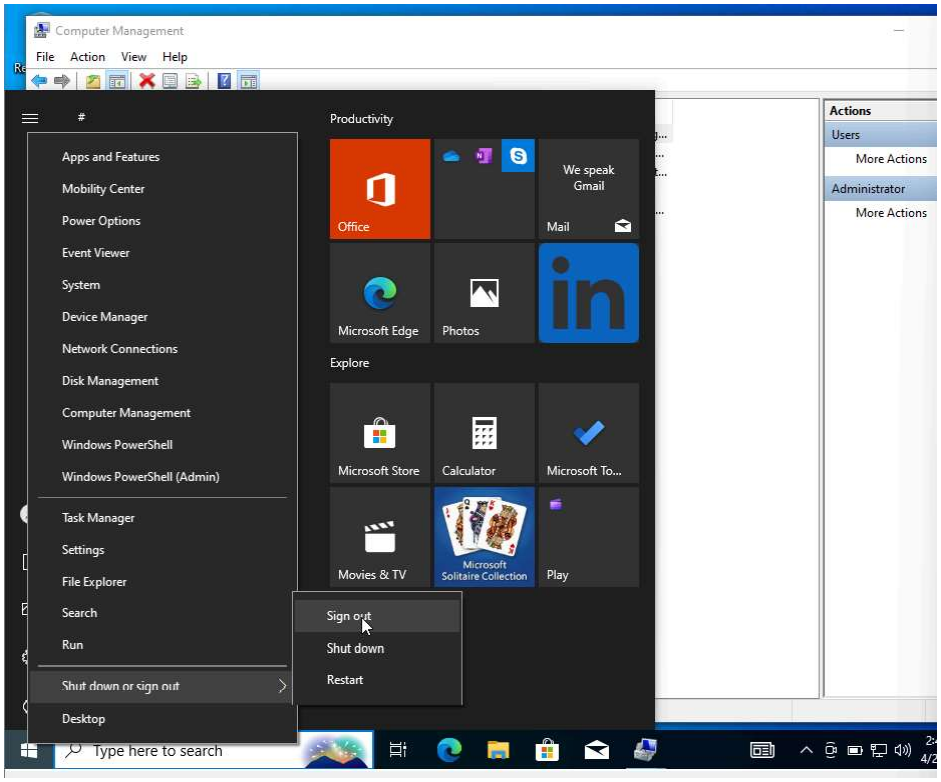
By default the Administrator account is disabled. Uncheck this box.

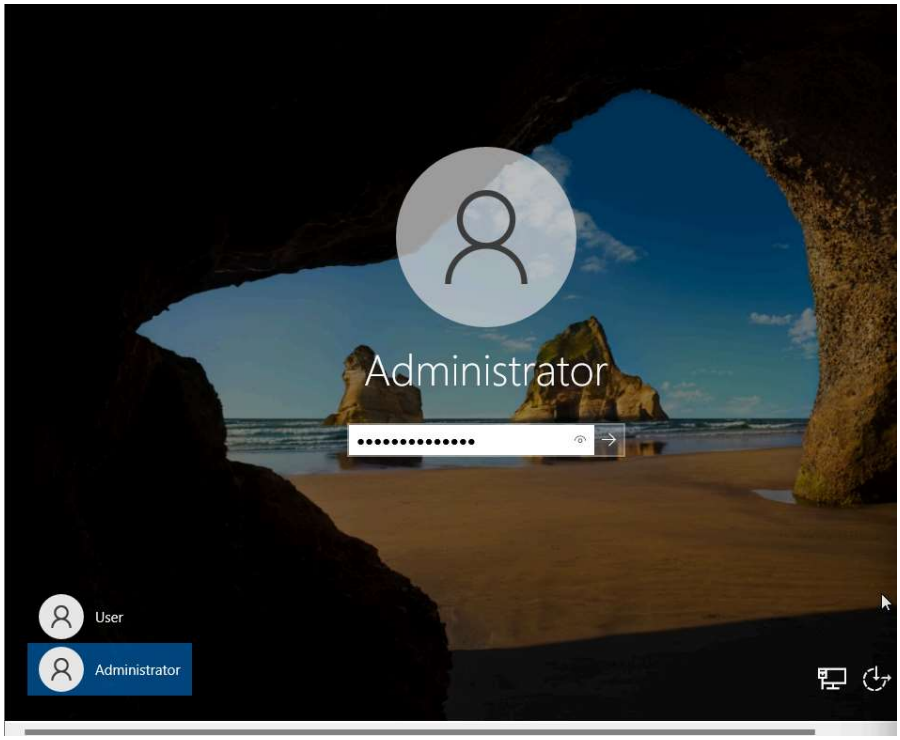




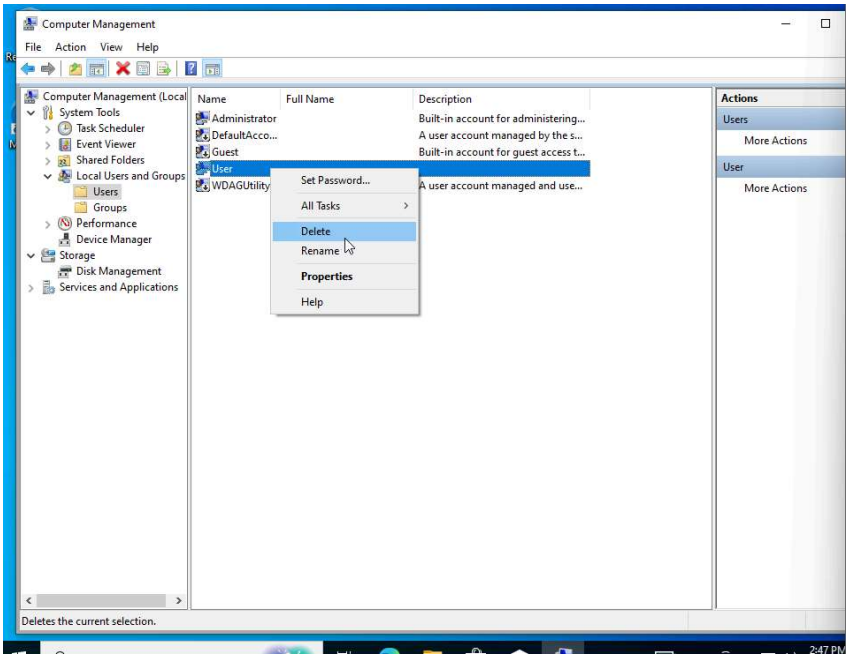


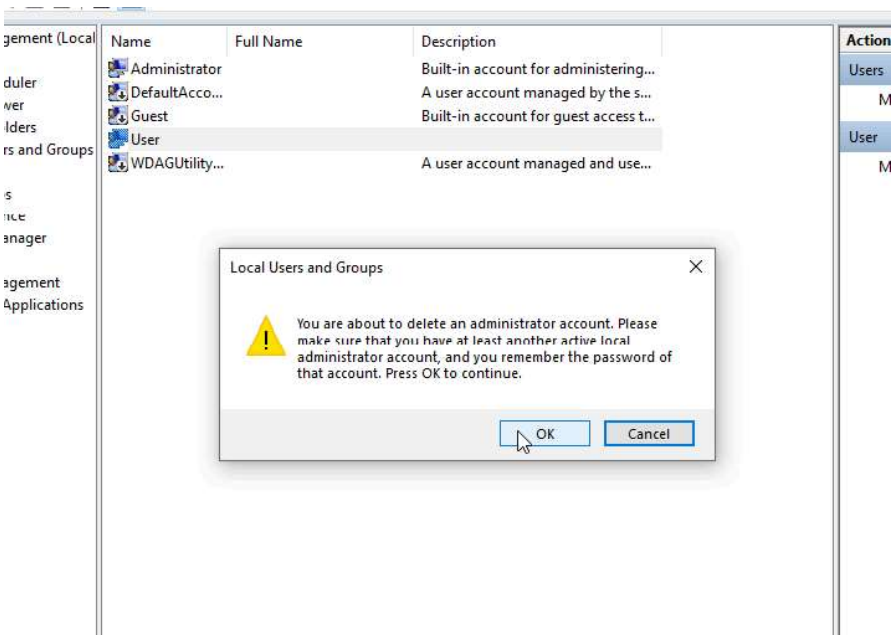
Sign out of the user account, and login as the Administrator account.


Computer Management
File Action View Help
Apps and Features
Mobility Center
Power Options
Event Viewer
System
Device Manager
Network Connections
Disk Management
Computer Management
Windows PowerShell
Windows PowerShell (Admin)
Task Manager
Settings
File Explorer
Search
Run
Shut down or sign out
Desktop
Sign out
Shut down
Restart
Productivity
Office
We speak Gmail
Mail
Microsoft Edge
Photos
Explore
Microsoft Store
Calculator
Microsoft To...
Movies & TV
Microsoft Solitaire Collection
Play
Actions
Users
More Actions
Administrator
More Actions
Type here to search


Administrator
User
Administrator

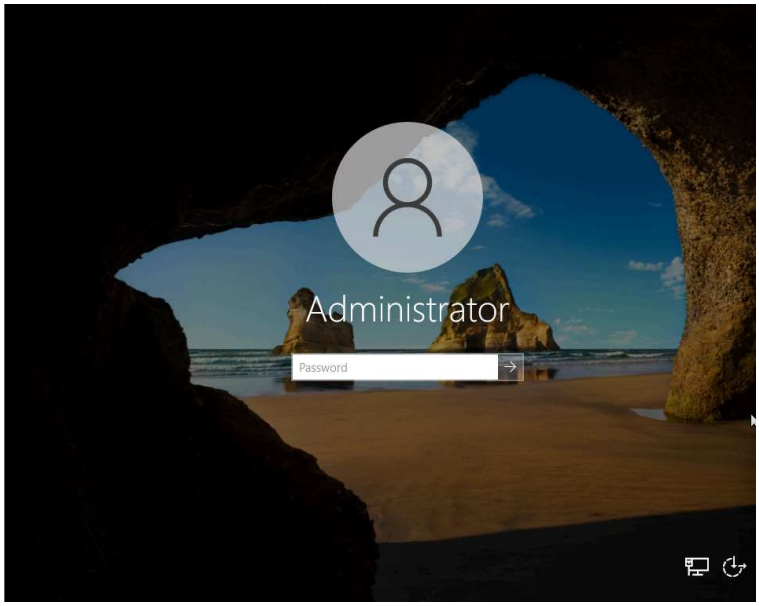
The User account can be accessed without a password, so we will remove the account to prevent any unauthorized access or security breaches.



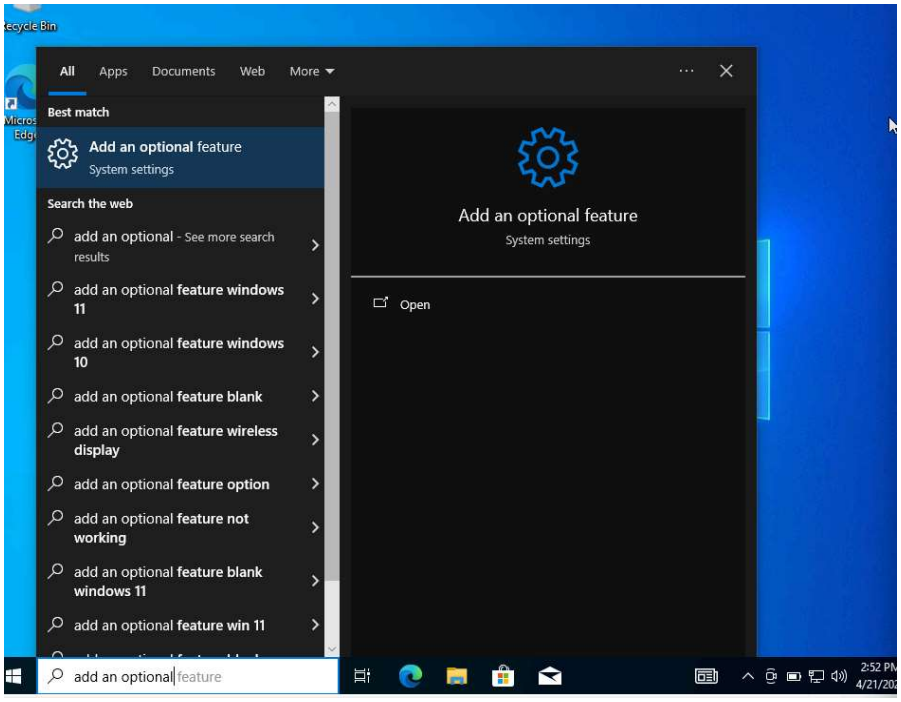


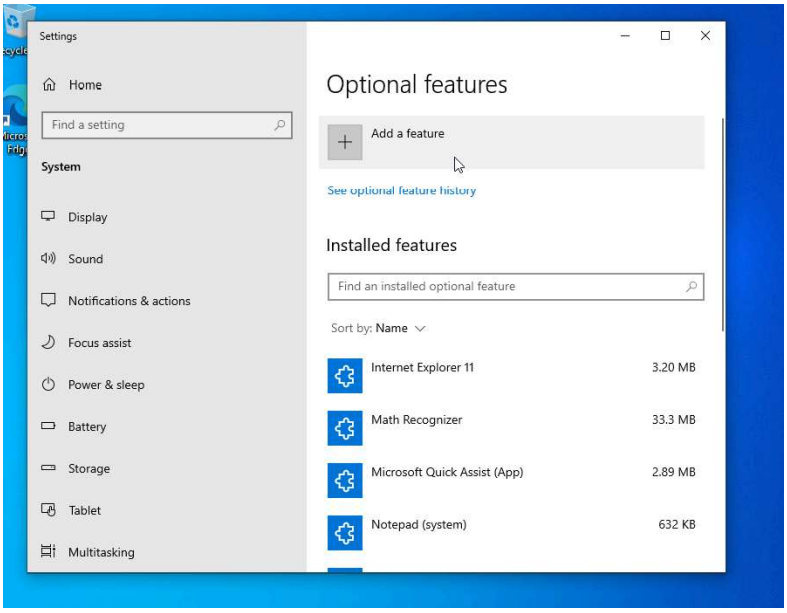
We sign out again to make sure that the User account has been successfully deleted and that the password protected Administrator

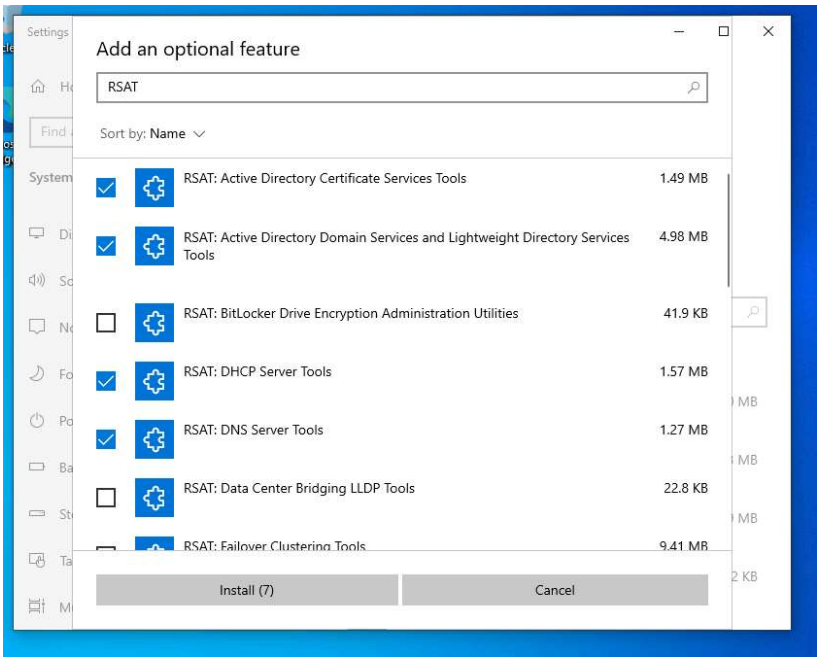
account is the only account available. This hardens the security of our Windows 10 machine.

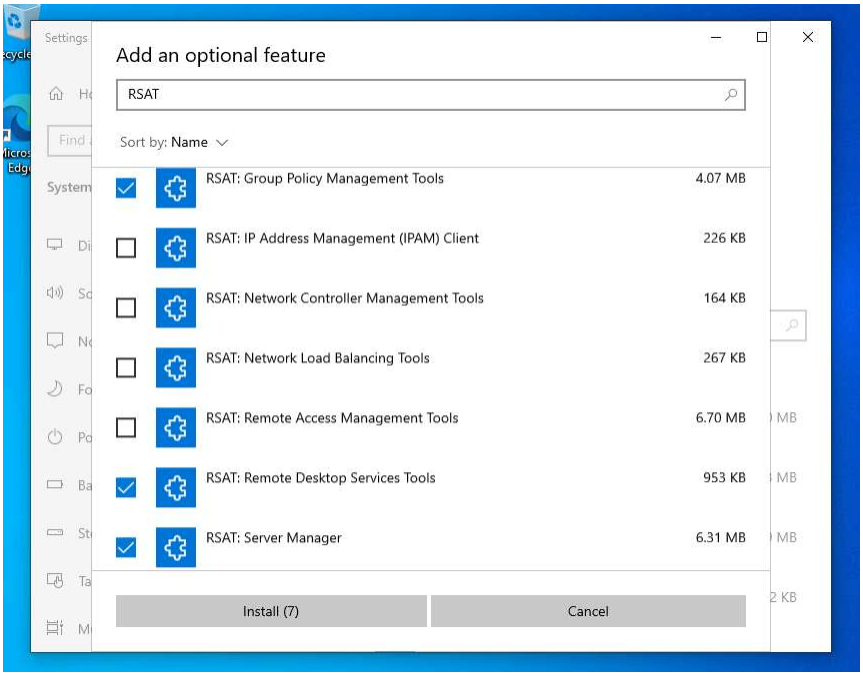


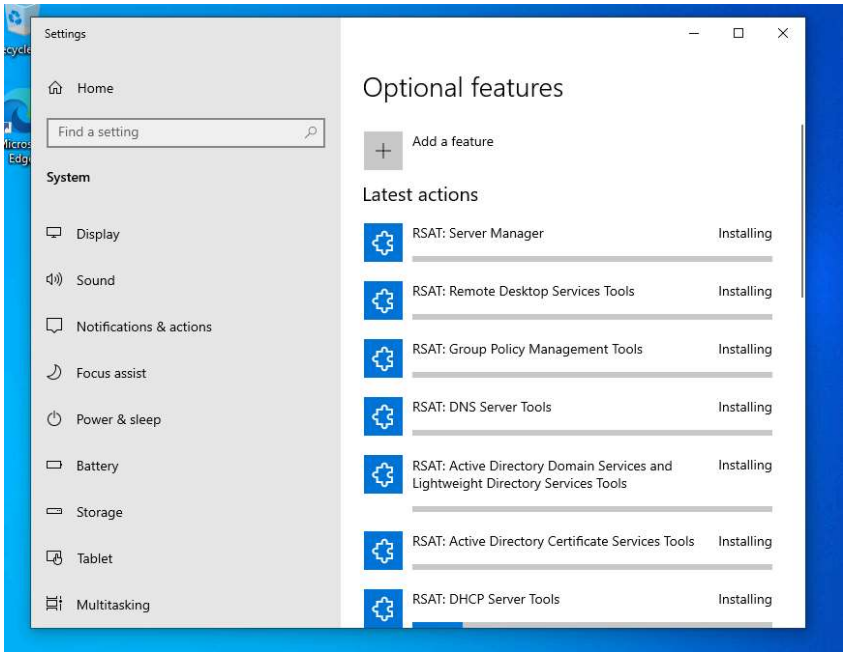
The next step is to download the RSATs (Remote Server Administration Tools) to enable access to Active Directory on a local level.



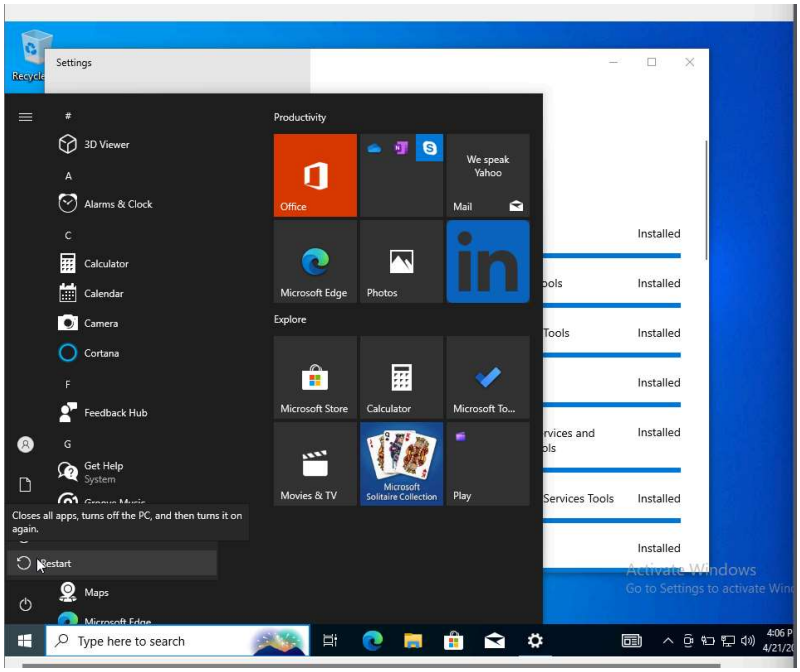

Settings
Home
Find a setting
System
Display
Sound
Notifications & actions
Focus assist
Power & sleep
Battery
Storage
Tablet
Multitasking
Optional features
Add a feature
See optional feature history
Installed features
Find an installed optional feature
Sort by: Name
Internet Explorer 11
3.20 MB
Math Recognizer
33.3 MB
Microsoft Quick Assist (App)
2.89 MB
Notepad (system)
632 KB


Add an optional feature
RSAT
Sort by: Name
RSAT: Active Directory Certificate Services Tools
1.49 MB
RSAT: Active Directory Domain Services and Lightweight Directory Services Tools
4.98 MB
RSAT: BitLocker Drive Encryption Administration Utilities
41.9 KB
RSAT: DHCP Server Tools
1.57 MB
RSAT: DNS Server Tools
1.27 MB
RSAT: Data Center Bridging LLDP Tools
22.8 KB
Install (7)
Cancel

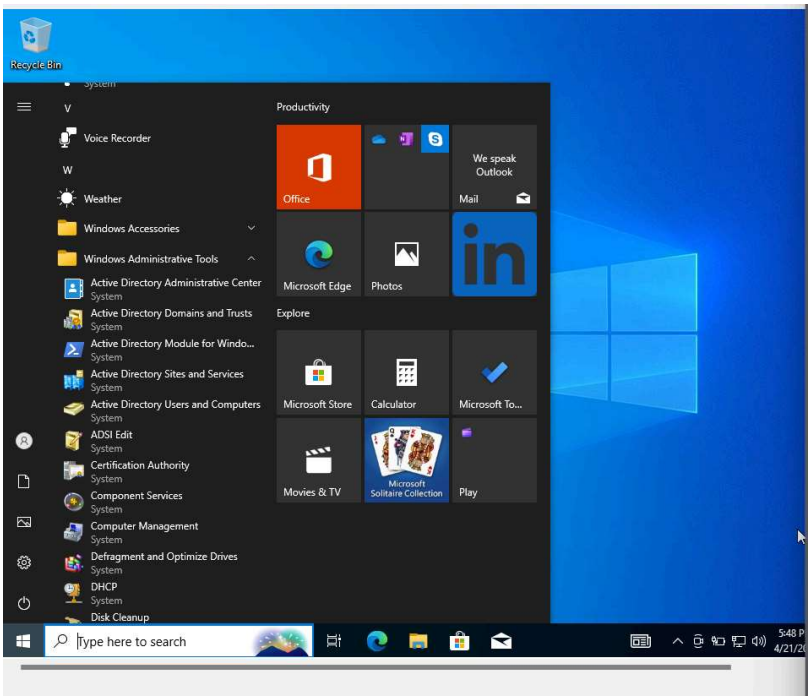




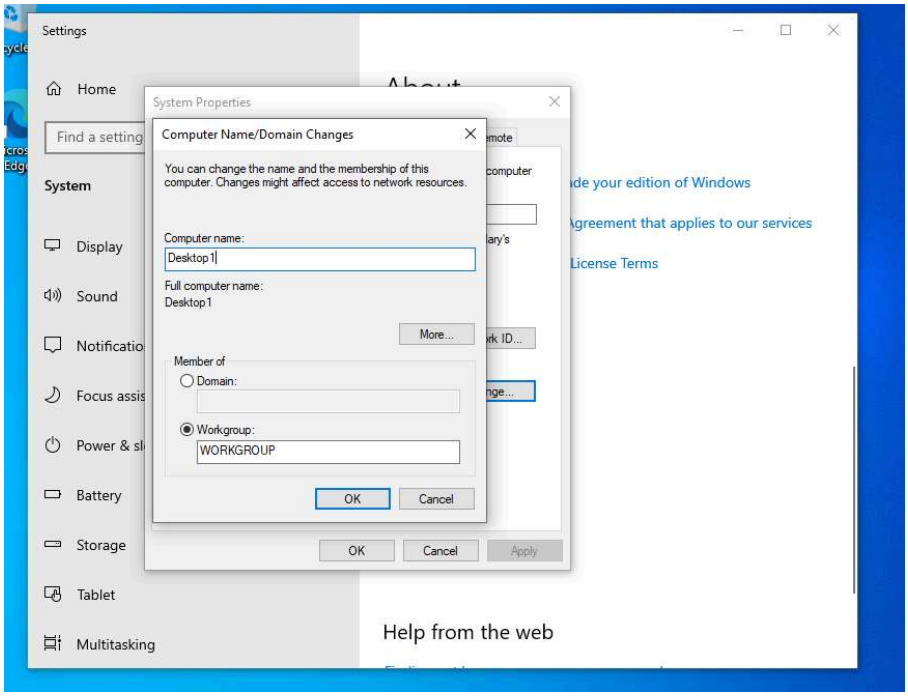
After installing the RSATs we need to restart the machine.



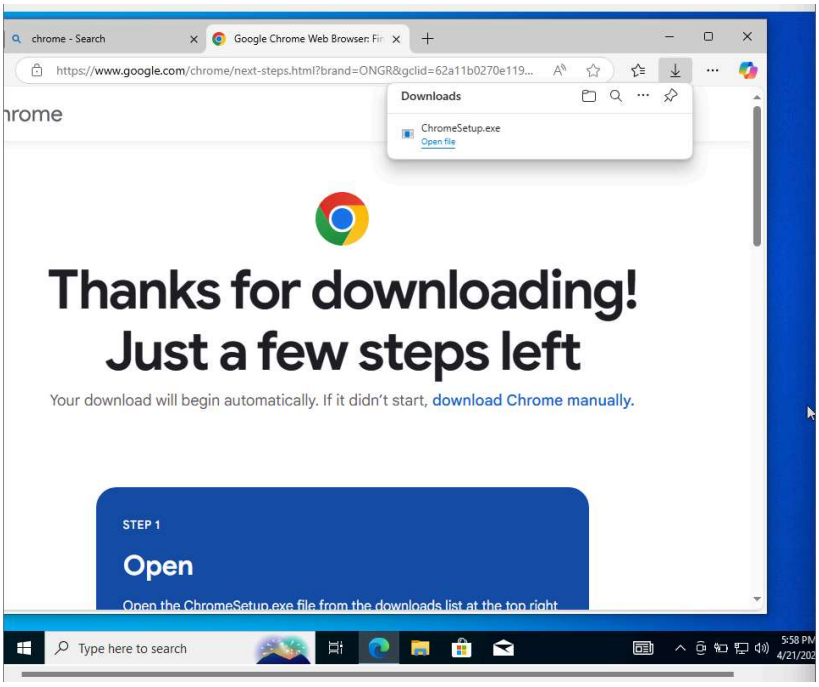
We can verify to see that the RSATs are installed.

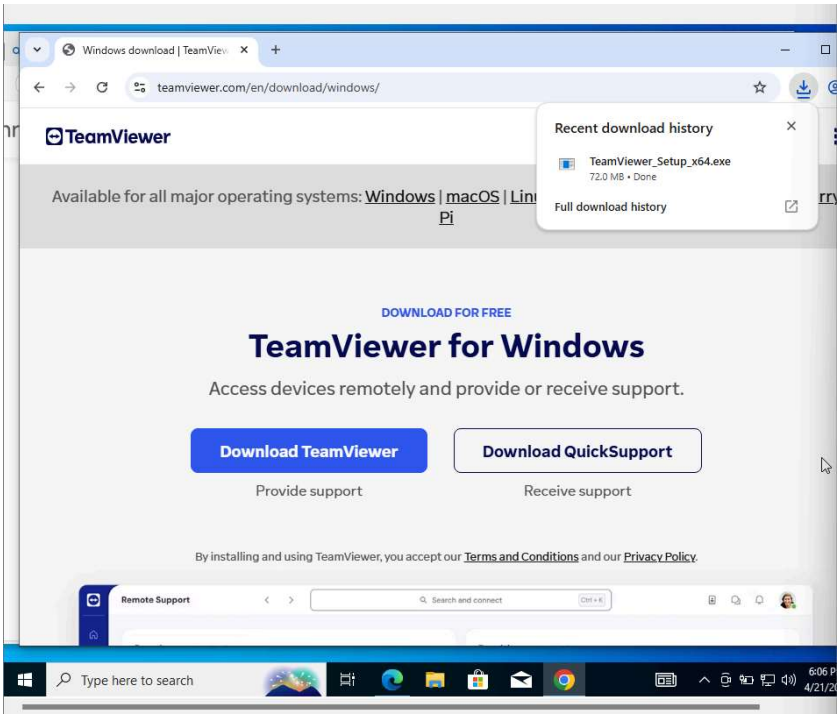


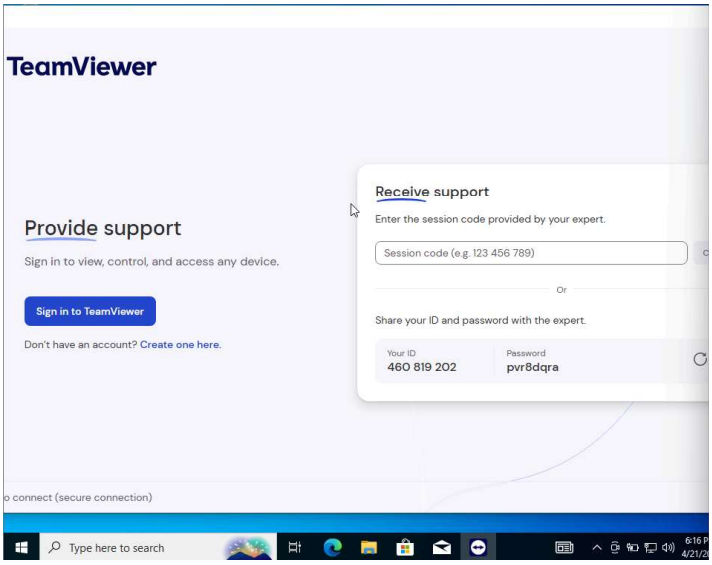
Add the Windows 10 machine to the SimoTech.com domain. First, change the Windows 10 computer name to “Desktop1”.



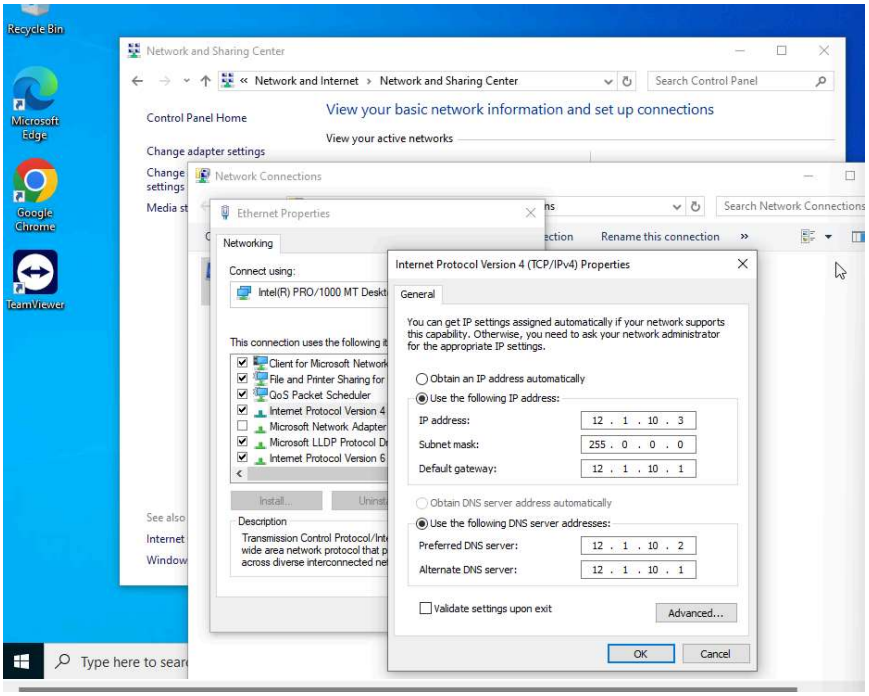
Restart again. Then go to Microsoft Edge and download Google Chrome. Then in Chrome download TeamViewer Full Client 64-bit. TeamViewer will allows us to access other machines remotely and fulfill our Helpdesk duties.



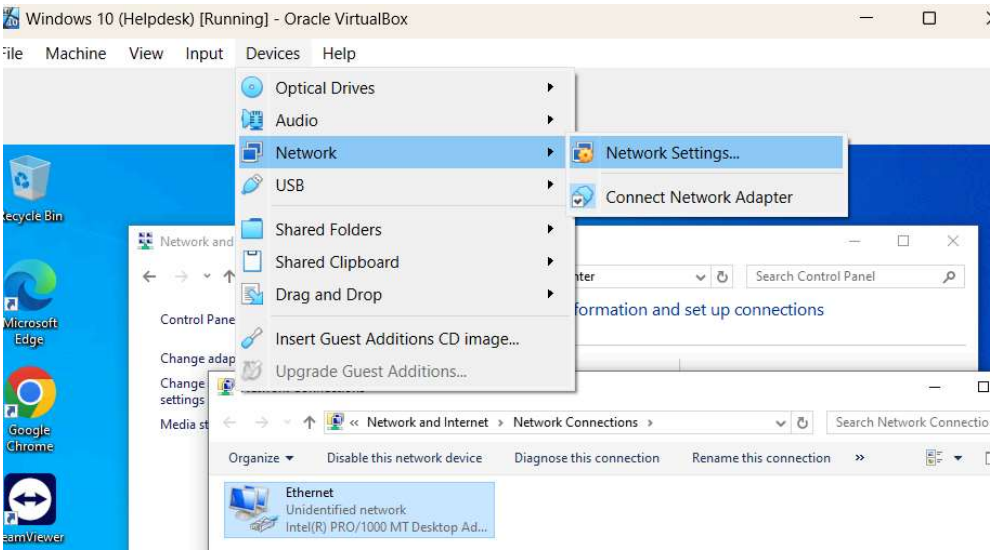


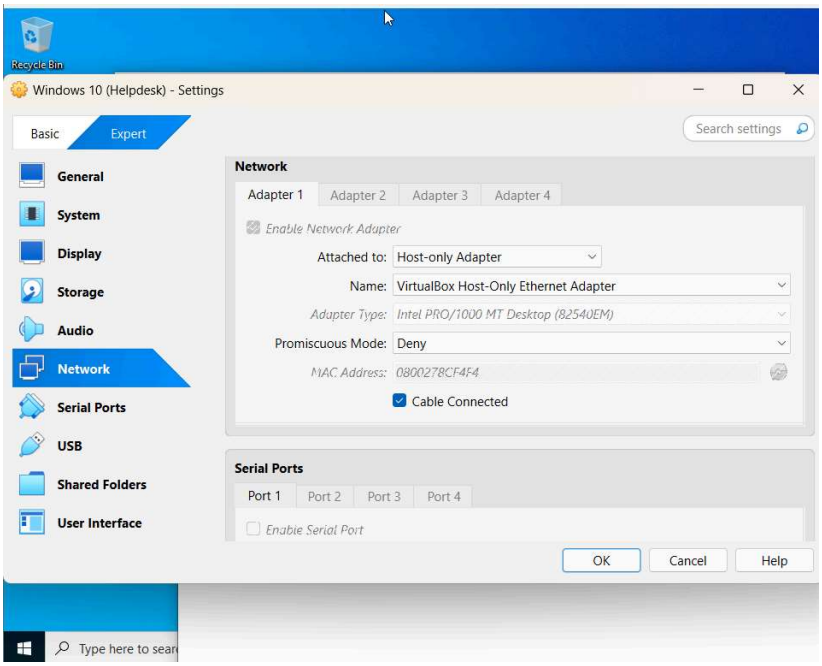


Now we must configure the network and assign a static IP for our Windows 10 machine to join it with the SimoTech.com domain. Do it just how we did previously with the Windows Server 2022 machine.

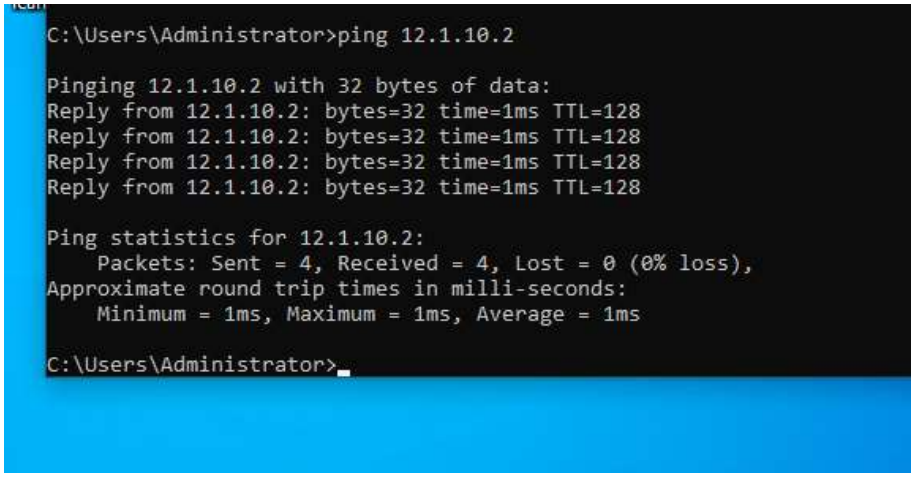


Go to the network settings for the virtual machine like we did previously with the WIndows Server 2022 machine and change the adapter from being attached to NAT to being attached to Host-only Adapter.

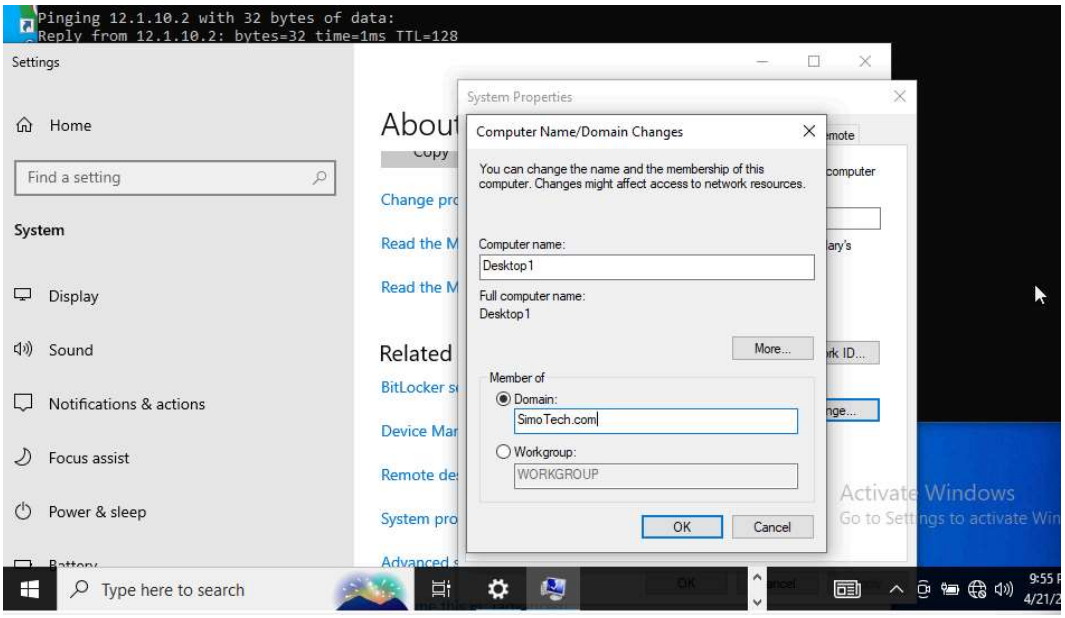


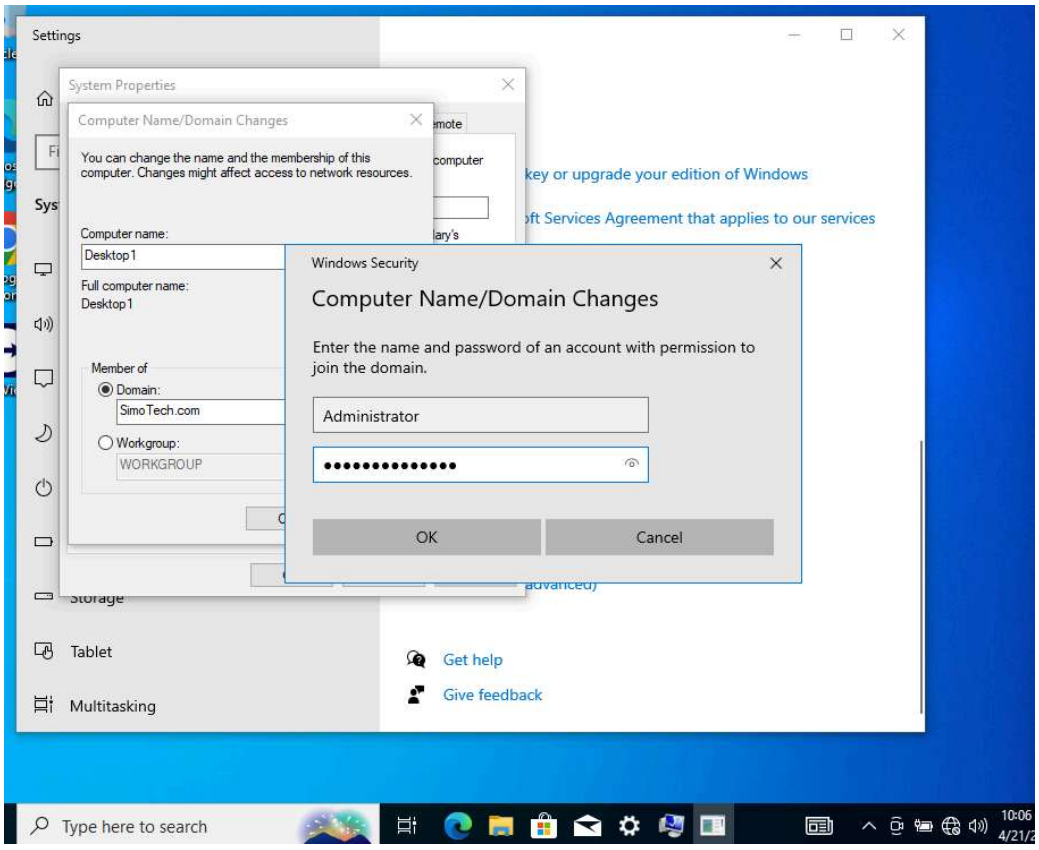


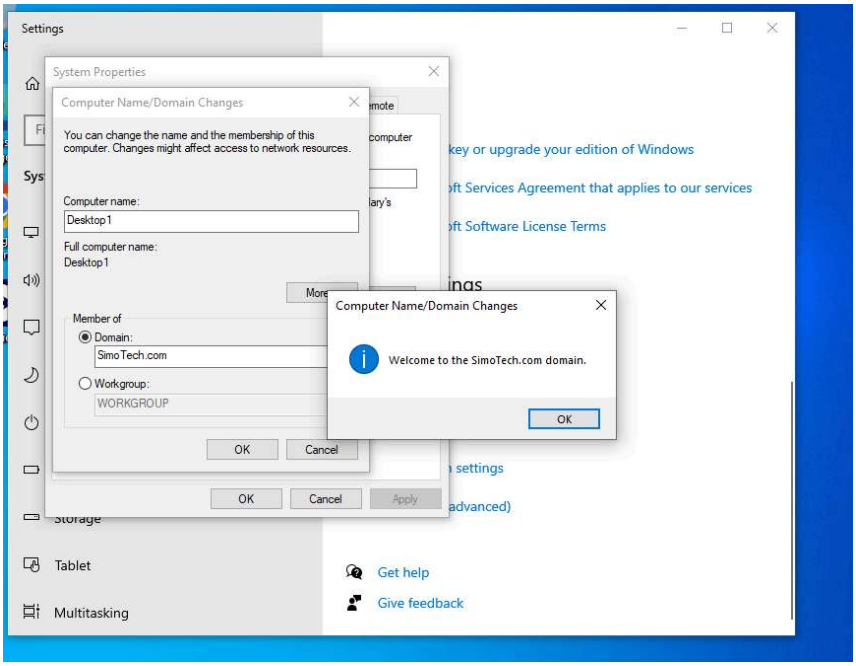
We have established the static IPs and networks, so now we will perform a ping test to see if our machines can connect to each other. I had to have my Windows Server 2022 machine open at the same time as the Windows 10 machine in order to successfully ping it.



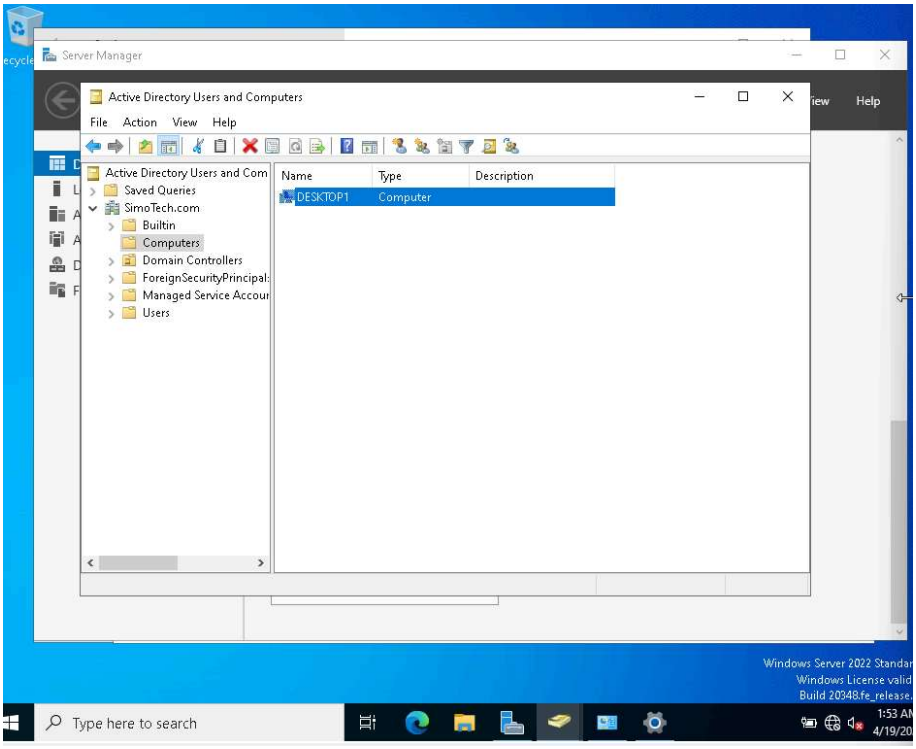
Since the machines can connect to each other we can join the WIndows 10 machine to the SimoTech.com domain. Make sure the Windows Server 2022 machine is open alongside the WIndows 10 machine.


Pinging 12.1.10.2 with 32 bytes of data:
Reply from 12.1.10.2: bytes=32 time=1ms TTL=128
Settings
Home
Find a setting
System
Display
Sound
Notifications & actions
Focus assist
Power & sleep
System Properties
Computer Name/Domain Changes
You can change the name and the membership of this computer. Changes might affect access to network resources.
Computer name:
Desktop1
Full computer name:
Desktop1
More...
Member of
Domain:
SimoTech.com
Workgroup:
WORKGROUP
OK
Cancel
Activate Windows
Type here to search

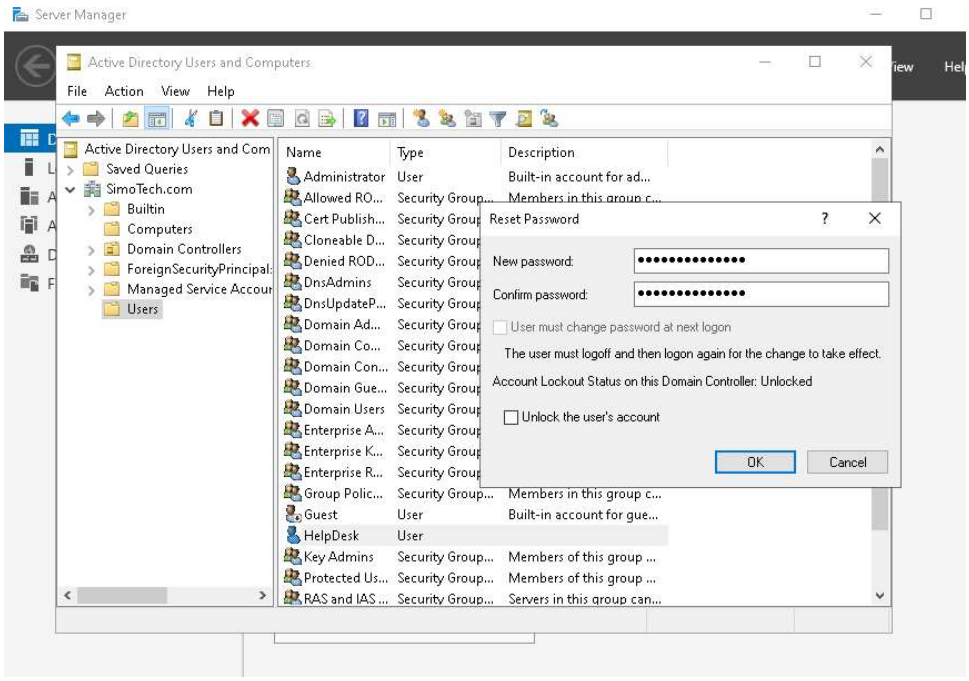

Settings
System Properties
Computer Name/Domain Changes
You can change the name and the membership of this computer. Changes might affect access to network resources.
Computer name:
Desktop1
Full computer name:
Desktop1
Member of
Domain:
SimoTech.com
Workgroup:
WORKGROUP
Windows Security
Computer Name/Domain Changes
Enter the name and password of an account with permission to join the domain.
Administrator
OK
Cancel
Tablet
Multitasking
Get help
Give feedback
Type here to search

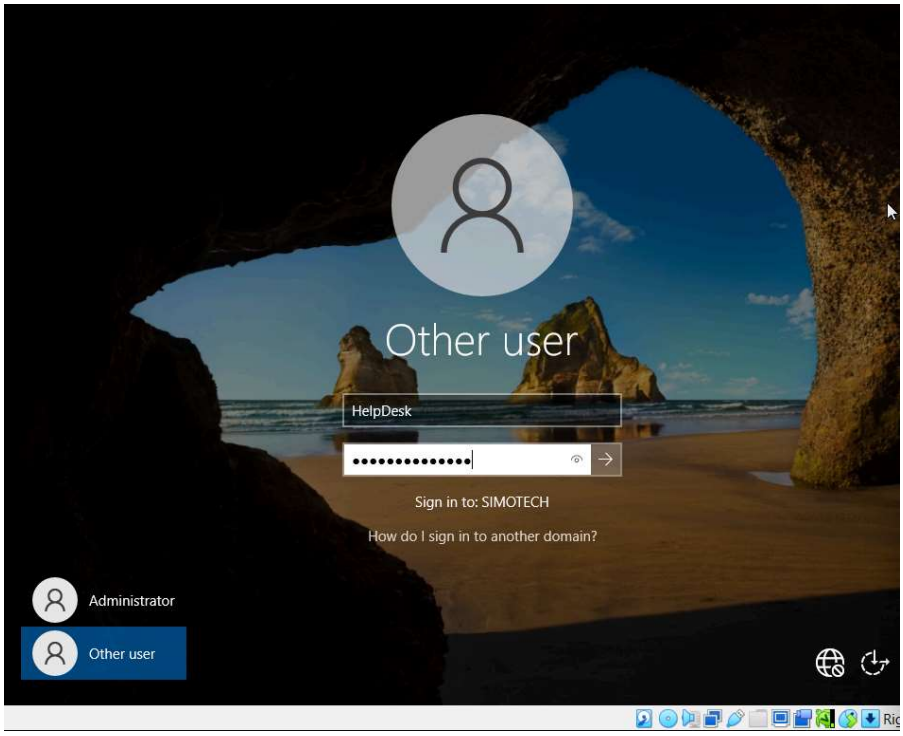


Verify that the Windows 10 machine was joined to the domain successfully by opening Windows Server 2022 and going to “Active Directory Users and Computers”

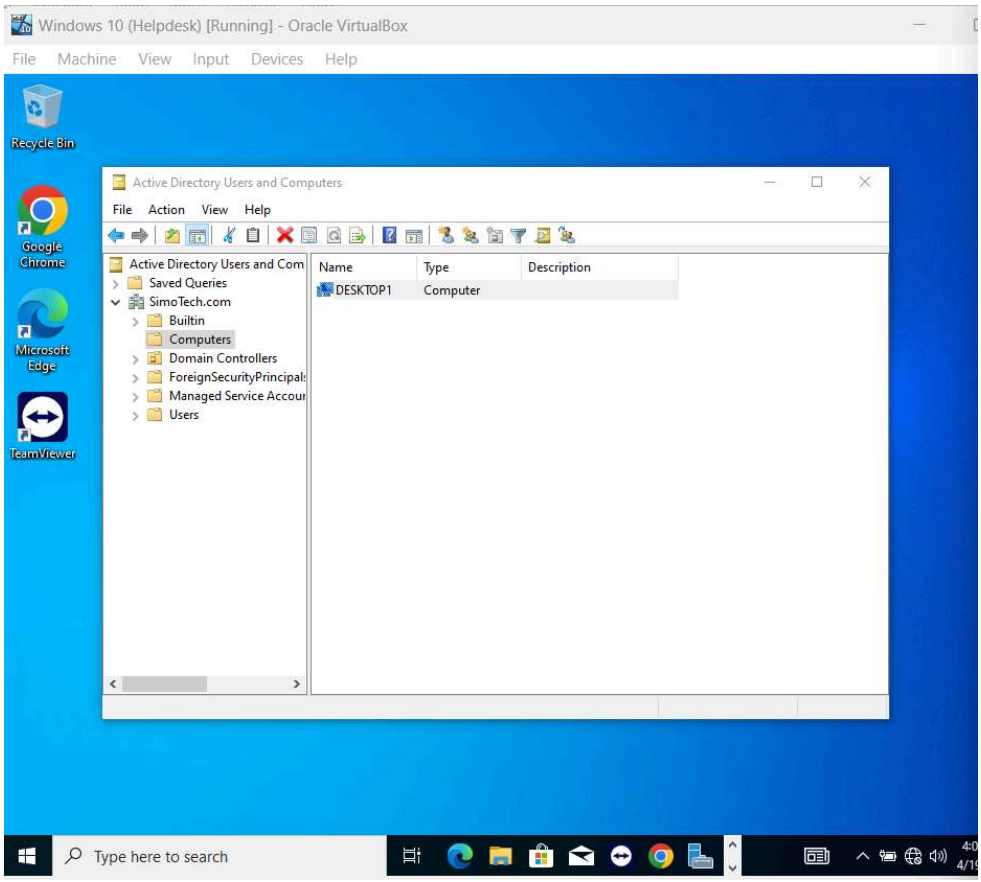


Create a password for the HelpDesk user account, and then log back into the Windows 10 machine with it.



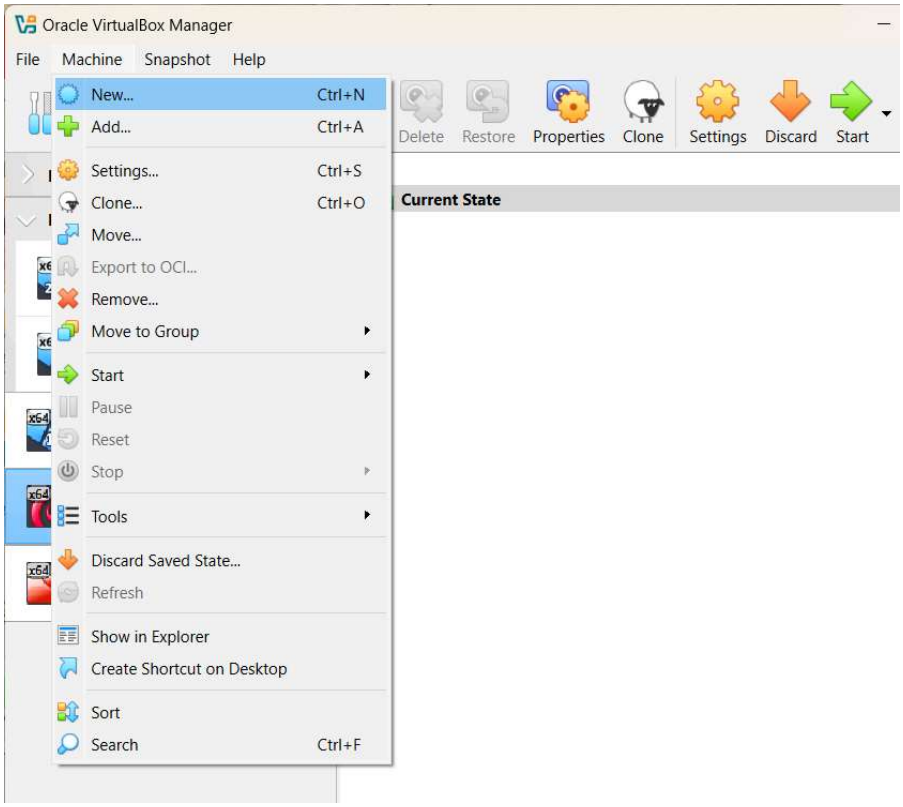


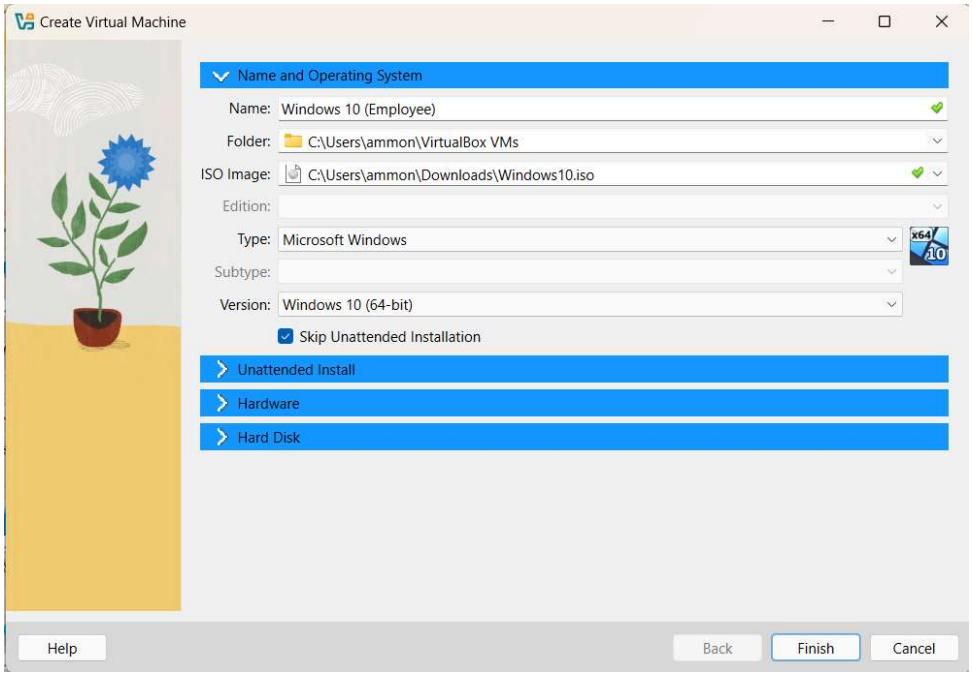
We have successfully joined the Windows 10 machine to the SimoTech.com domain. We downloaded the RSATs, Team Viewer, and Google Chrome.

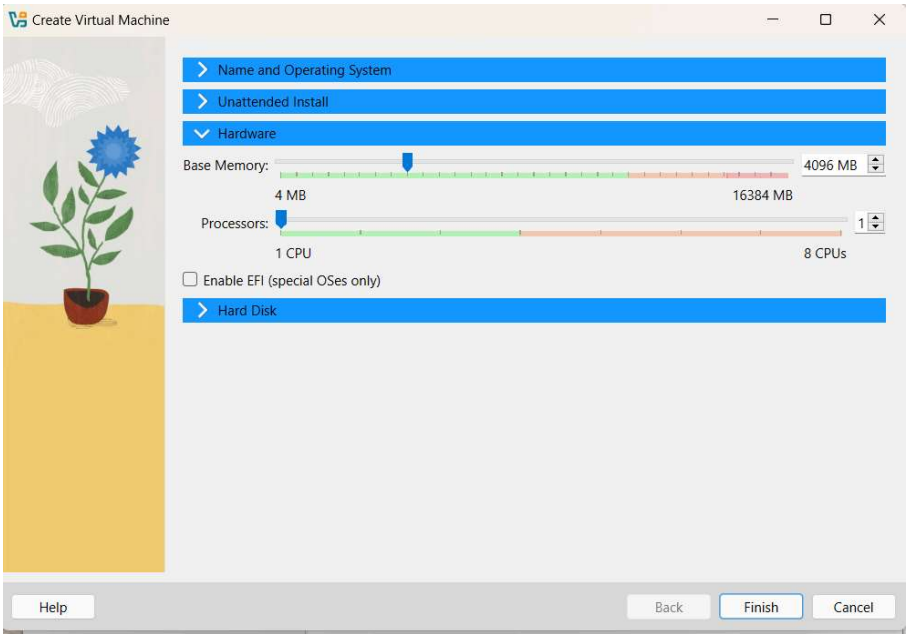


Windows 10 (Employee) : Join PC to Domain with Local User, Group Policy, and RSOP Reports

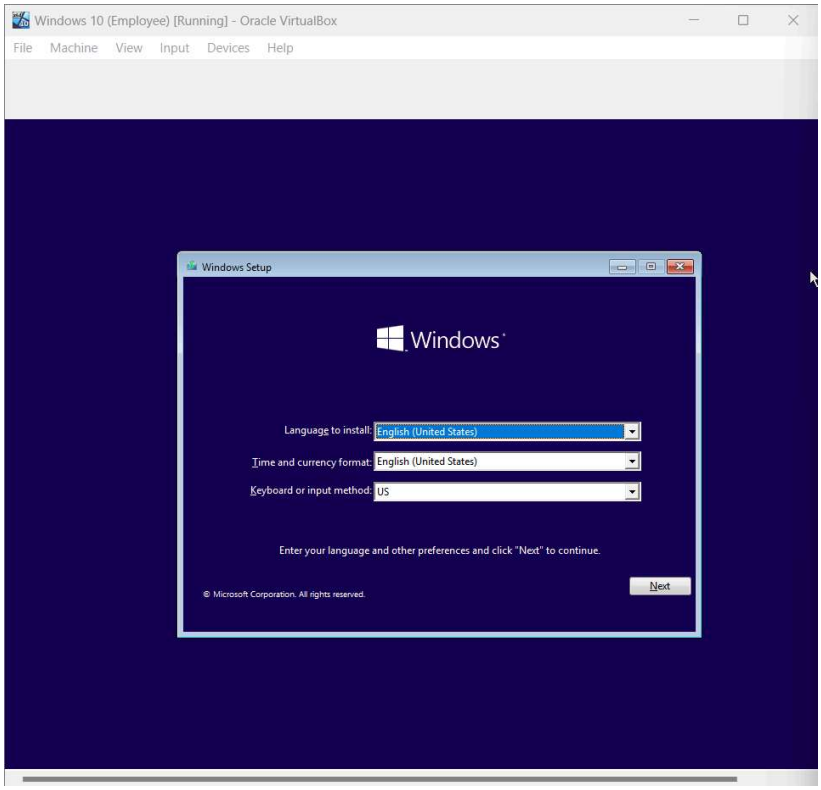
For Part 5, we will create a new Windows 10 machine. This new machine will act as a typical user, an employee. It will be used for testing. Use the same Windows 10 *.iso* file the we used for our previous Windows 10 machine.







Then click finish and then start up the machine to install the WIndows 10 OS.


Windows 10 (Employee) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Windows Setup
Windows
Language to install: English (United States)
Time and currency format: English (United States)
Keyboard or input method: US
Enter your language and other preferences and click "Next" to continue.
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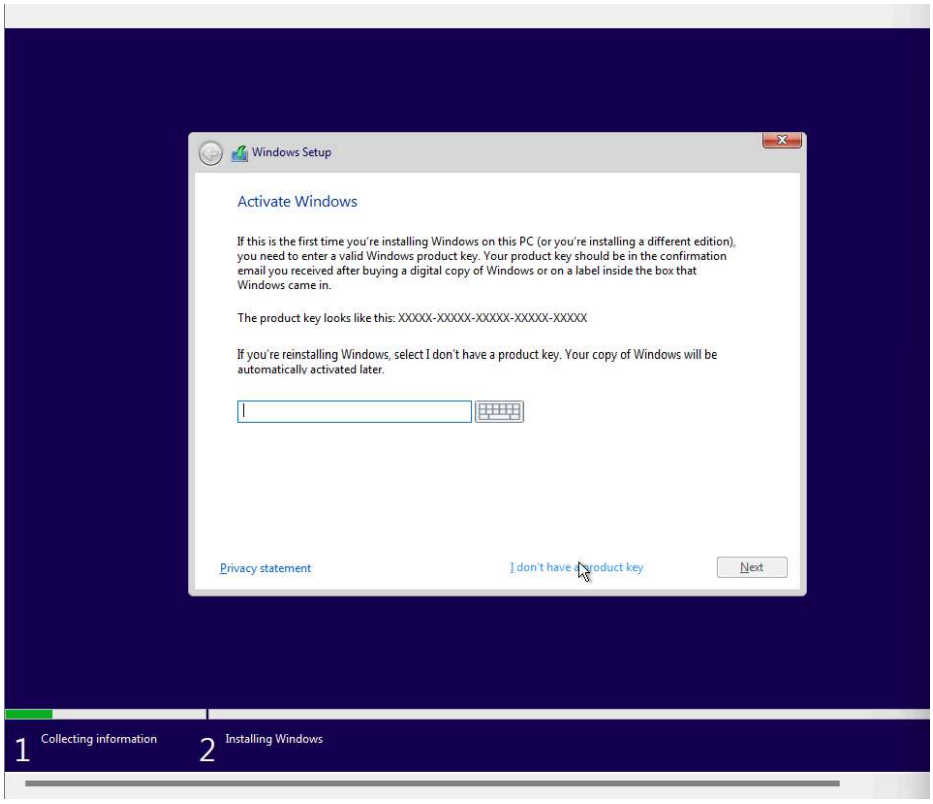
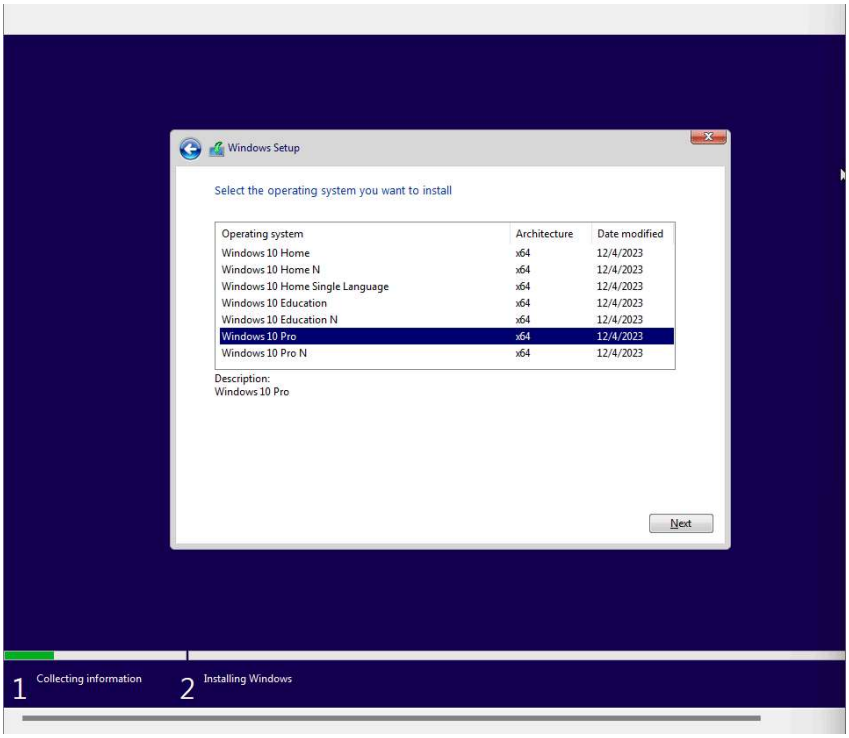
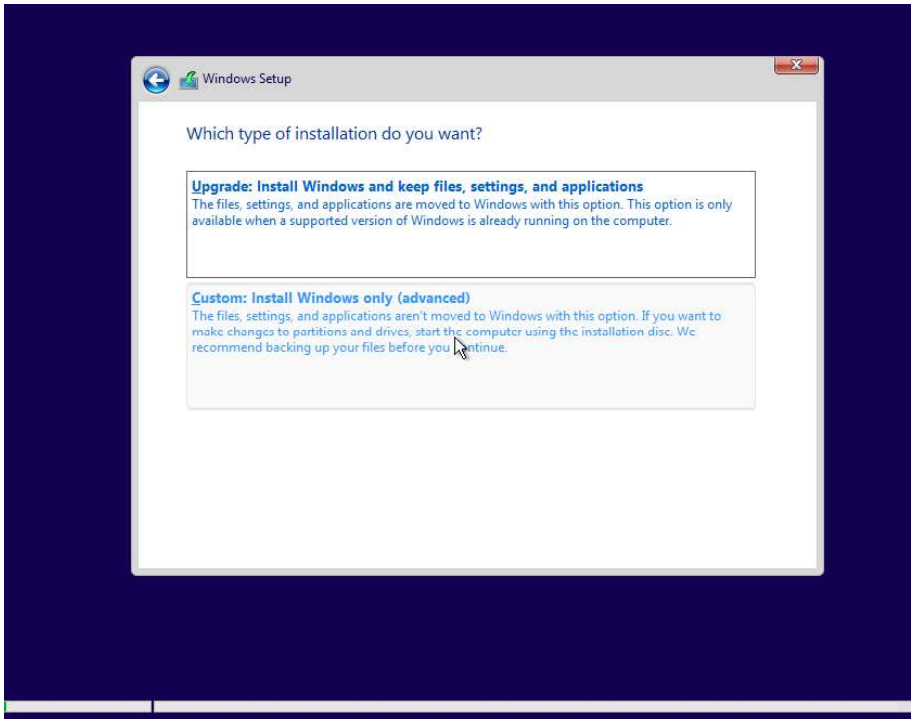
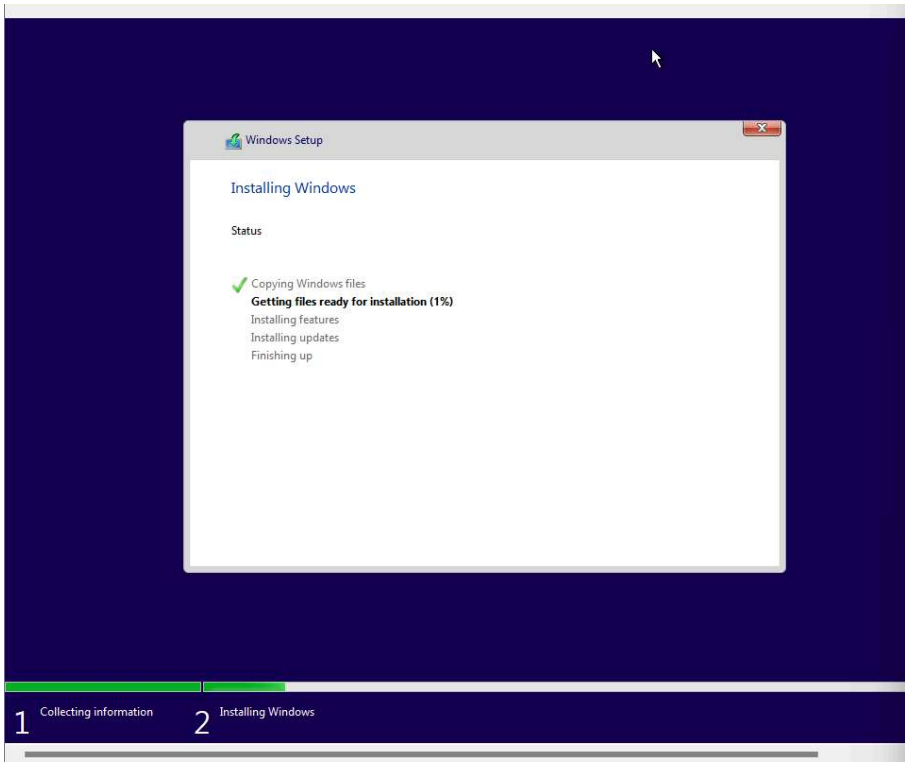
Next


Windows Setup
Activate Windows
If this is the first time you're installing Windows on this PC (or you're installing a different edition), you need to enter a valid Windows product key. Your product key should be in the confirmation email you received after buying a digital copy of Windows or on a label inside the box that Windows came in.
The product key looks like this: XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
If you're reinstalling Windows, select I don't have a product key. Your copy of Windows will be automatically activated later.
Privacy statement
I don't have a product key
Next
1 Collecting information
2 Installing Windows

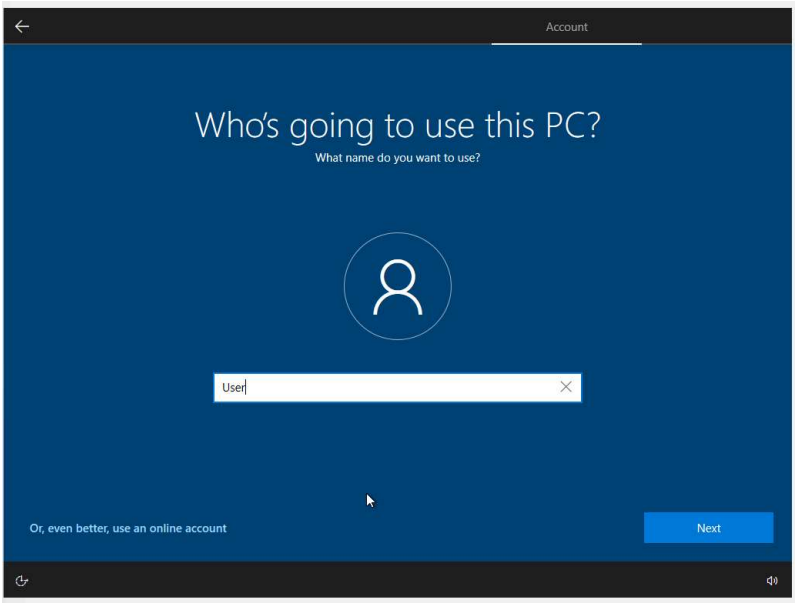


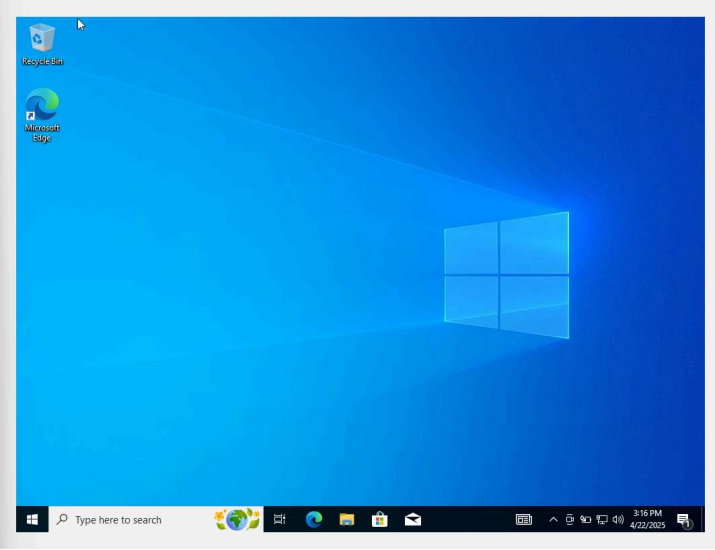
After selecting “Windows 10 Pro”, select “Custom: Install Windows only (advanced)”.





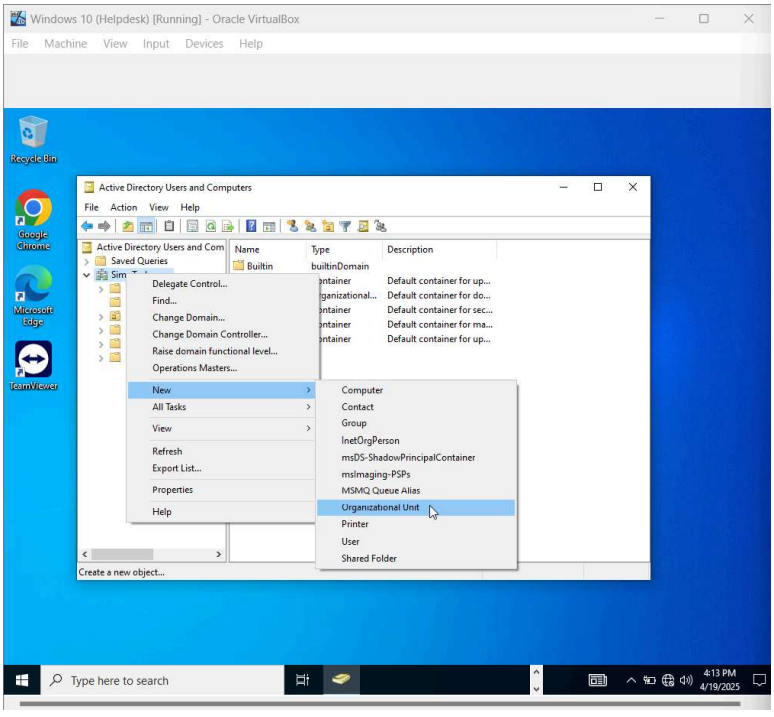
After Windows 10 is done installing select “Personal Use” and then “Offline account”. Create a “User” account but don’t assign a password.

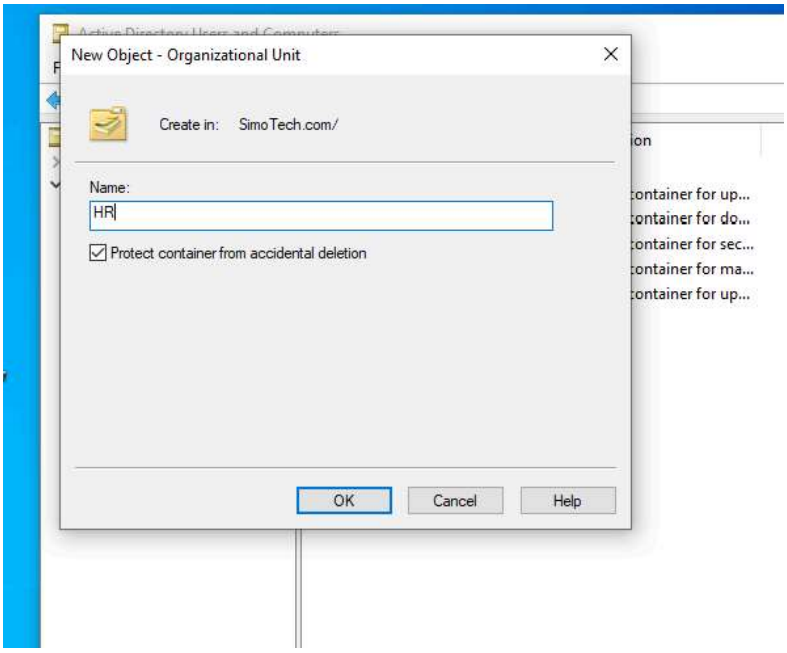


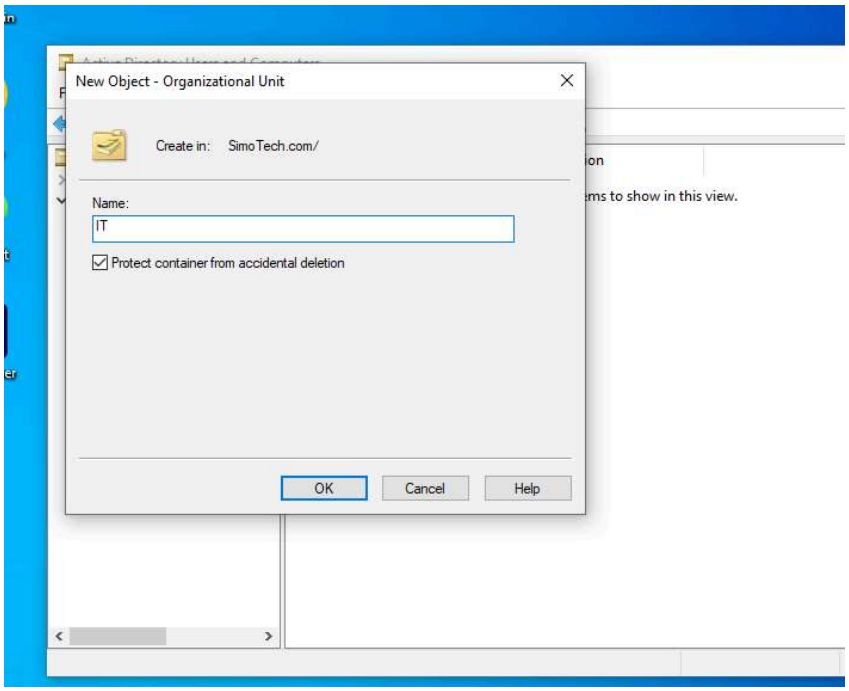


We have successfully created the Windows 10 (Employee) machine or Desktop2. Now we will create a user for this computer. Open Windows 10 (Helpdesk) or Desktop1. Make sure Windows Server 2022 is running alongside it. So all of our 3 machines will be running together.

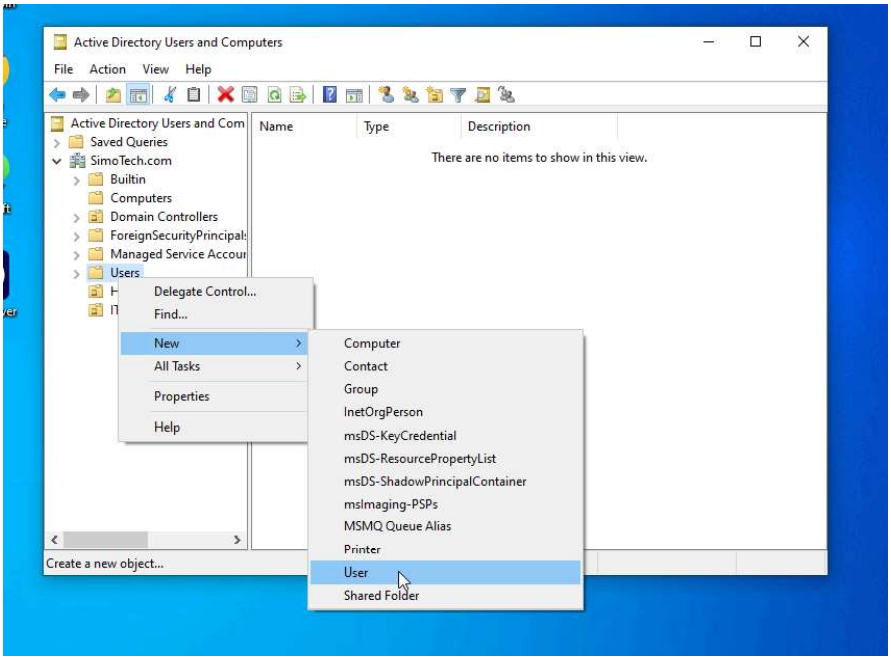
On Windows 10 (Helpdesk) open “ Active Directory Users and Computers”. Create 2 organizational units. One called “HR” and another called “IT”.

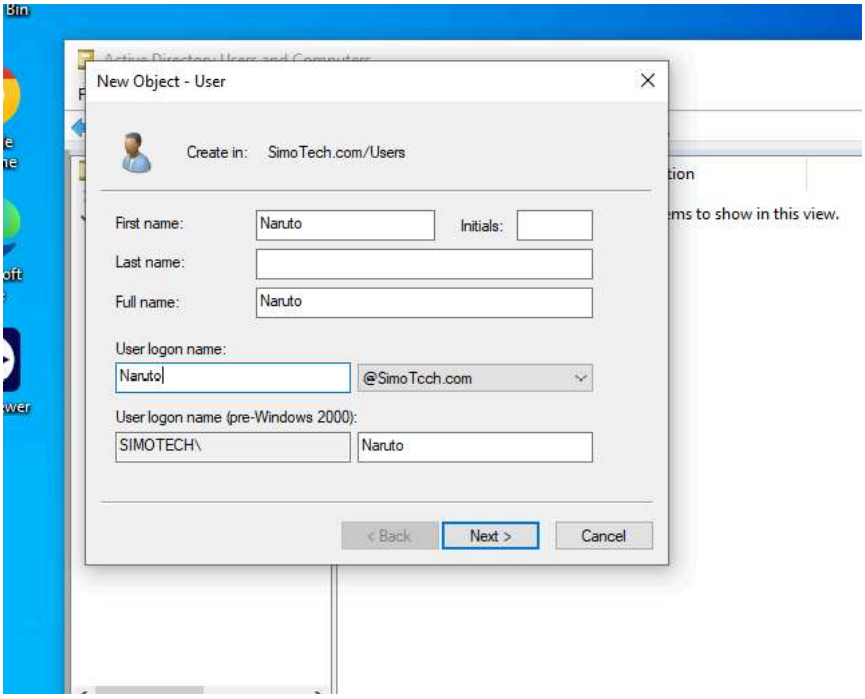


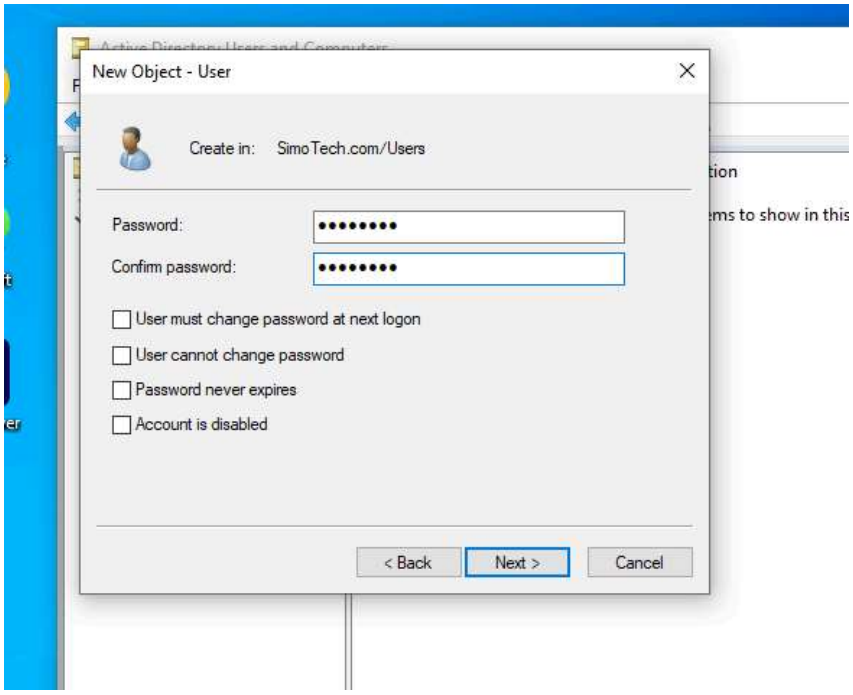


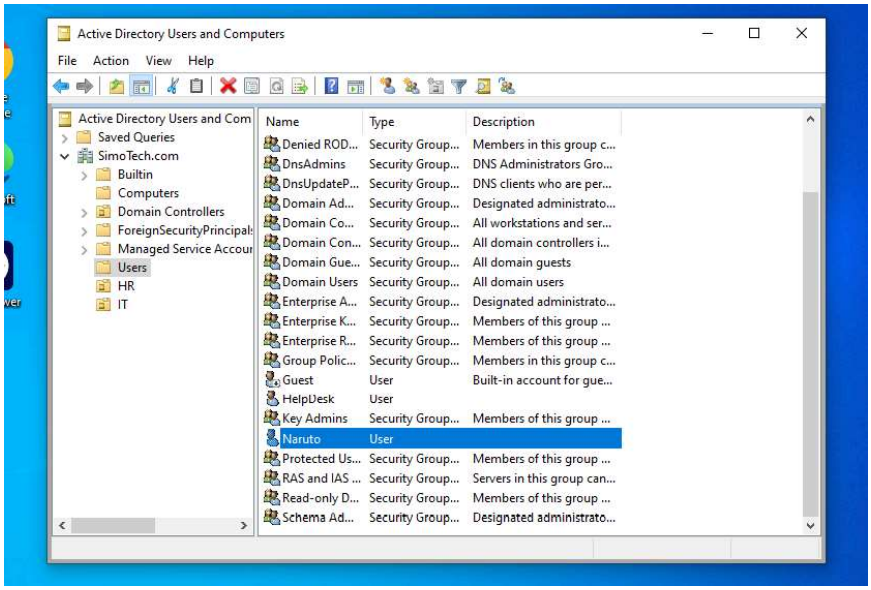


Now we will create a new user in Active Directory. Right click on “Users” and follow the steps.

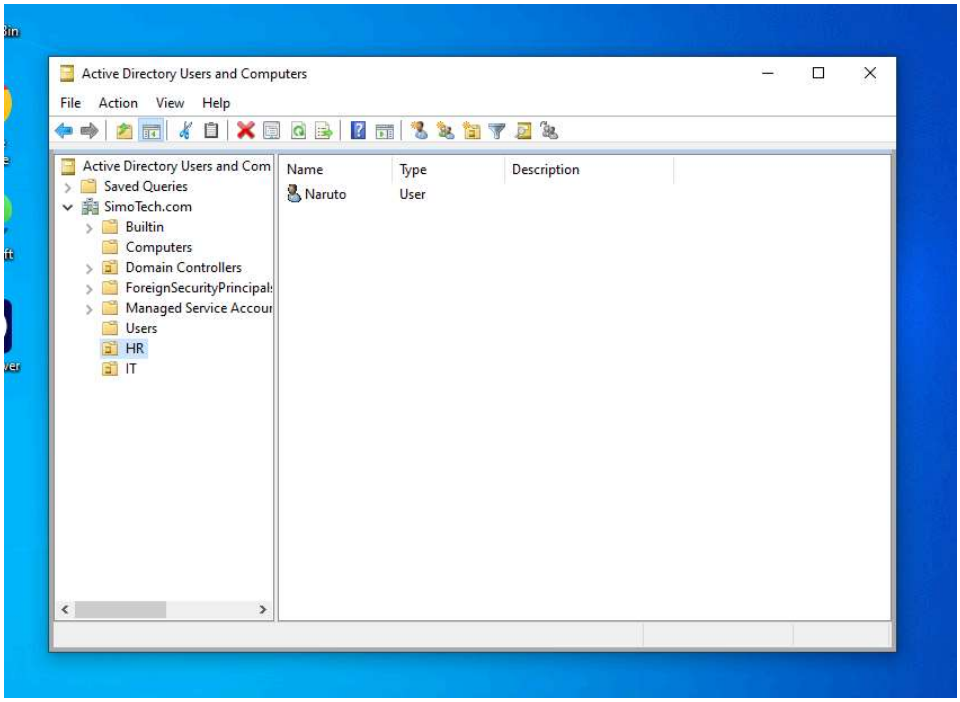

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal
Managed Service Accou
Users
Name
Type
Description
There are no items to show in this view.
Delegate Control...
Find...
New
All Tasks
Properties
Help
Computer
Contact
Group
InetOrgPerson
msDS-KeyCredential
msDS-ResourcePropertyList
msDS-ShadowPrincipalContainer
msImaging-PSPs
MSMQ Queue Alias
Printer
User
Shared Folder
Create a new object...

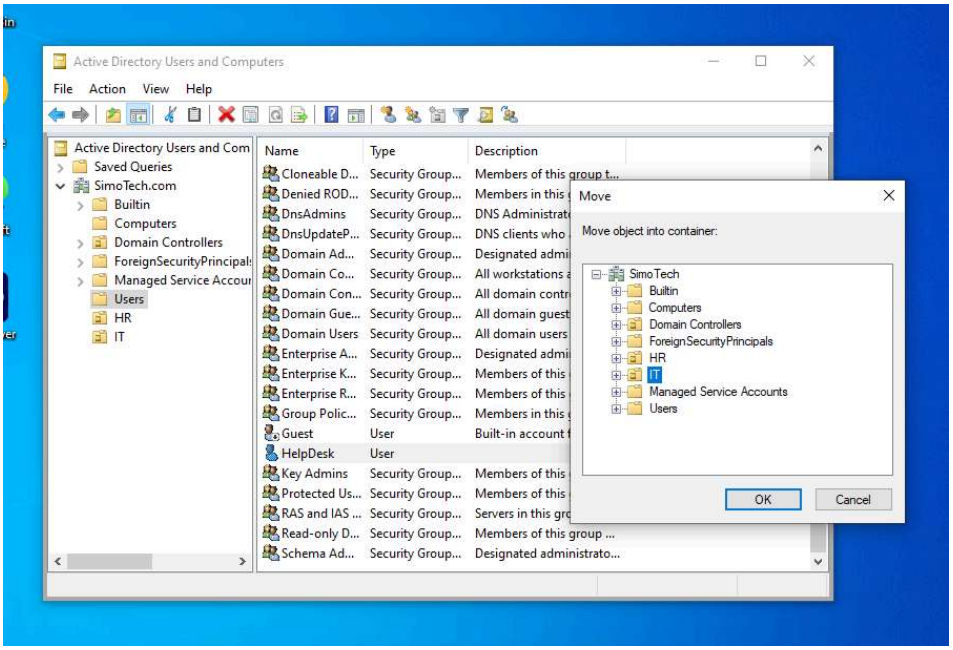

New Object - User
Create in: SimoTech.com/Users
First name: Naruto
Initials:
Last name:
Full name: Naruto
User logon name:
Naruto
@SimoTcch.com
User logon name (pre-Windows 2000):
SIMOTECH\
Naruto
< Back
Next >
Cancel

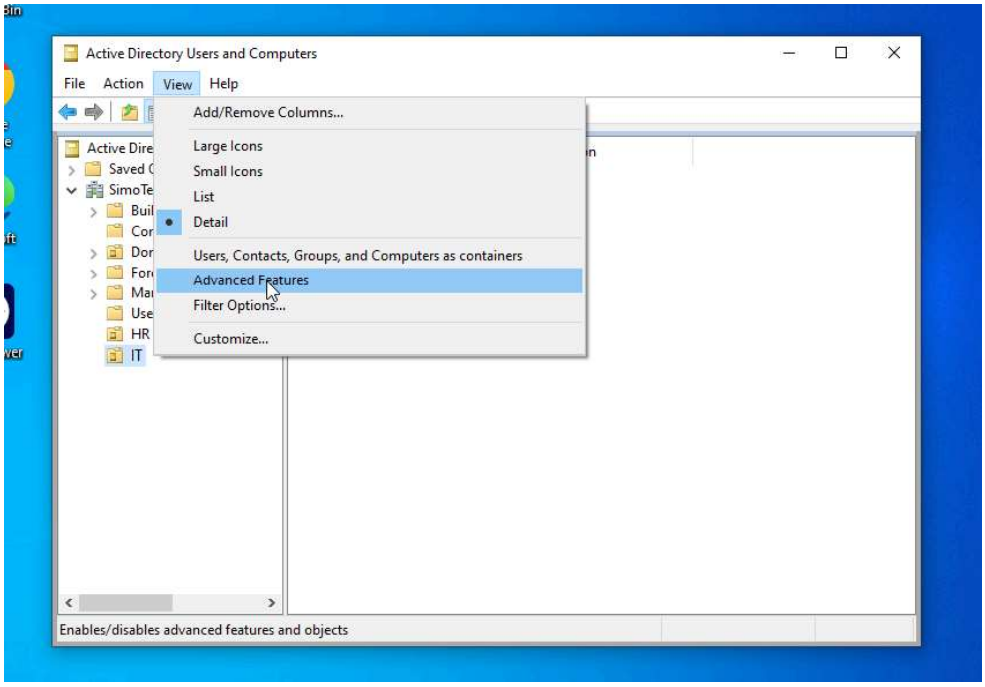


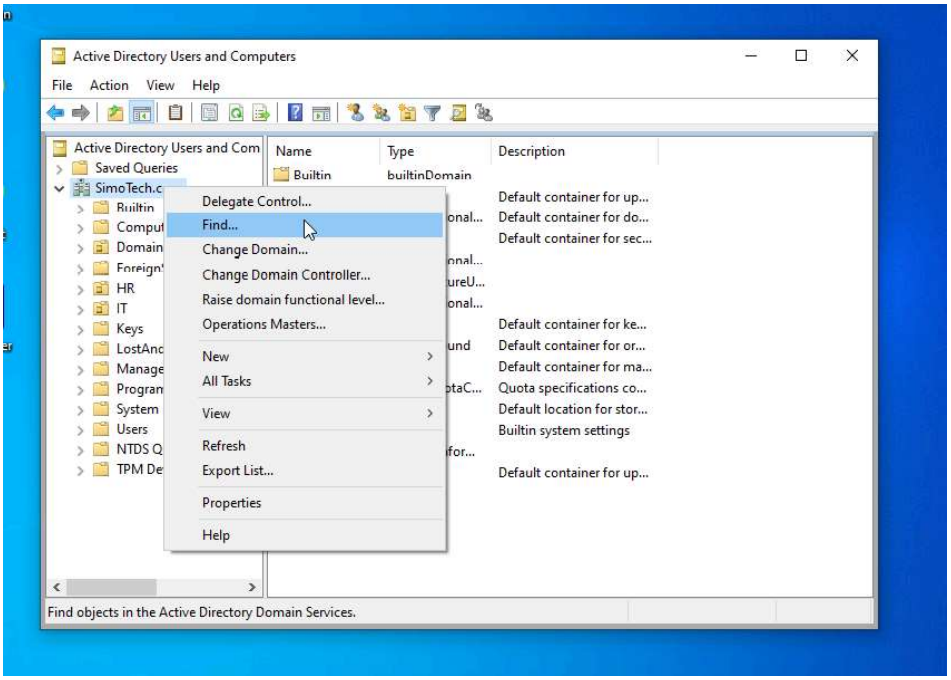


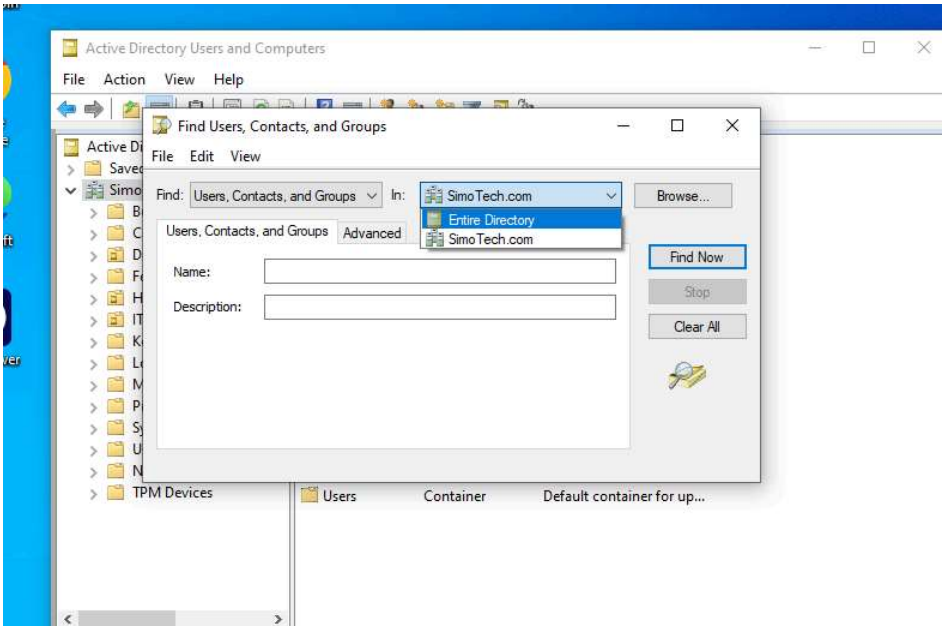
Now we will move our new user, “Naruto”, into the HR organizational unit. Right click on “Naruto” and click “Move” and then select “HR” and “OK”. Also move the user “Helpdesk” into the IT organizational unit. To verify their user creation click “View” in the top bar and “Advanced Features”. Then verify the user is in the correct organizational unit.

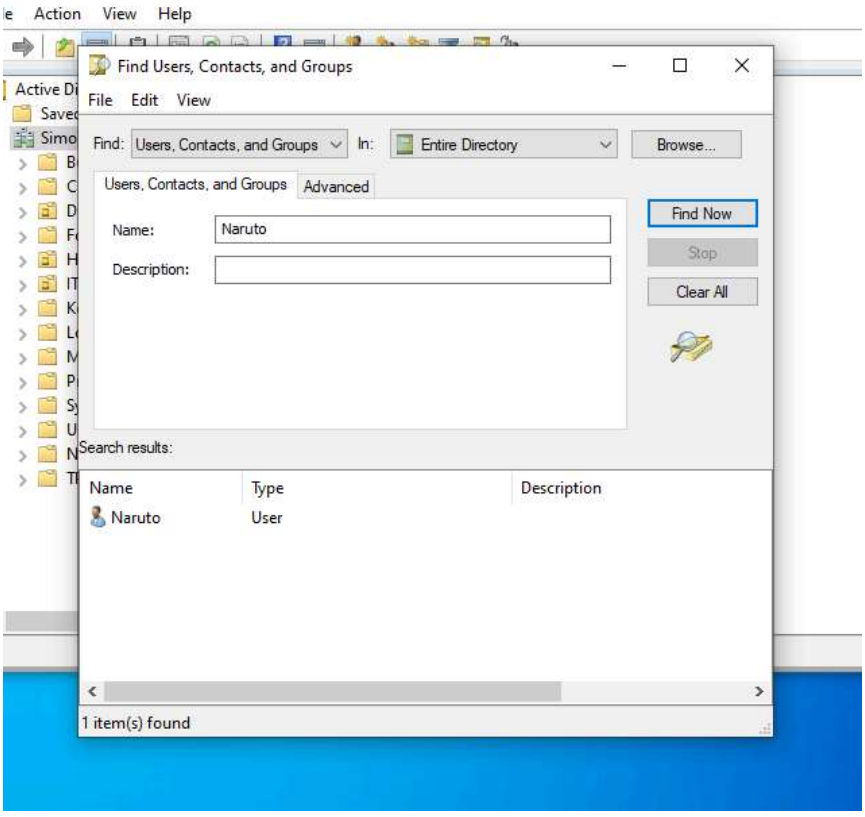

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipals
Managed Service Accour
Users
HR
IT
Name
Type
Description
Naruto
User

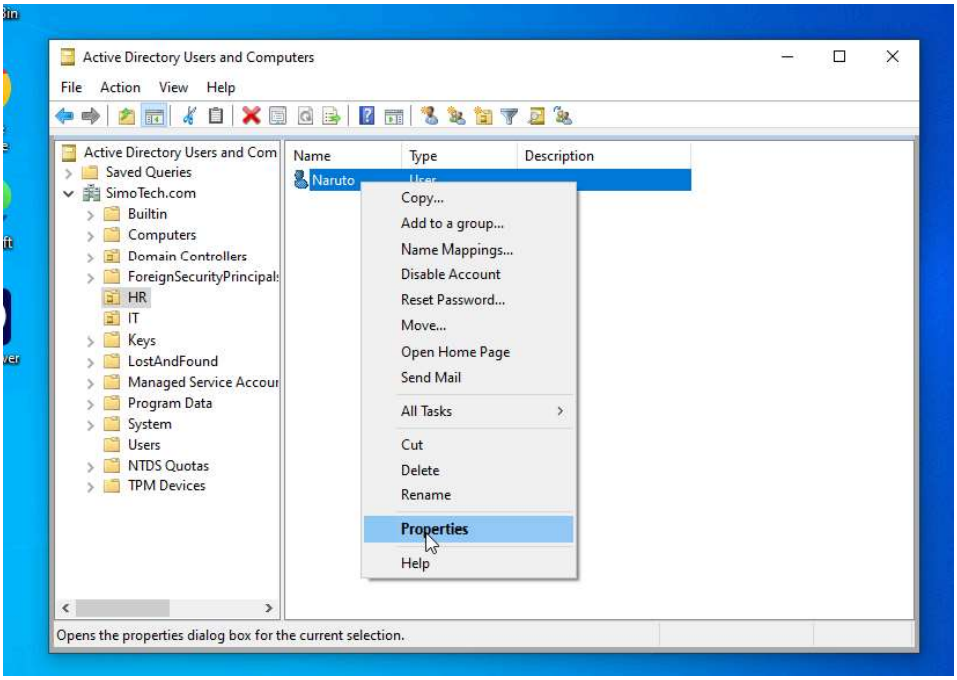

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipals
Managed Service Accour
Users
HR
IT
Name
Type
Description
Move
Move object into container:
SimoTech
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipals
HR
IT
Managed Service Accounts
Users
OK
Cancel

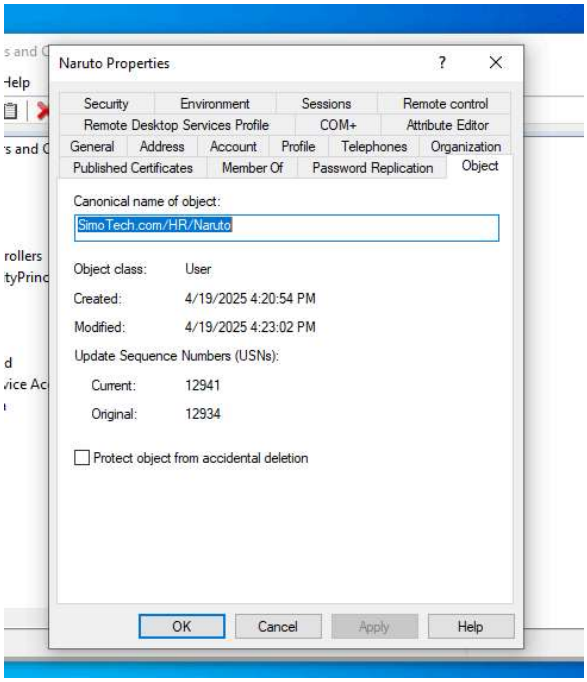

Active Directory Users and Computers
File
Action
View
Help
Add/Remove Columns...
Large Icons
Small Icons
List
Detail
Users, Contacts, Groups, and Computers as containers
Advanced Features
Filter Options...
Customize...
Enables/disables advanced features and objects

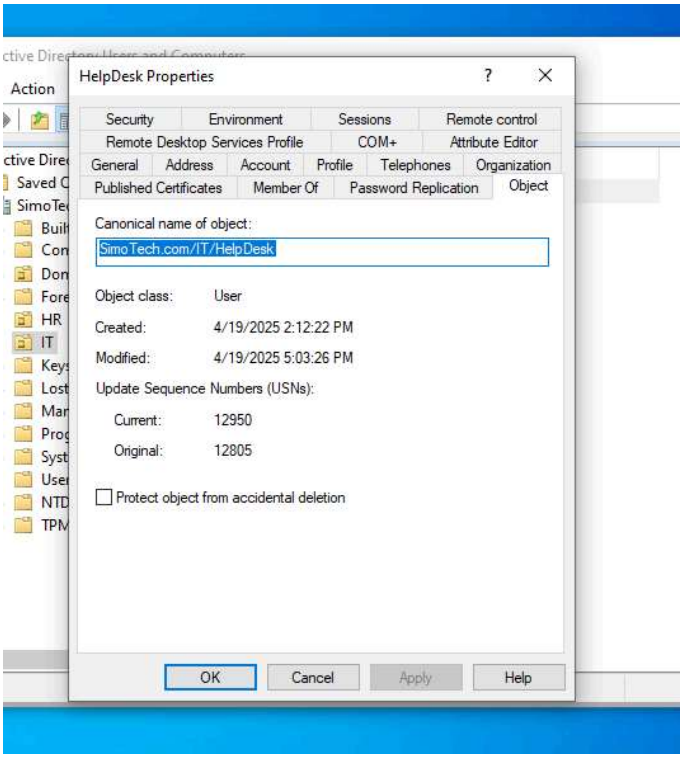

Active Directory Users and Computers
File
Action
View
Help
Active Directory Users and Com
Saved Queries
Name
Type
Description
Builtin
builtinDomain
Delegate Control...
Find...
Change Domain...
Change Domain Controller...
Raise domain functional level...
Operations Masters...
New
All Tasks
View
Refresh
Export List...
Properties
Help
Default container for up...
Default container for do...
Default container for sec...
Default container for ke...
Default container for or...
Default container for ma...
Quota specifications co...
Default location for stor...
Builtin system settings
Default container for up...
Find objects in the Active Directory Domain Services.


Active Directory Users and Computers
File Action View Help
Find Users, Contacts, and Groups
File Edit View
Find: Users, Contacts, and Groups
In: SimoTech.com
Entire Directory
SimoTech.com
Browse...
Users, Contacts, and Groups
Advanced
Name:
Description:
Find Now
Stop
Clear All
TPM Devices
Users
Container
Default container for up...

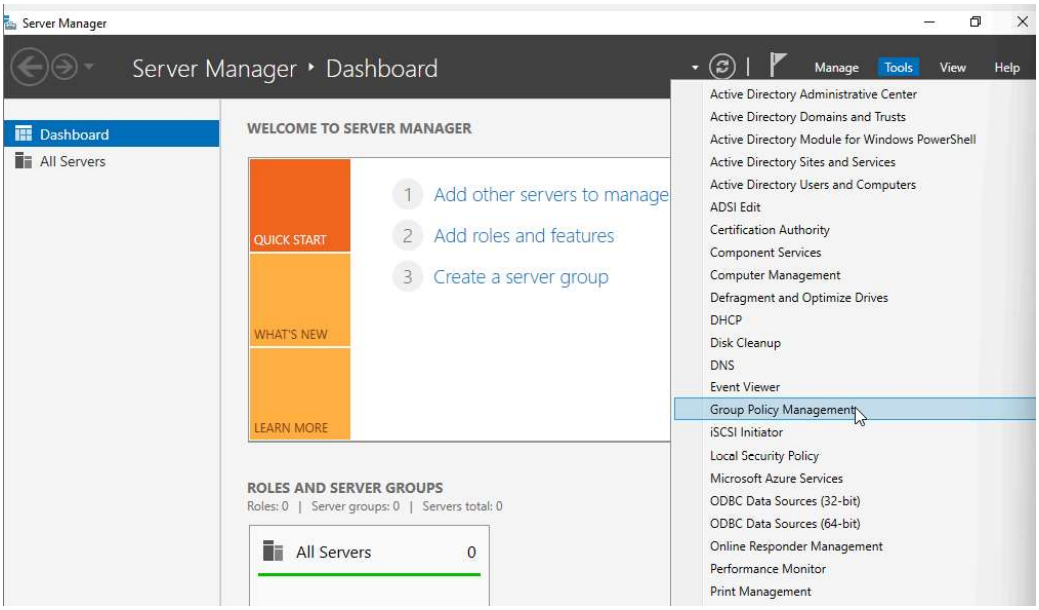

Action View Help
Find Users, Contacts, and Groups
File Edit View
Find: Users, Contacts, and Groups
In: Entire Directory
Browse...
Users, Contacts, and Groups
Advanced
Name: Naruto
Description:
Find Now
Stop
Clear All
Search results:
Name
Type
Description
Naruto
User
1 item(s) found


Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal
HR
IT
Keys
LostAndFound
Managed Service Accou
Program Data
System
Users
NTDS Quotas
TPM Devices
Name
Type
Description
Naruto
Copy...
Add to a group...
Name Mappings...
Disable Account
Reset Password...
Move...
Open Home Page
Send Mail
All Tasks
Cut
Delete
Rename
Properties
Help
Opens the properties dialog box for the current selection.

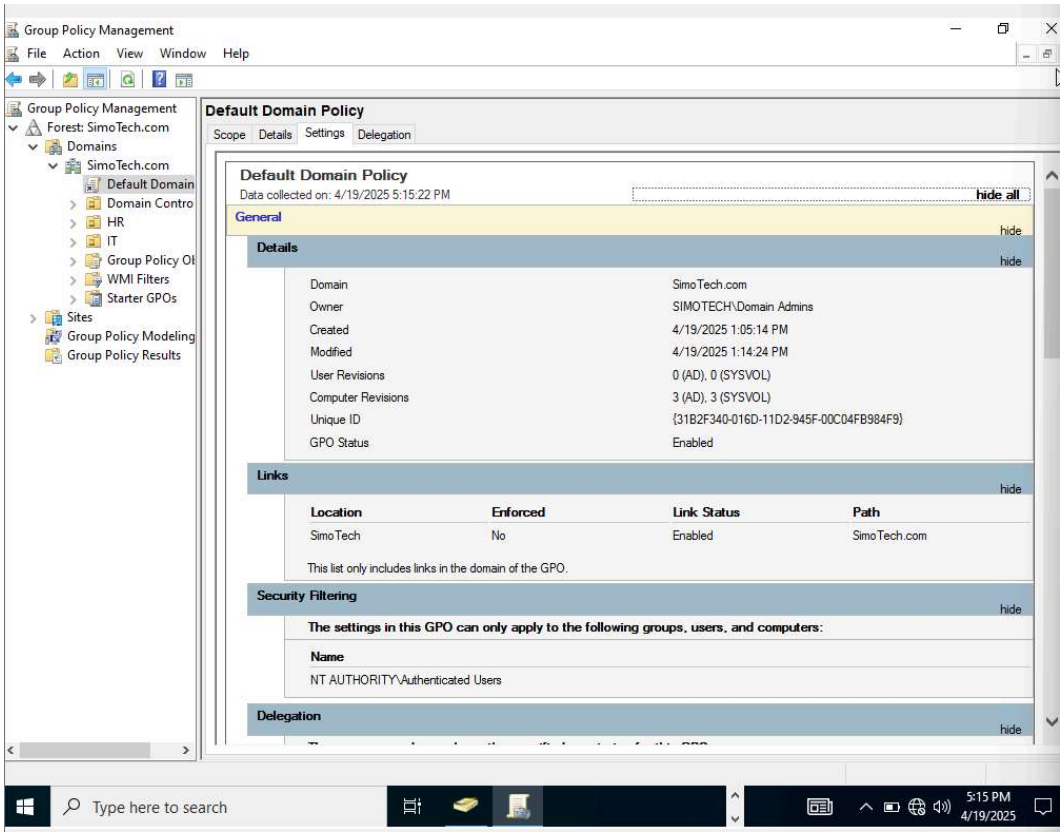

Naruto Properties
Security
Environment
Sessions
Remote control
Remote Desktop Services Profile
COM+
Attribute Editor
General
Address
Account
Profile
Telephones
Organization
Published Certificates
Member Of
Password Replication
Object
Canonical name of object:
SimoTech.com/HR/Naruto
Object class: User
Created: 4/19/2025 4:20:54 PM
Modified: 4/19/2025 4:23:02 PM
Update Sequence Numbers (USNs):
Current: 12941
Original: 12934
Protect object from accidental deletion
OK
Cancel
Apply
Help



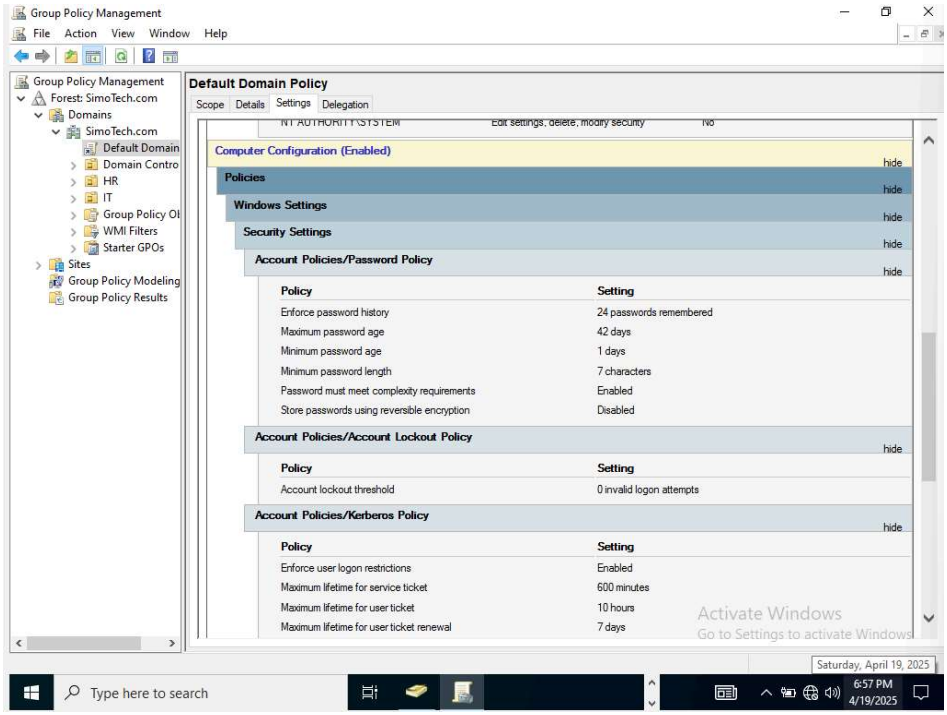
Go to Server Manager and click “Tools” and then “Group Policy Management.”

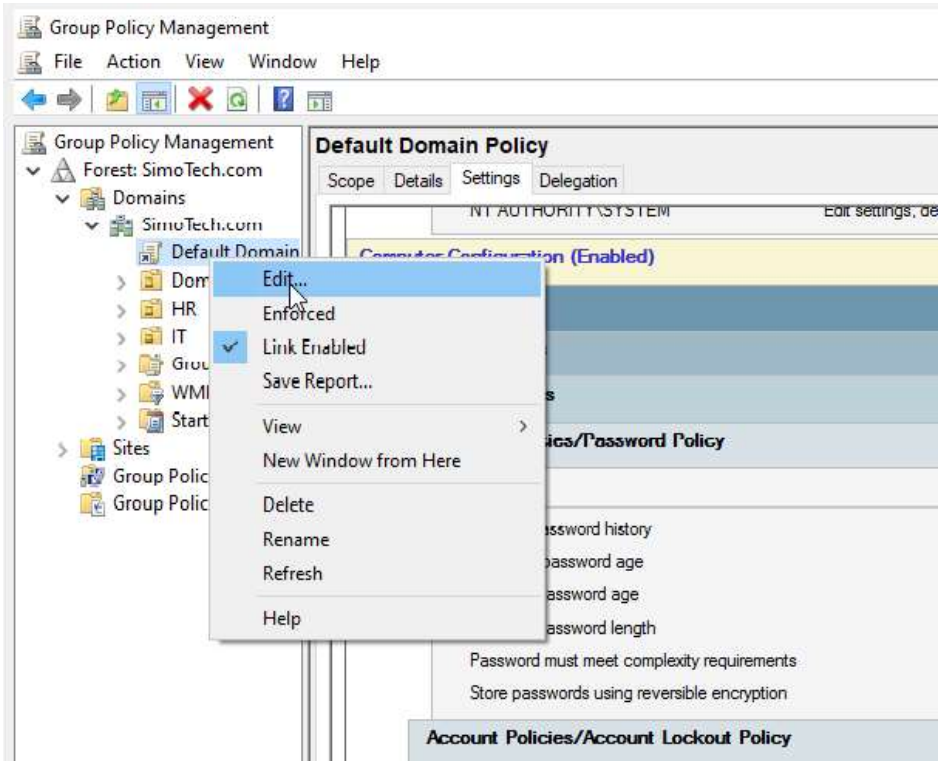


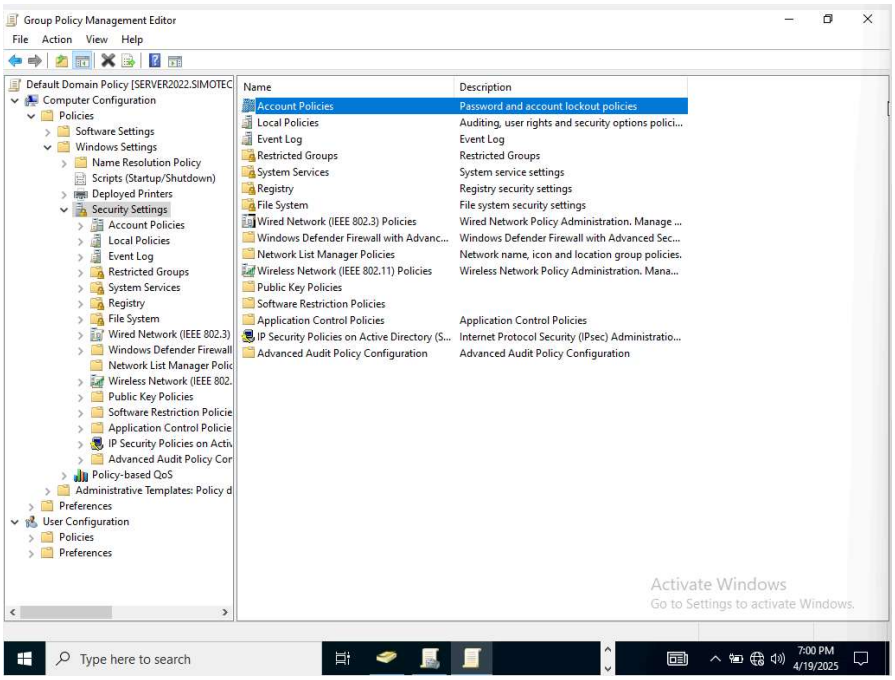
Let’s look at the group policy for the domain controller.

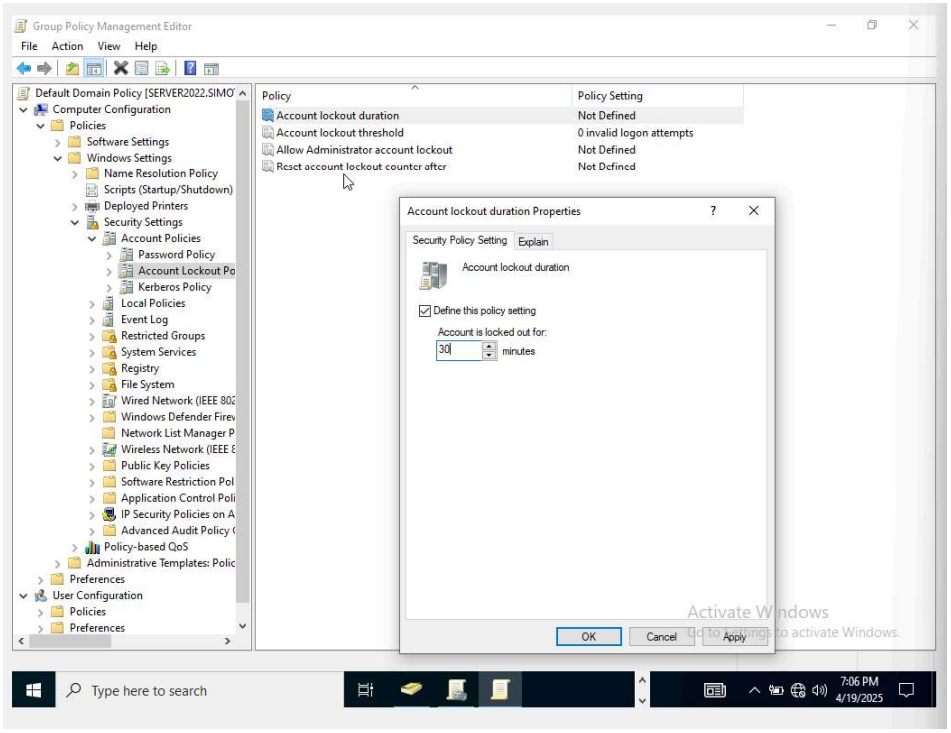


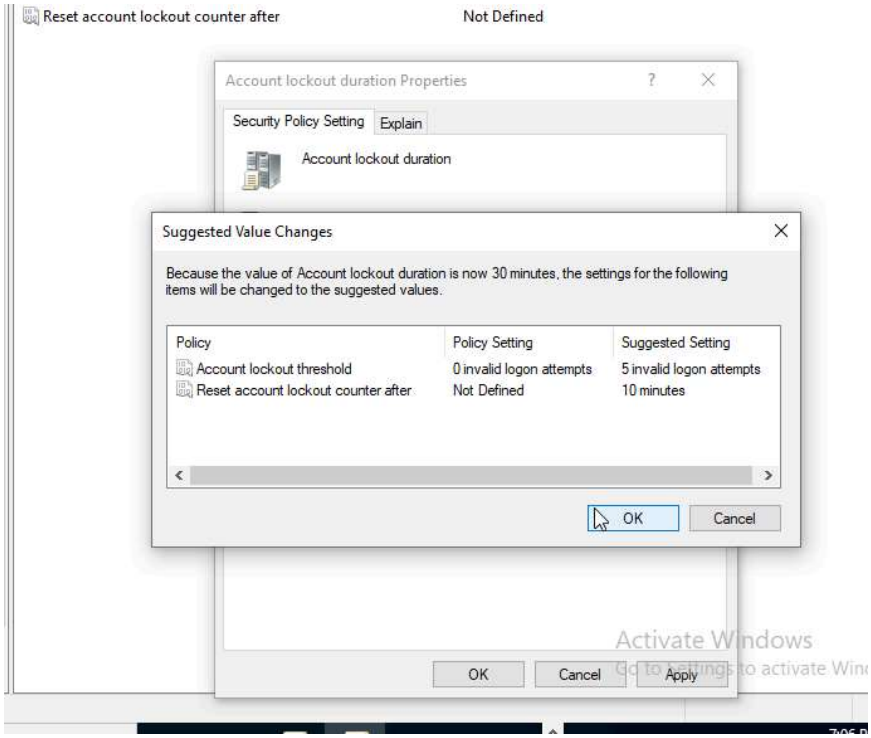
This domain policy report is crucial for Helpdesk because it provides all policy information related to user accounts. For example we can see that under Account Lockout Policy that the account lockout threshold is set to “0 invalid logon attempts”. This poses a security risk, because a malicious user can attempt to login an infinite amount of times, making the account susceptible to brute force attacks. We can edit this policy and harden the accounts security.

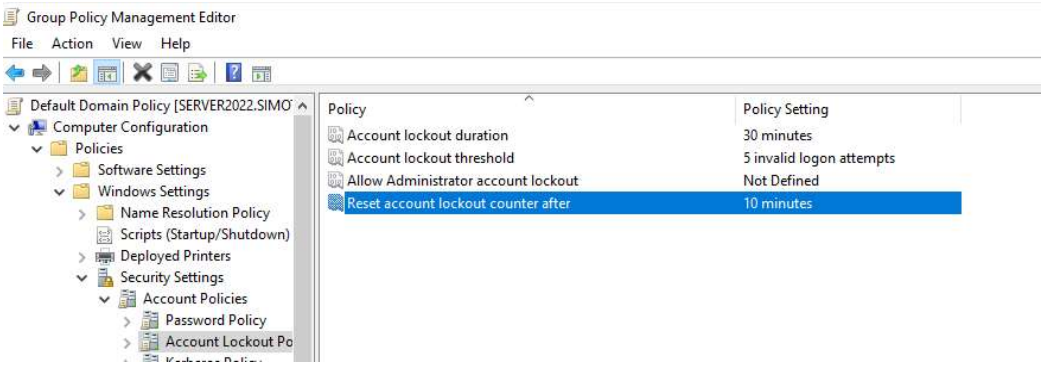

Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
SimoTech.com
Default Domain
Domain Contro
HR
IT
Group Policy Ol
WMI Filters
Starter GPOs
Sites
Group Policy Modeling
Group Policy Results
Default Domain Policy
Scope Details Settings Delegation
Computer Configuration (Enabled)
Policies
Windows Settings
Security Settings
Account Policies/Password Policy
Policy Setting
Enforce password history 24 passwords remembered
Maximum password age 42 days
Minimum password age 1 days
Minimum password length 7 characters
Password must meet complexity requirements Enabled
Store passwords using reversible encryption Disabled
Account Policies/Account Lockout Policy
Policy Setting
Account lockout threshold 0 invalid logon attempts
Account Policies/Kerberos Policy
Policy Setting
Enforce user logon restrictions Enabled
Maximum lifetime for service ticket 600 minutes
Maximum lifetime for user ticket 10 hours
Maximum lifetime for user ticket renewal 7 days
Activate Windows
Go to Settings to activate Windows.
Saturday, April 19, 2025
Type here to search
6:57 PM
4/19/2025


Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
SimoTech.com
Default Domain
Sites
Default Domain Policy
Scope Details Settings Delegation
Edit...
Enforced
Link Enabled
Save Report...
View
New Window from Here
Delete
Rename
Refresh
Help
Password must meet complexity requirements
Store passwords using reversible encryption
Account Policies/Account Lockout Policy

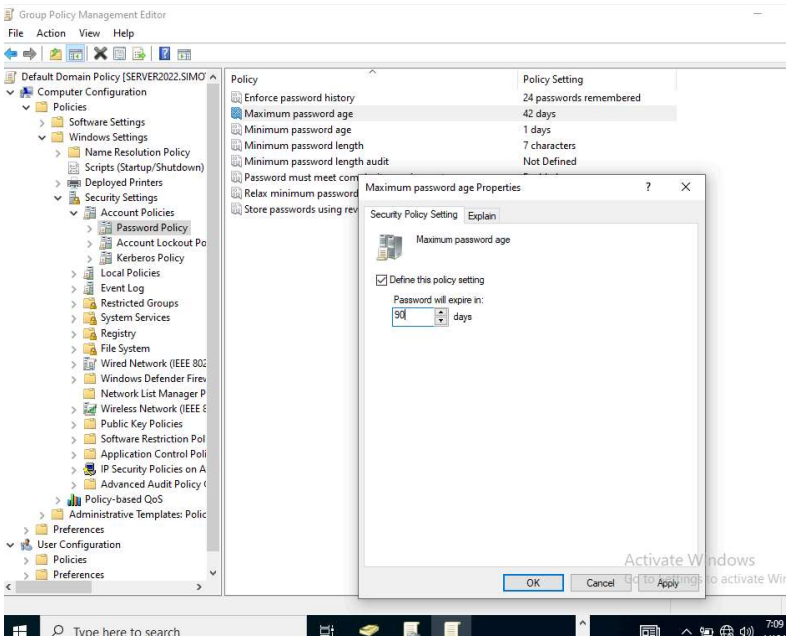

Group Policy Management Editor
File Action View Help
Default Domain Policy [SERVER2022.SIMOTEC
Computer Configuration
Policies
Software Settings
Windows Settings
Name Resolution Policy
Scripts (Startup/Shutdown)
Deployed Printers
Security Settings
Account Policies
Local Policies
Event Log
Restricted Groups
System Services
Registry
File System
Wired Network (IEEE 802.3)
Windows Defender Firewall
Network List Manager Polic
Wireless Network (IEEE 802.
Public Key Policies
Software Restriction Policie
Application Control Policie
IP Security Policies on Activ
Advanced Audit Policy Cor
Policy-based QoS
Administrative Templates: Policy d
Preferences
User Configuration
Policies
Preferences
Name
Description
Account Policies
Password and account lockout policies
Local Policies
Auditing, user rights and security options polici...
Event Log
Event Log
Restricted Groups
Restricted Groups
System Services
System service settings
Registry
Registry security settings
File System
File system security settings
Wired Network (IEEE 802.3) Policies
Wired Network Policy Administration. Manage ...
Windows Defender Firewall with Advanc...
Windows Defender Firewall with Advanced Sec...
Network List Manager Policies
Network name, icon and location group policies.
Wireless Network (IEEE 802.11) Policies
Wireless Network Policy Administration. Mana...
Public Key Policies
Software Restriction Policies
Application Control Policies
Application Control Policies
IP Security Policies on Active Directory (S...
Internet Protocol Security (IPsec) Administratio...
Advanced Audit Policy Configuration
Advanced Audit Policy Configuration
Activate Windows
Go to Settings to activate Windows.
Type here to search
7:00 PM
4/19/2025


Group Policy Management Editor
File Action View Help
Default Domain Policy [SERVER2022.SIMO
Computer Configuration
Policies
Software Settings
Windows Settings
Name Resolution Policy
Scripts (Startup/Shutdown)
Deployed Printers
Security Settings
Account Policies
Password Policy
Account Lockout Po
Kerberos Policy
Local Policies
Event Log
Restricted Groups
System Services
Registry
File System
Wired Network (IEEE 802
Windows Defender Firev
Network List Manager P
Wireless Network (IEEE 8
Public Key Policies
Software Restriction Pol
Application Control Poli
IP Security Policies on A
Advanced Audit Policy
Policy-based QoS
Administrative Templates: Polic
Preferences
User Configuration
Policies
Preferences
Policy
Policy Setting
Account lockout duration
Not Defined
Account lockout threshold
0 invalid logon attempts
Allow Administrator account lockout
Not Defined
Reset account lockout counter after
Not Defined
Account lockout duration Properties
Security Policy Setting
Explain
Account lockout duration
Define this policy setting
Account is locked out for:
30
minutes
OK
Cancel
Apply
Activate Windows
Go to Settings to activate Windows.
Type here to search
7:06 PM
4/19/2025

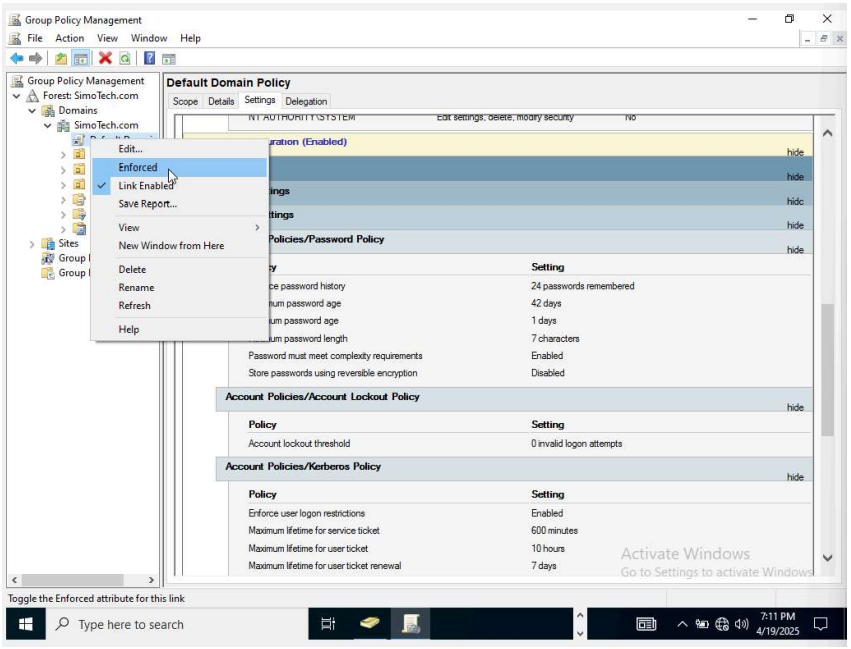




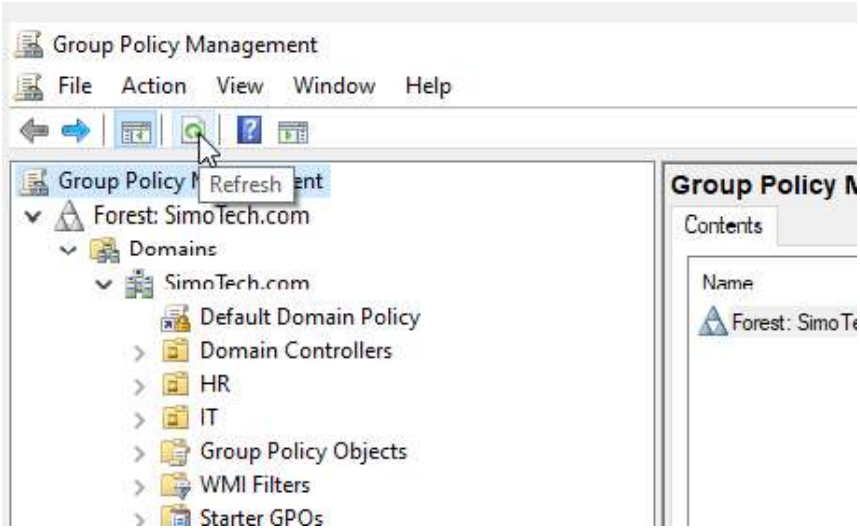
After configuring the Account Lockout Policy, we can configure the Password Policy.

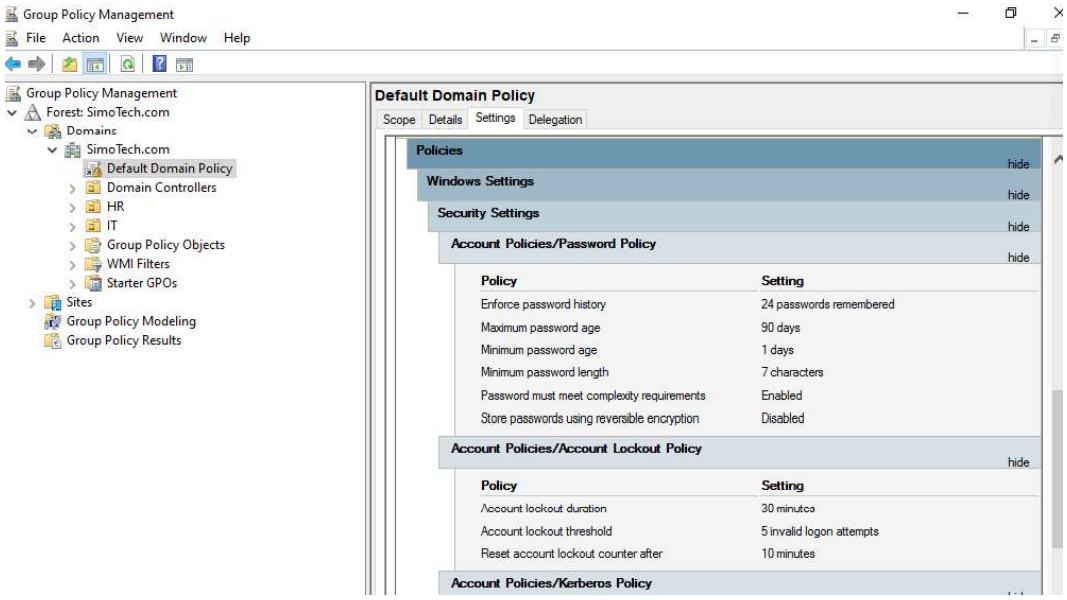


Now we must “Enforce” these policies.

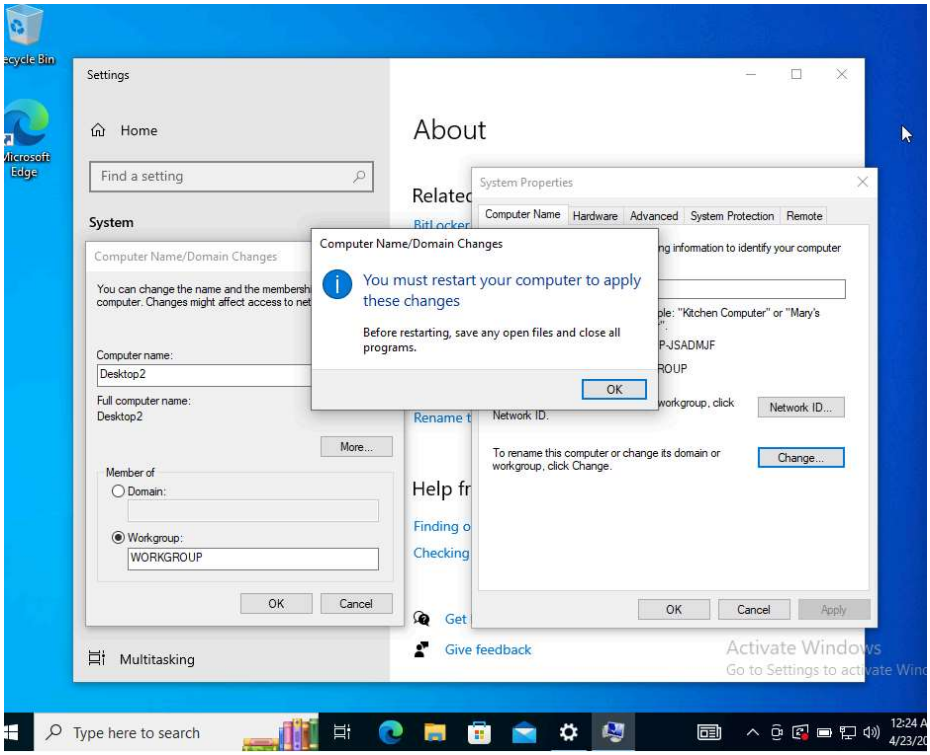


Verify that the policies have been changed successfully by refreshing the page. Now the report has our edited policy.

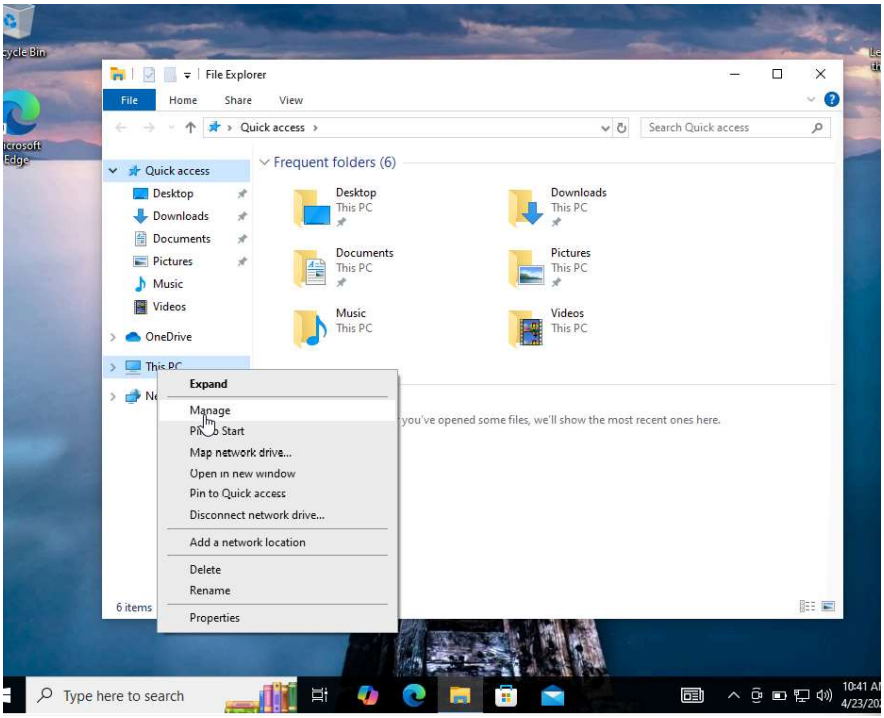


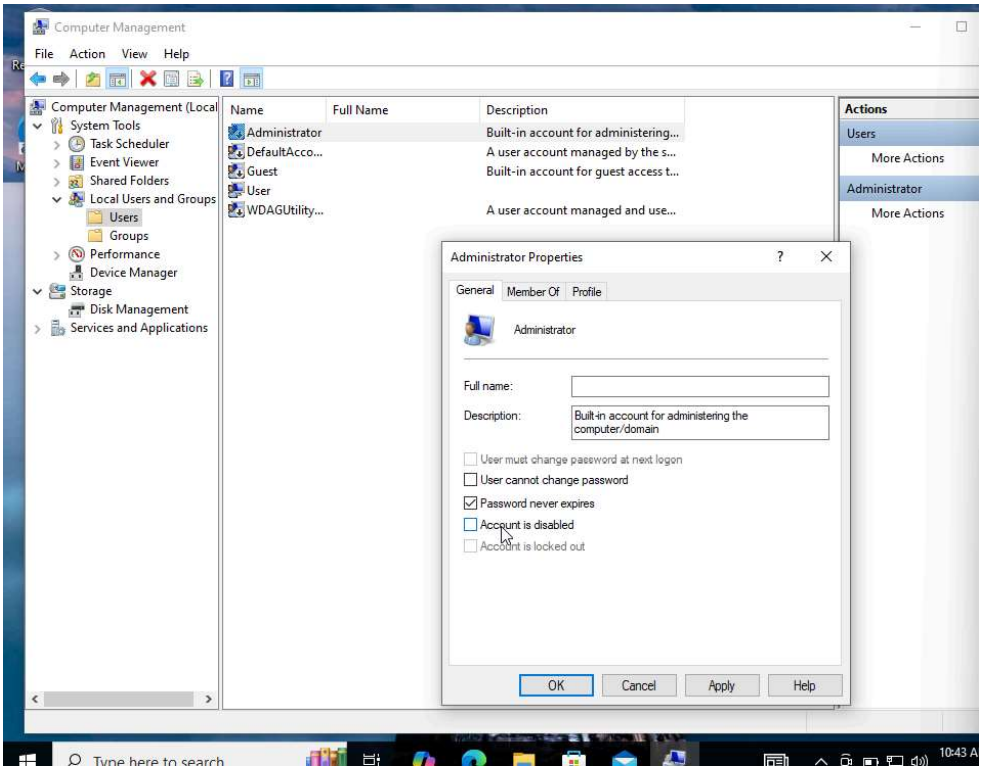


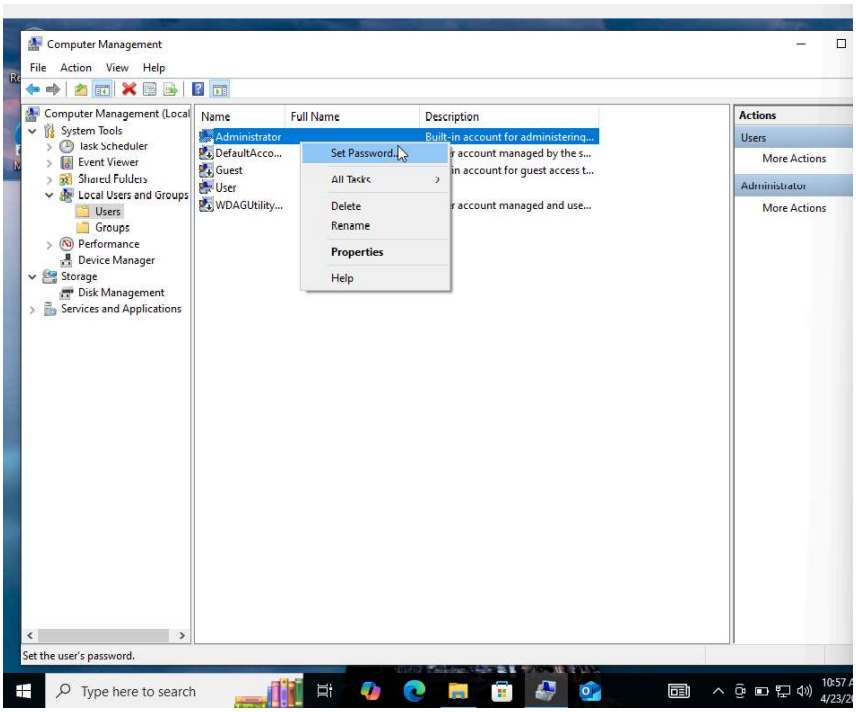
Now go back to Windows 10 (Employee) and change the computer name to “Desktop2” and then restart the machine.

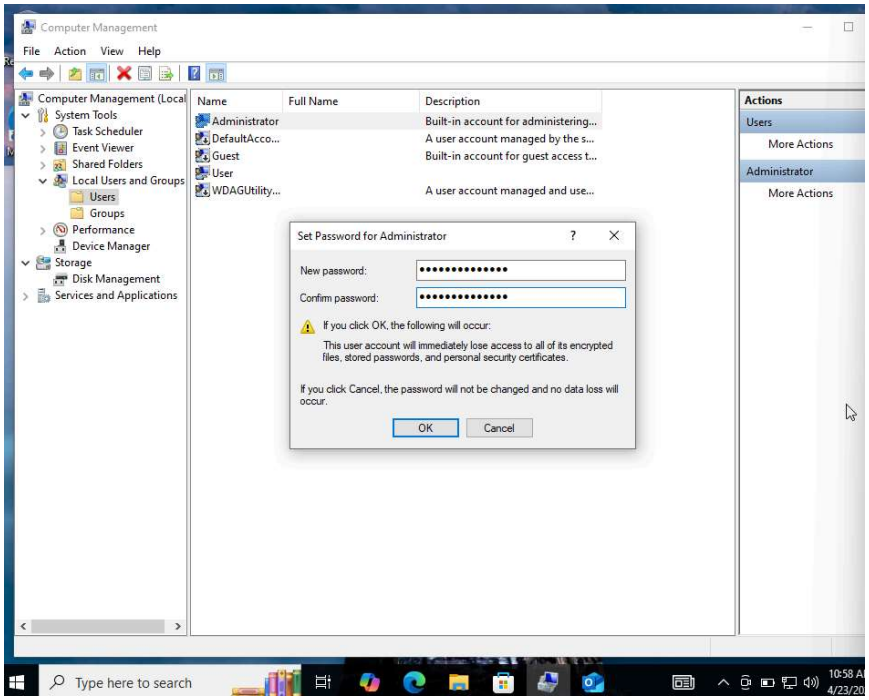


After the restart is complete, we can enable the Administrator account. After going to “Administrator Properties” in “Computer Management”, make sure you uncheck the “Account is disabled” option. Then set the password for the administrator.

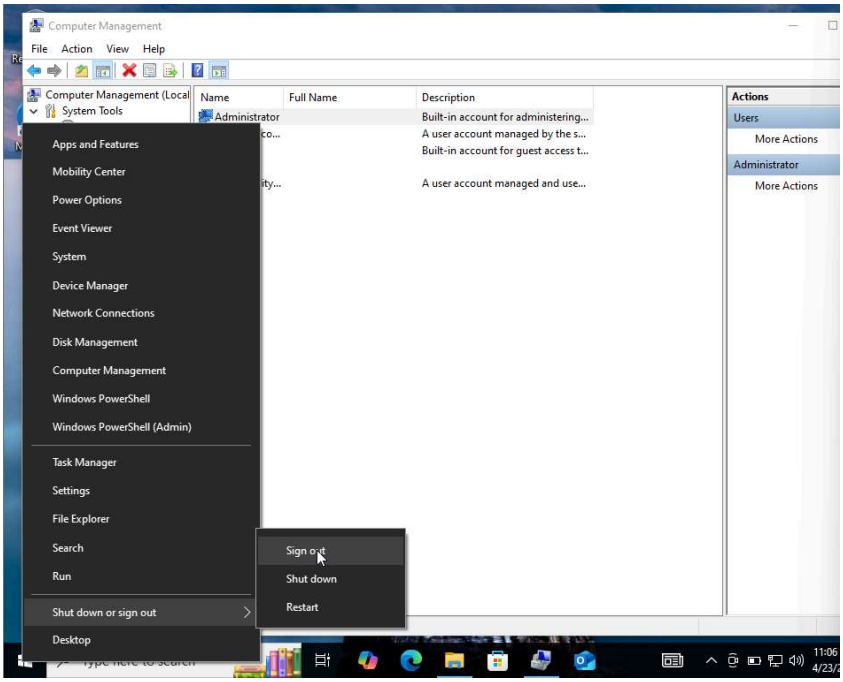

File Explorer
File
Home
Share
View
Quick access
Search Quick access
Frequent folders (6)
Desktop
This PC
Downloads
This PC
Documents
This PC
Pictures
This PC
Music
This PC
Videos
This PC
OneDrive
Expand
Manage
Pin to Start
Map network drive...
Open in new window
Pin to Quick access
Disconnect network drive...
Add a network location
Delete
Rename
Properties
you've opened some files, we'll show the most recent ones here.
6 items
Type here to search


Computer Management
File
Action
View
Help
Computer Management (Local
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and Groups
Users
Groups
Performance
Device Manager
Storage
Disk Management
Services and Applications
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...
User
WDAGUtility...
A user account managed and use...
Actions
Users
More Actions
Administrator
More Actions
Administrator Properties
General
Member Of
Profile
Administrator
Full name:
Description:
Built-in account for administering the computer/domain
User must change password at next logon
User cannot change password
Password never expires
Account is disabled
Account is locked out
OK
Cancel
Apply
Help
Type here to search

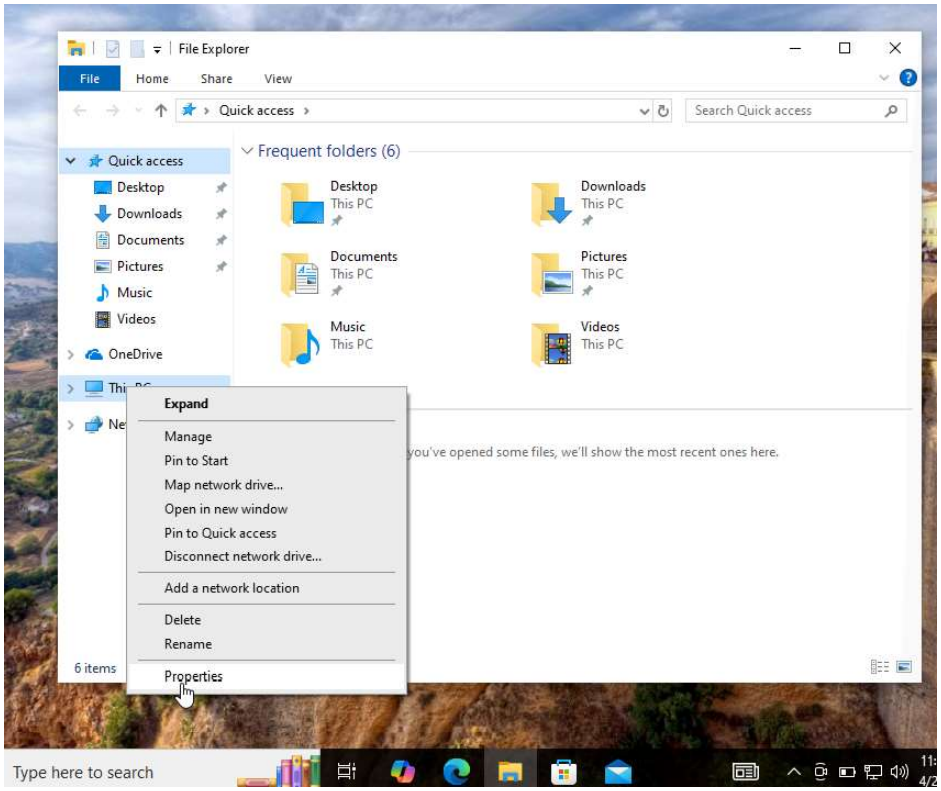


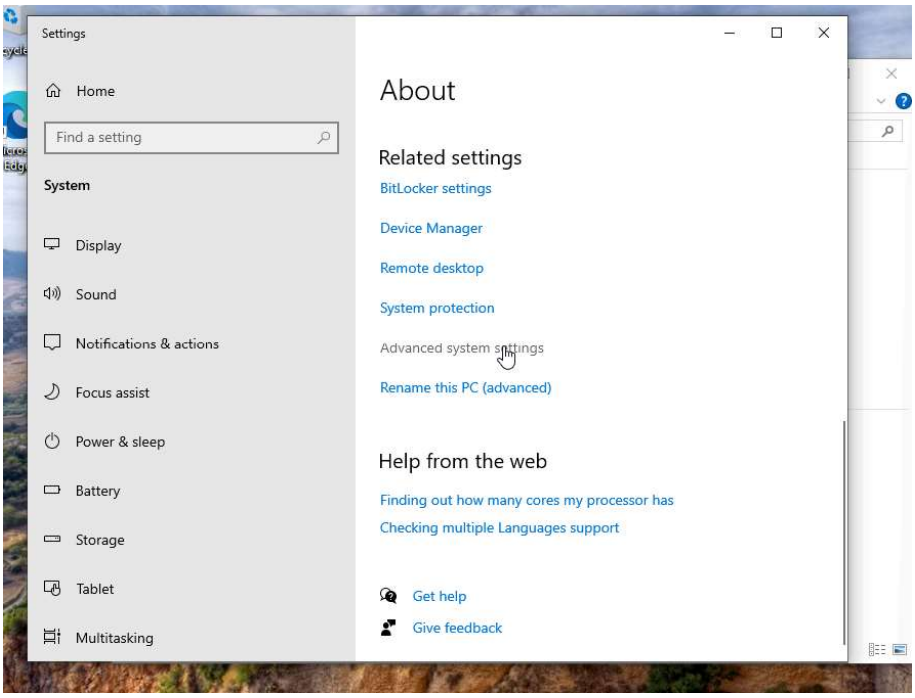


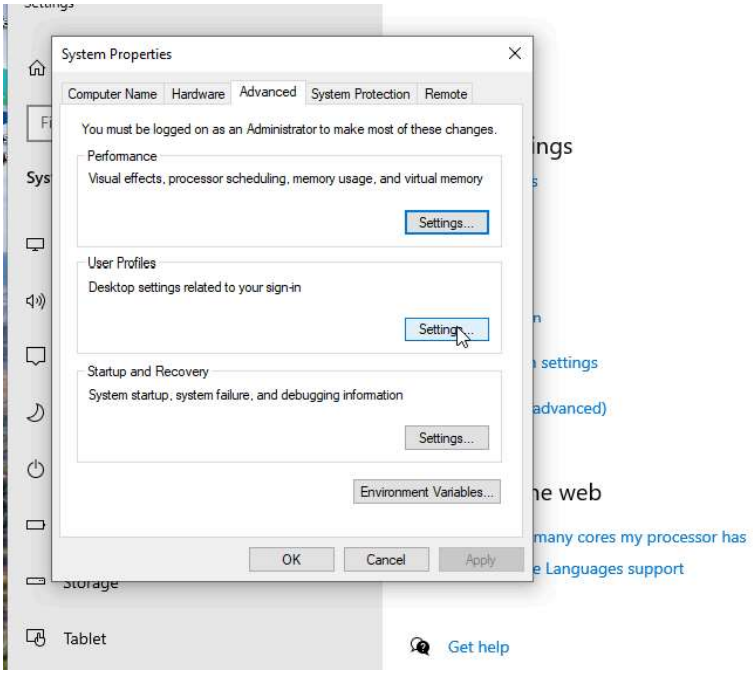
Now sign out and login to the Administrator account.

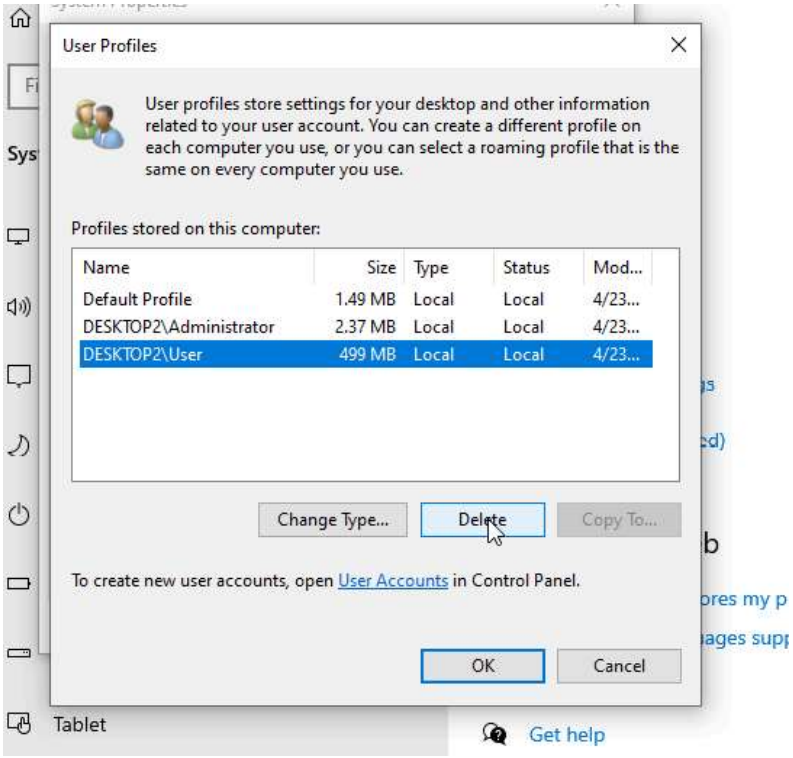


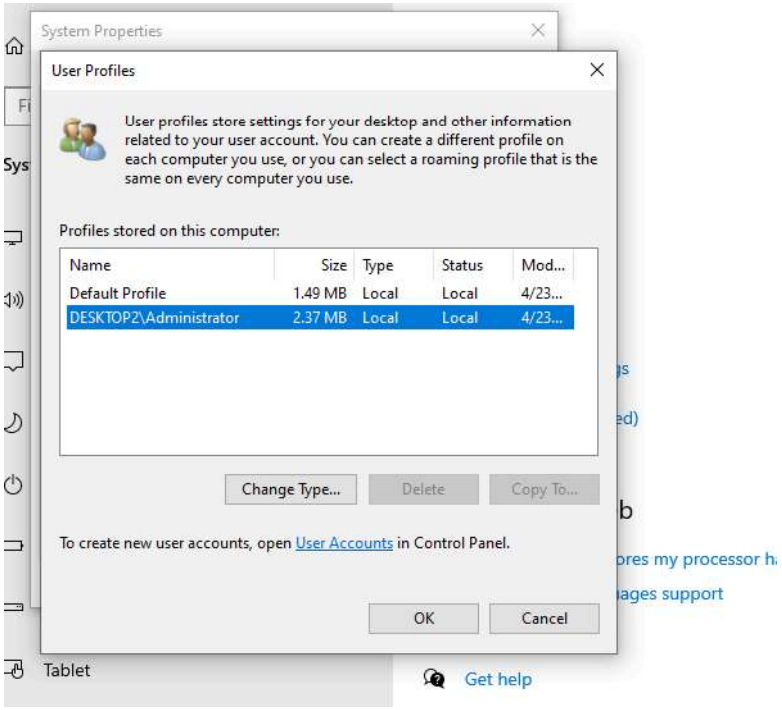
After logging into the Administrator account we will remove the user login screen to make the machine more secure.



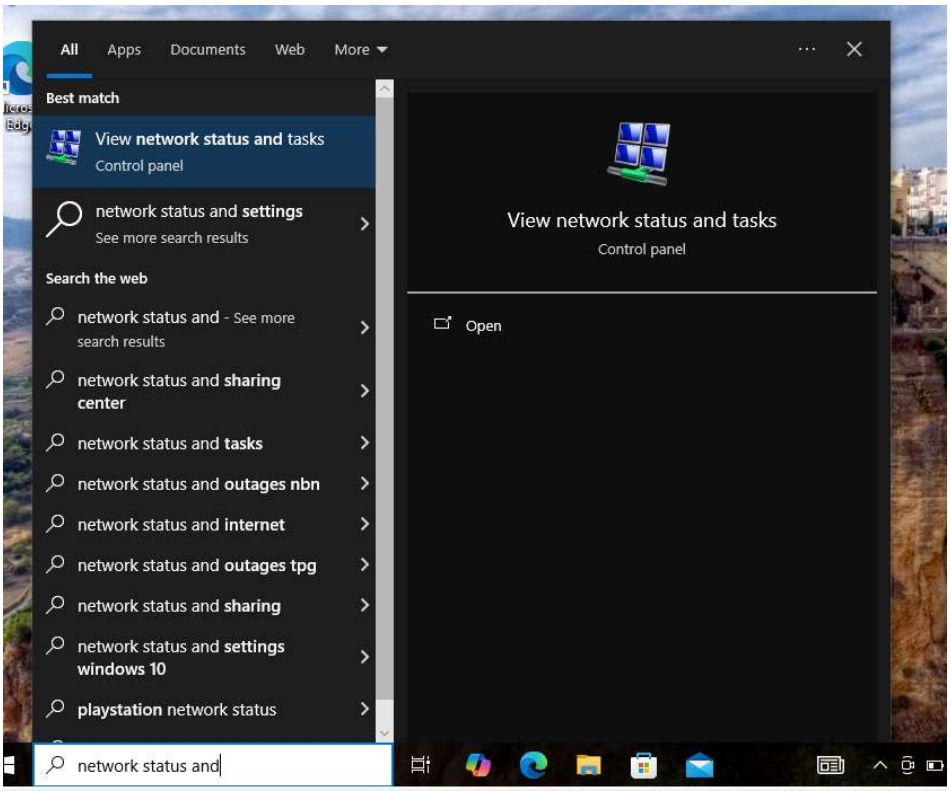

Settings
Home
Find a setting
System
Display
Sound
Notifications & actions
Focus assist
Power & sleep
Battery
Storage
Tablet
Multitasking
About
Related settings
BitLocker settings
Device Manager
Remote desktop
System protection
Advanced system settings
Rename this PC (advanced)
Help from the web
Finding out how many cores my processor has
Checking multiple Languages support
Get help
Give feedback

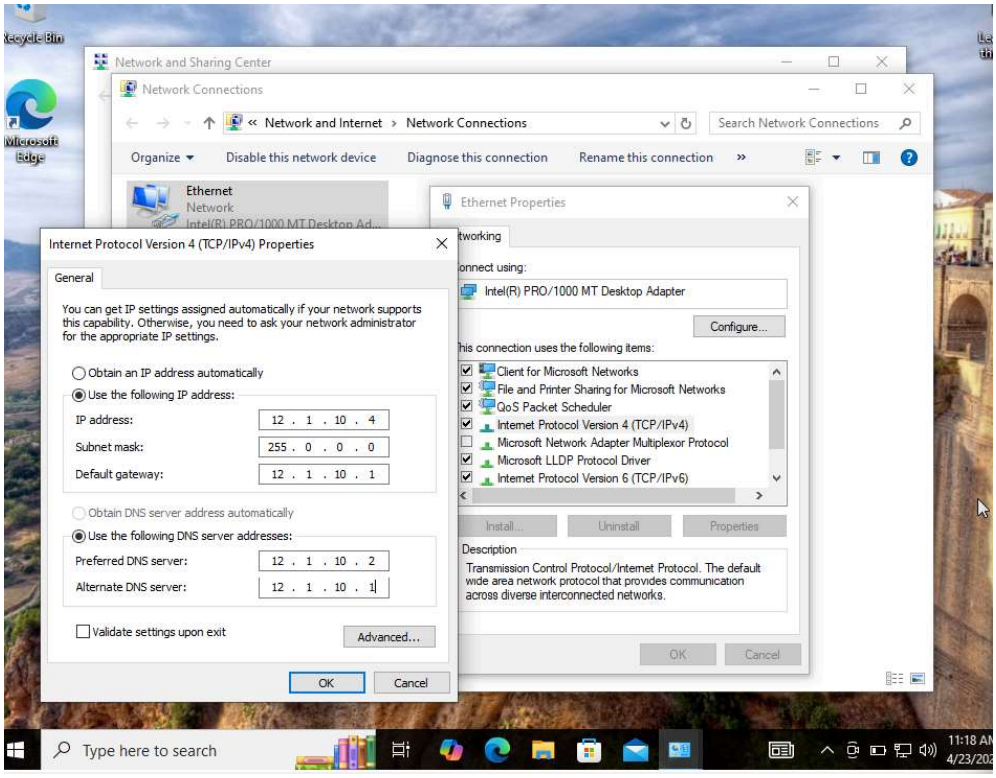

System Properties
Computer Name
Hardware
Advanced
System Protection
Remote
You must be logged on as an Administrator to make most of these changes.
Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings...
User Profiles
Desktop settings related to your sign-in
Settings...
Startup and Recovery
System startup, system failure, and debugging information
Settings...
Environment Variables...
OK
Cancel
Apply
Tablet
Get help

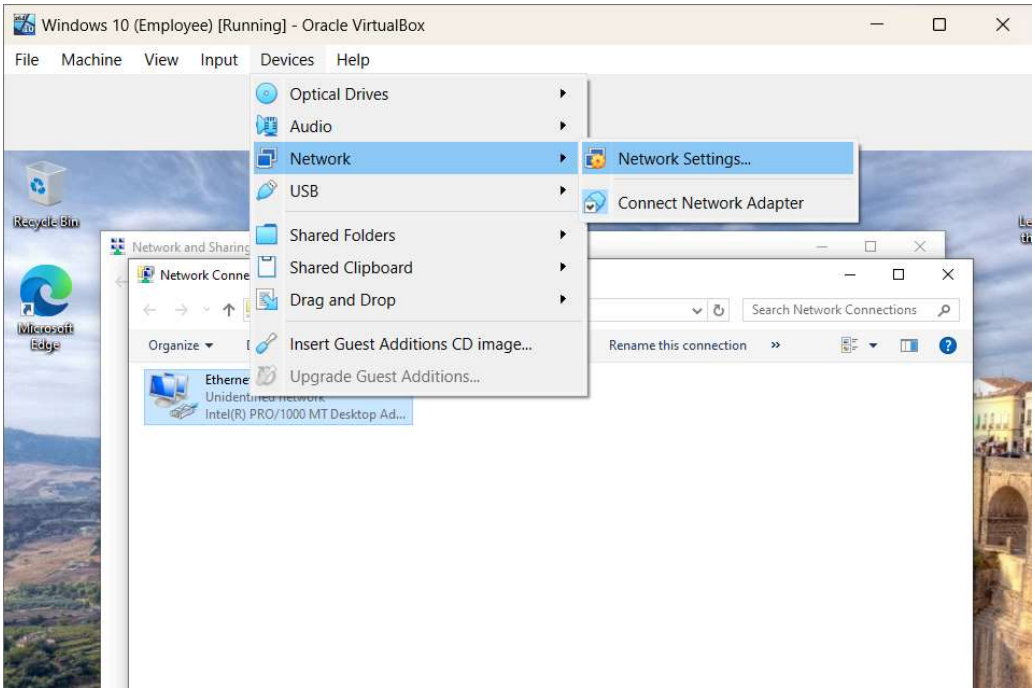


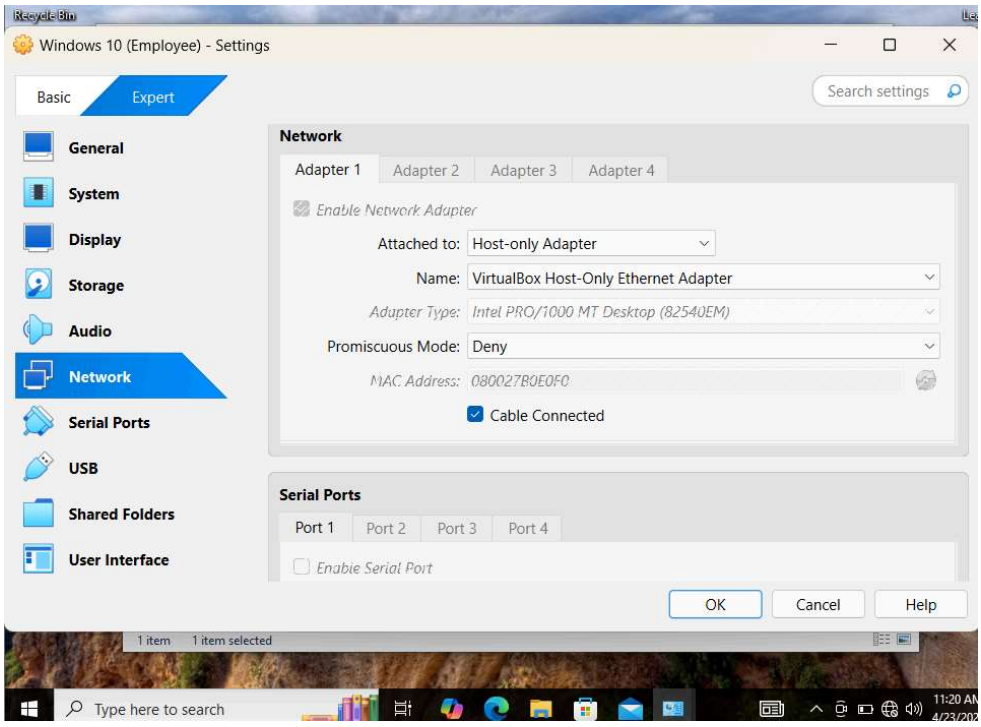


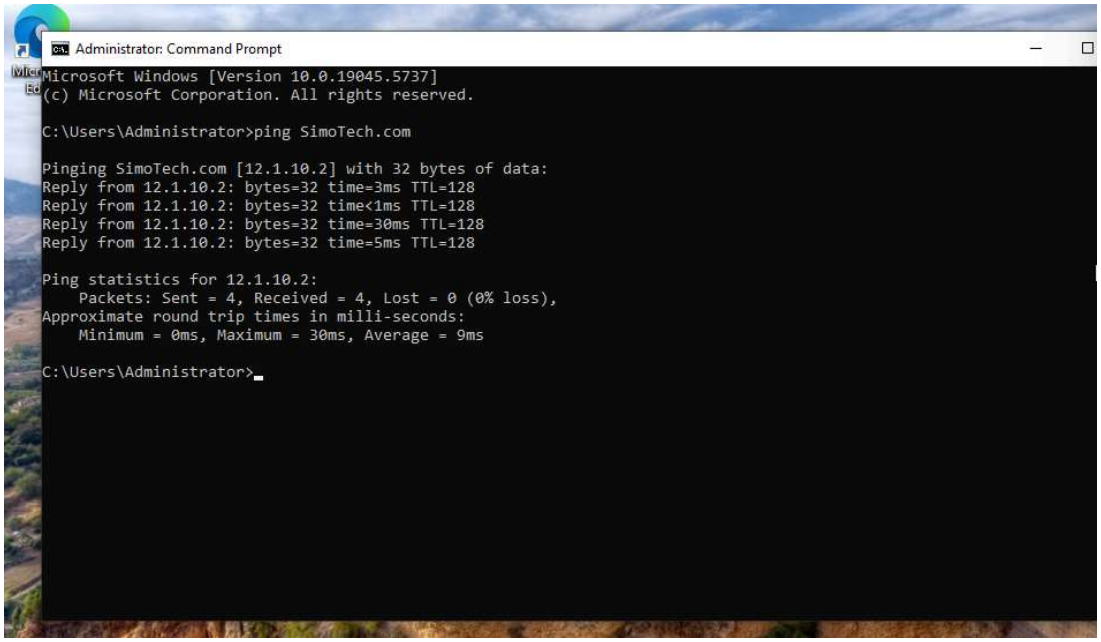
Now we will configure the network for Windows 10 (Employee) and assign a static IP address.

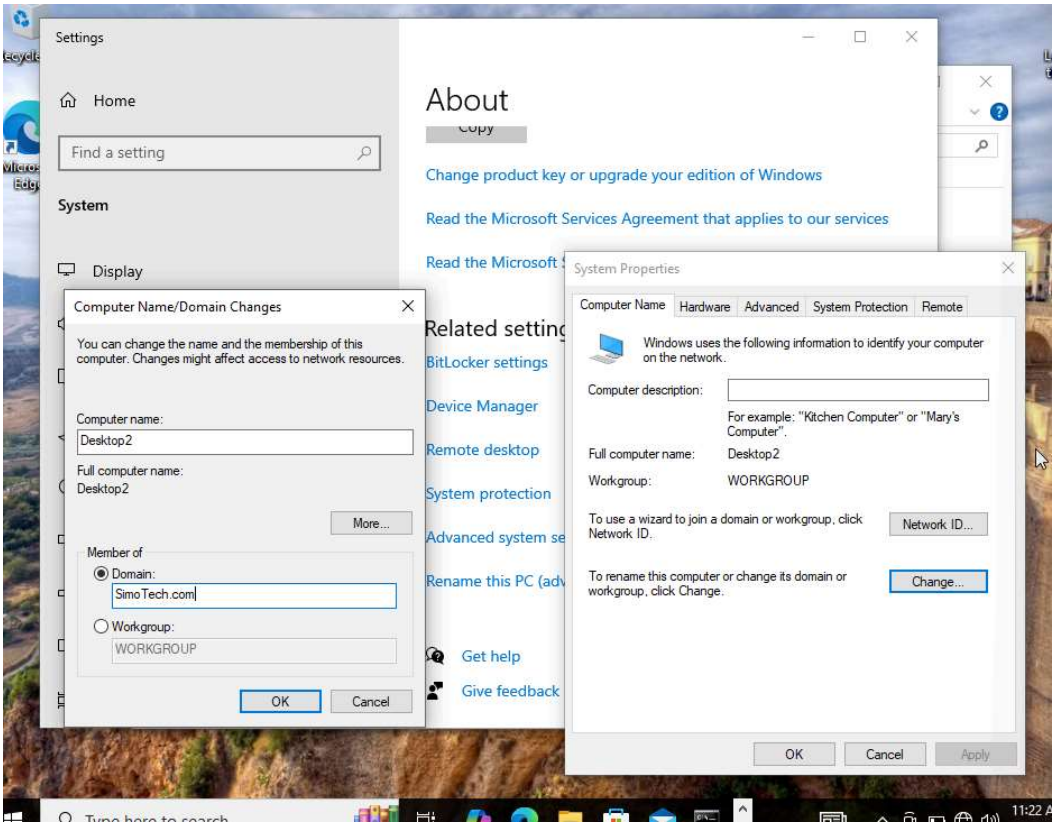

All
Apps
Documents
Web
More
Best match
View network status and tasks
Control panel
network status and settings
See more search results
Search the web
network status and - See more search results
network status and sharing center
network status and tasks
network status and outages nbn
network status and internet
network status and outages tpg
network status and sharing
network status and settings windows 10
playstation network status
network status and
View network status and tasks
Control panel
Open

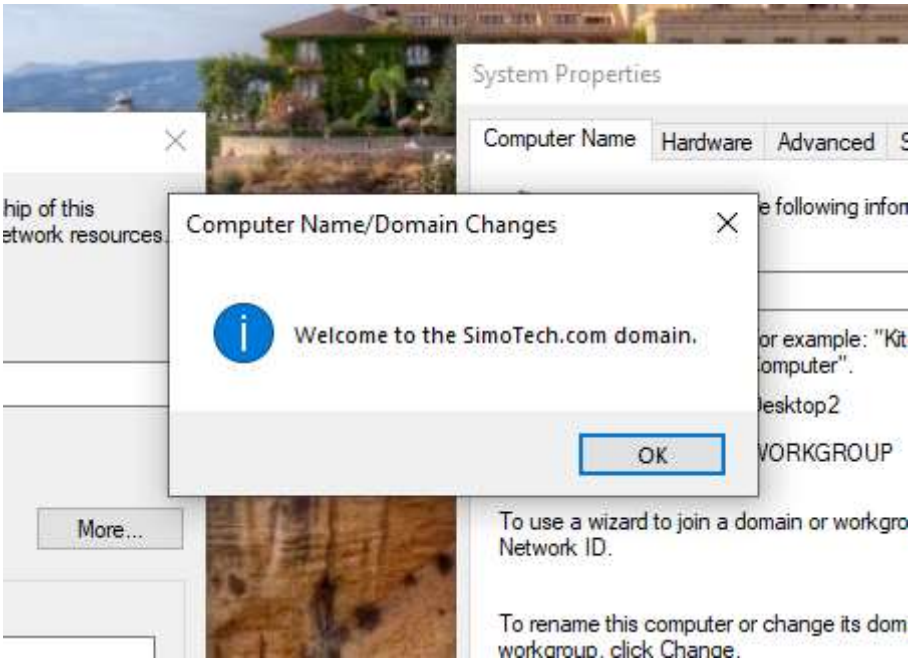

Network and Sharing Center
Network Connections
Network and Internet › Network Connections
Search Network Connections
Organize
Disable this network device
Diagnose this connection
Rename this connection
Ethernet
Network
Ethernet Properties
Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 12 . 1 . 10 . 4
Subnet mask: 255 . 0 . 0 . 0
Default gateway: 12 . 1 . 10 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 12 . 1 . 10 . 2
Alternate DNS server: 12 . 1 . 10 . 1
Validate settings upon exit
Advanced...
OK
Cancel
Intel(R) PRO/1000 MT Desktop Adapter
Configure...
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol Version 4 (TCP/IPv4)
Microsoft Network Adapter Multiplexor Protocol
Microsoft LLDP Protocol Driver
Internet Protocol Version 6 (TCP/IPv6)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Type here to search


Windows 10 (Employee) [Running] - Oracle VirtualBox
File
Machine
View
Input
Devices
Help
Optical Drives
Audio
Network
USB
Shared Folders
Shared Clipboard
Drag and Drop
Insert Guest Additions CD image...
Upgrade Guest Additions...
Network Settings...
Connect Network Adapter
Recycle Bin
Microsoft Edge
Search Network Connections
Organize
Rename this connection
Intel(R) PRO/1000 MT Desktop Ad...

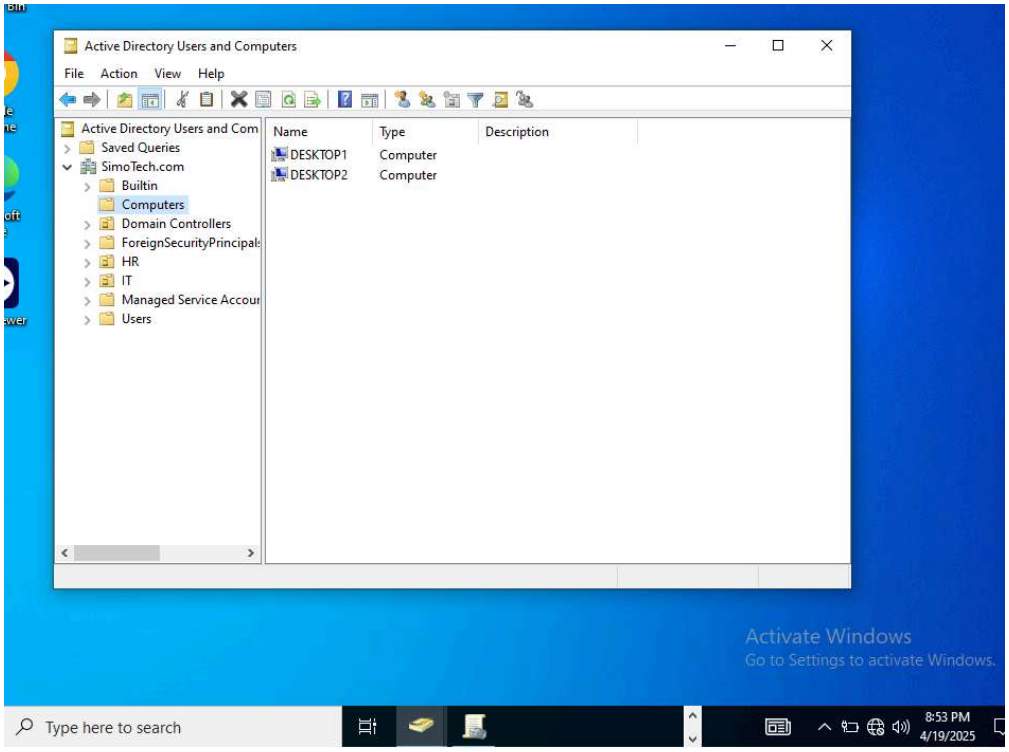

Windows 10 (Employee) - Settings
Basic
Expert
Search settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to:
Host-only Adapter
Name:
VirtualBox Host-Only Ethernet Adapter
Adapter Type:
Intel PRO/1000 MT Desktop (82540EM)
Promiscuous Mode:
Deny
MAC Address:
080027B0E0F0
Cable Connected
Serial Ports
Port 1
Port 2
Port 3
Port 4
Enable Serial Port
OK
Cancel
Help
1 item
1 item selected
Type here to search


Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.5737]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Administrator>ping SimoTech.com
Pinging SimoTech.com [12.1.10.2] with 32 bytes of data:
Reply from 12.1.10.2: bytes=32 time=3ms TTL=128
Reply from 12.1.10.2: bytes=32 time<1ms TTL=128
Reply from 12.1.10.2: bytes=32 time=30ms TTL=128
Reply from 12.1.10.2: bytes=32 time=5ms TTL=128
Ping statistics for 12.1.10.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 30ms, Average = 9ms
C:\Users\Administrator>

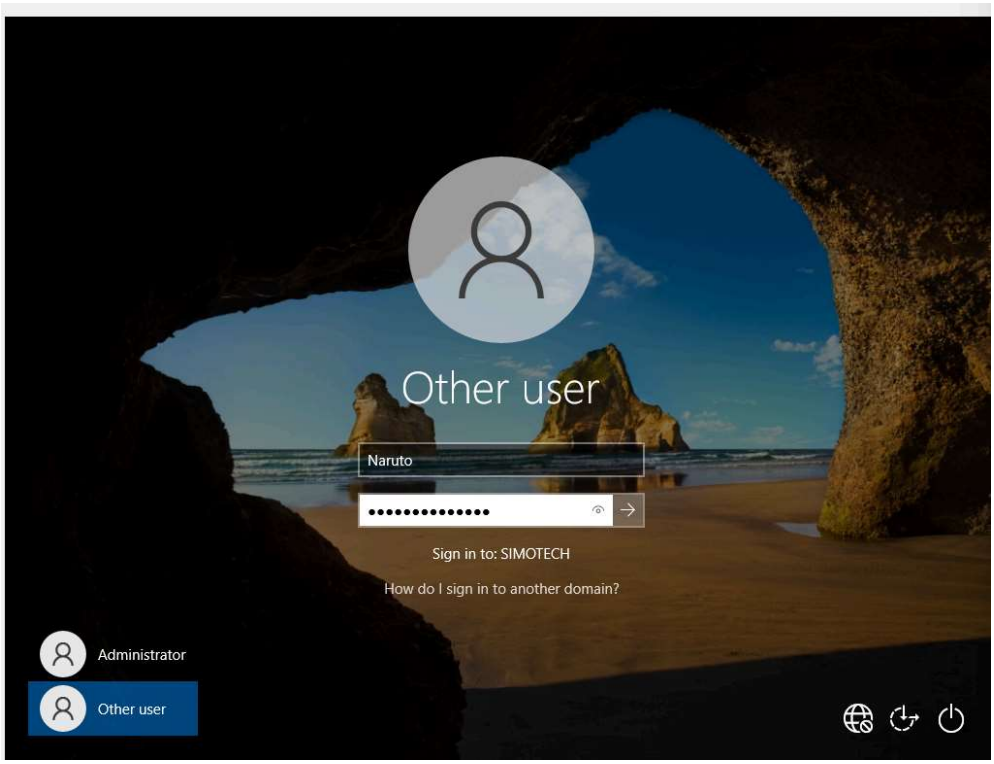

Settings
Home
Find a setting
System
Display
About
Change product key or upgrade your edition of Windows
Read the Microsoft Services Agreement that applies to our services
Related setting
BitLocker settings
Device Manager
Remote desktop
System protection
Advanced system se
Rename this PC (adv
Get help
Give feedback
Computer Name/Domain Changes
You can change the name and the membership of this computer. Changes might affect access to network resources.
Computer name:
Desktop2
Full computer name:
Desktop2
More...
Member of
Domain:
SimoTech.com
Workgroup:
WORKGROUP
OK
Cancel
System Properties
Computer Name
Hardware
Advanced
System Protection
Remote
Windows uses the following information to identify your computer on the network.
Computer description:
For example: "Kitchen Computer" or "Mary's Computer".
Full computer name:
Desktop2
Workgroup:
WORKGROUP
To use a wizard to join a domain or workgroup, click Network ID.
Network ID...
To rename this computer or change its domain or workgroup, click Change.
Change...
OK
Cancel
Apply



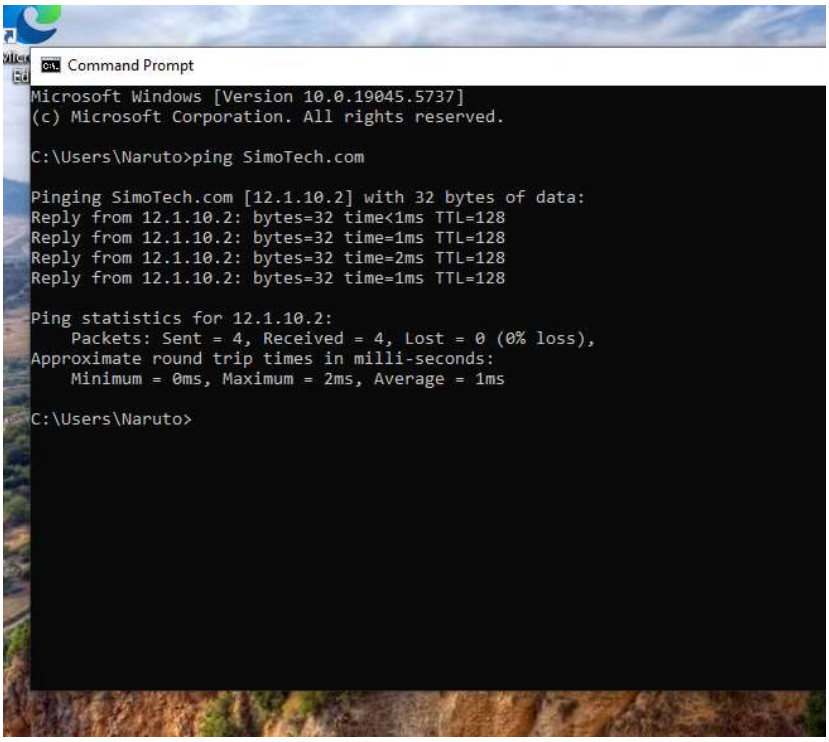
Now that we have joined Windows 10 (Employee) to the SimoTech.com domain and configured the network. We will go to Windows 10 (Helpdesk) and verify that Windows 10 (Employee) (Desktop2) was added to the domain successfully.



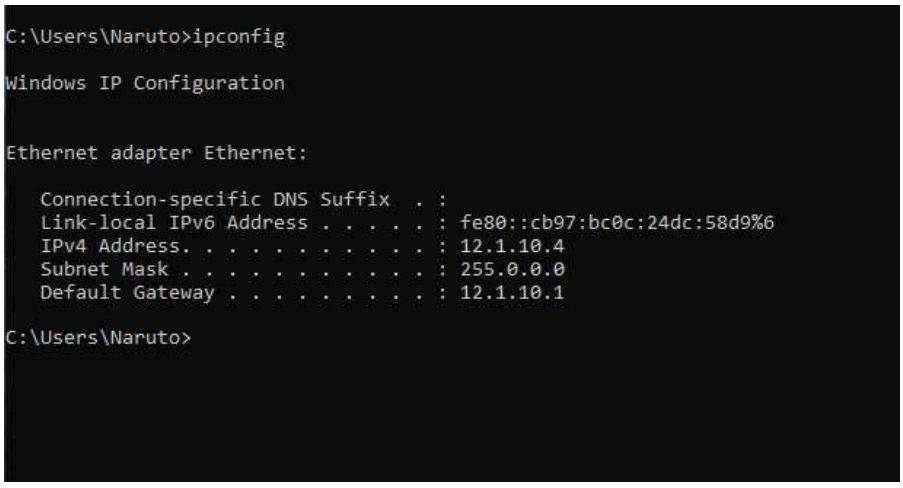
After Windows 10 (Employee) has restarted, login to the local user account “Naruto”.



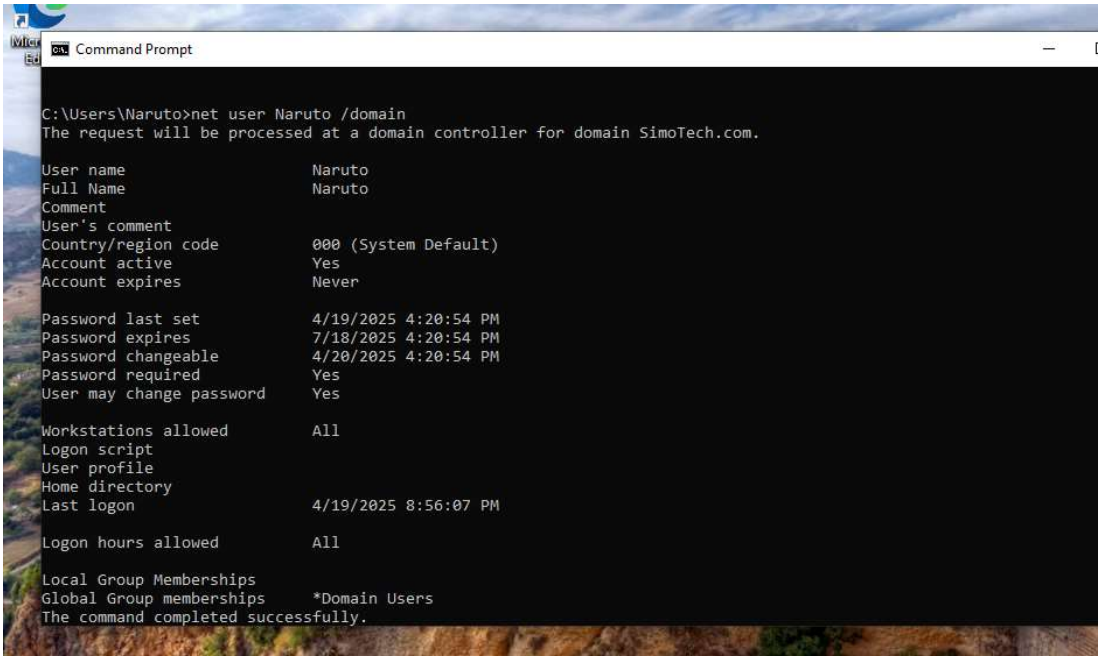
After logging in as the local user, perform a ping test to ensure that Desktop2 can connect to the domain controller.



Use “ipconfig” to ensure proper network configuration.



Lastly, use the command “net use Naruto /domain” to see if our local user can access domain resources with valid credentials.



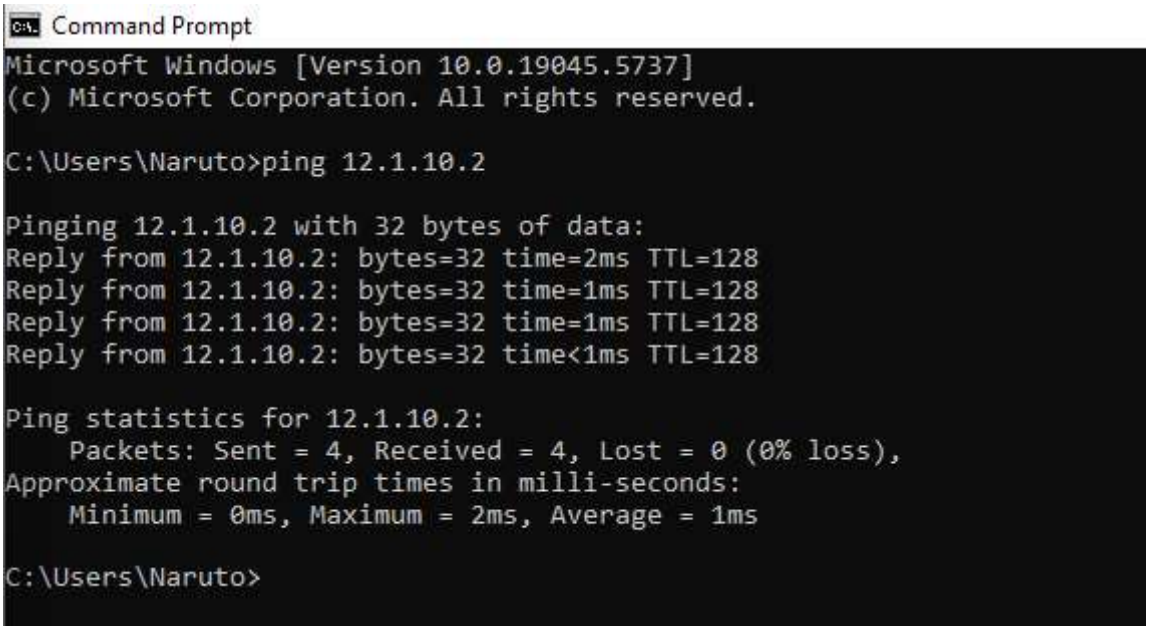
Now we have finished Part 5 of the lab. Tasks completed:

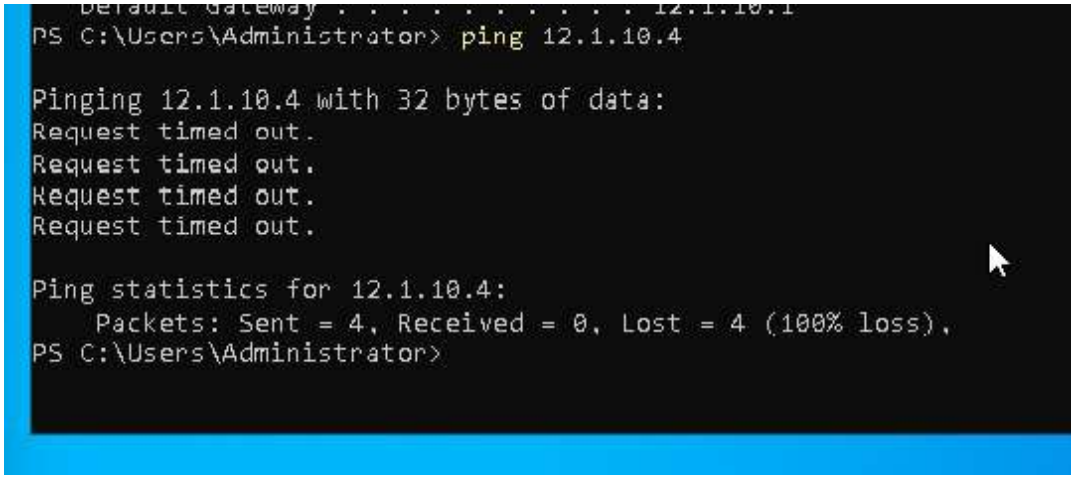
- Joined Desktop 2 to the SimoTech.com domain as a local user on a Windows 10 machine
- Configured and analyzed policy settings
- Navigated Group Policy Management
- Performed administration and troubleshooting, using CMD and generating Resultant Set of Policy (RSOP) reports

Exploring Active Directory Issues & Troubleshooting with CMD

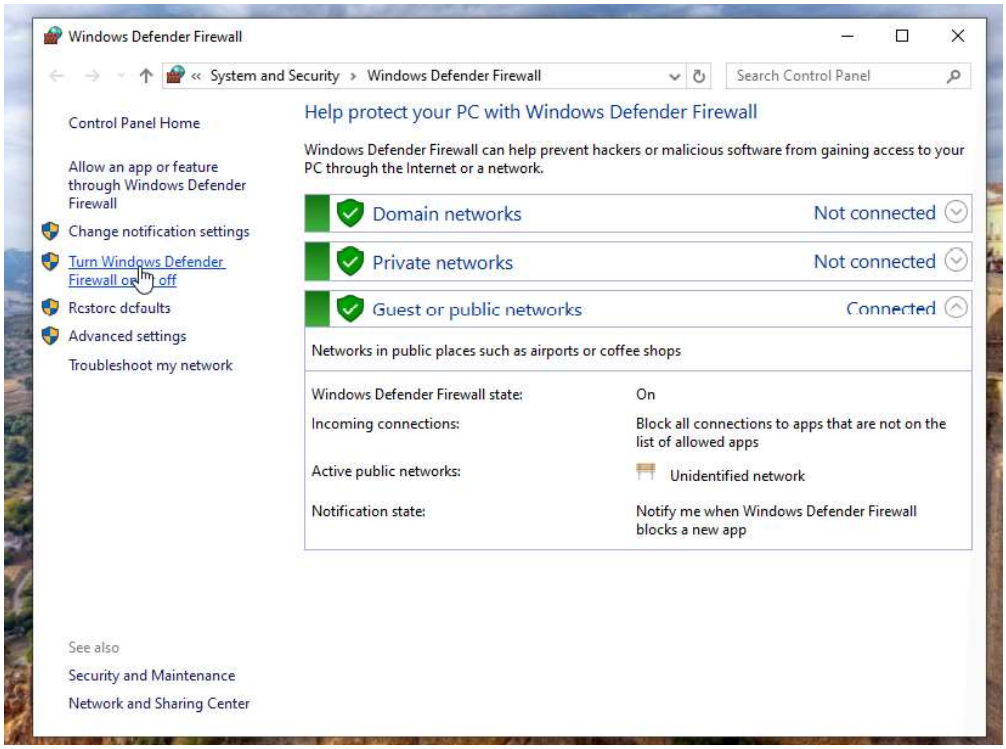
In Part 6, we will learn how to spot and fix typical Active Directory problems like users being unable to log in or accounts getting locked. We will use CMD to troubleshoot issues with domain access, account verification, and similar problems. We will also practice what to do when a computer is disconnected from the domain—checking its network connection and domain status. Throughout this, we'll get comfortable using logs, CMD, and networking tools to figure out what's wrong and how to fix it.

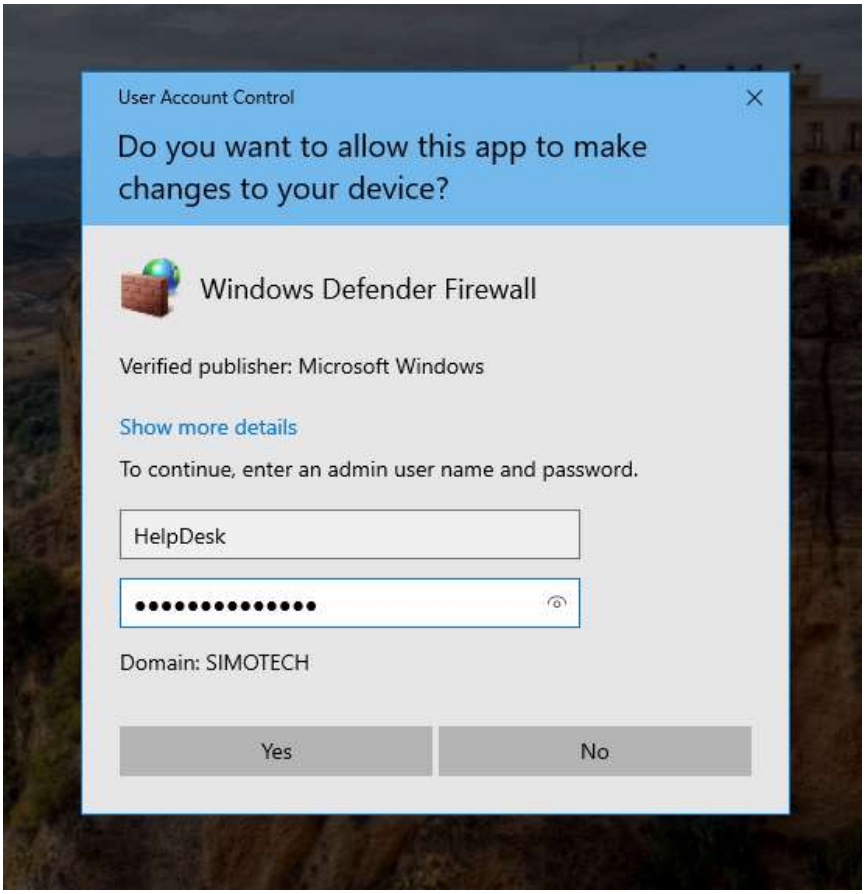
First, we will ping the Windows Server 2022 machine from the local user account, Naruto, on the Windows 10 (Employee) machine. The ping Windows 10 (Employee) from Windows Server 2022.

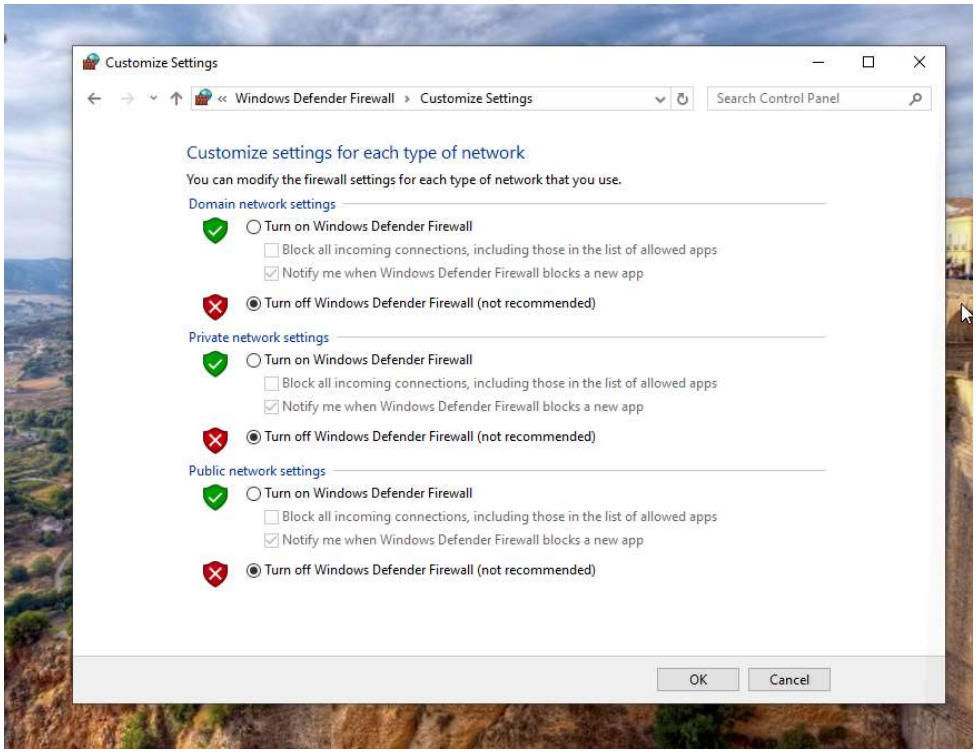




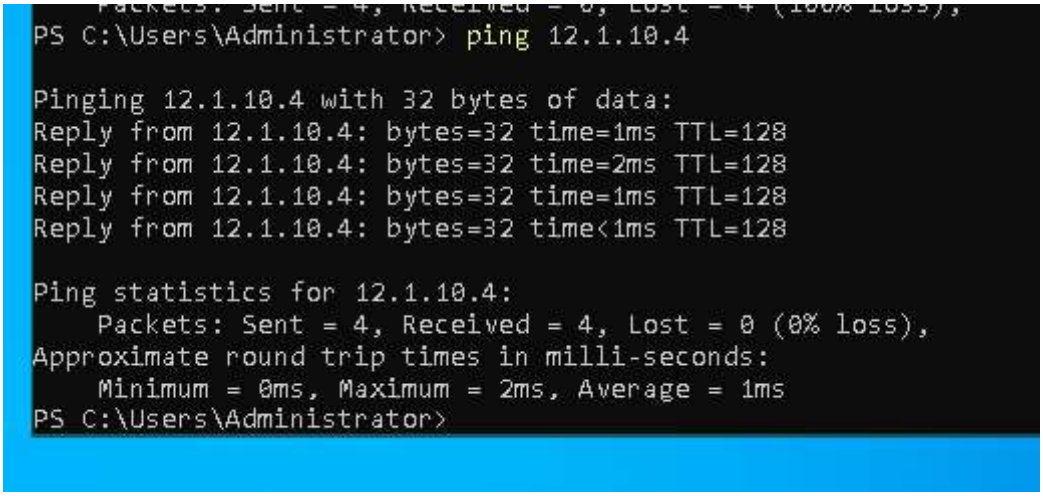
We see the ping test for Windows Server 2022 to Windows 10 (Employee) failed. This issue is coming from the firewall on Windows 10 (Employee), Windows Defender. We must disable the firewall.



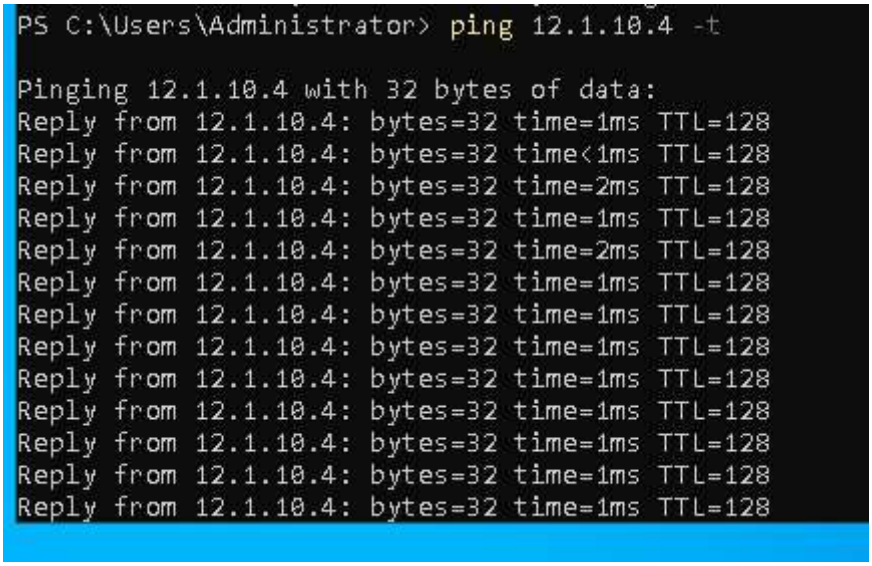

User Account Control
Do you want to allow this app to make changes to your device?
Windows Defender Firewall
Verified publisher: Microsoft Windows
Show more details
To continue, enter an admin user name and password.
HelpDesk
Domain: SIMOTECH
Yes
No


Customize Settings
Windows Defender Firewall › Customize Settings
Search Control Panel
Customize settings for each type of network
You can modify the firewall settings for each type of network that you use.
Domain network settings
Turn on Windows Defender Firewall
Block all incoming connections, including those in the list of allowed apps
Notify me when Windows Defender Firewall blocks a new app
Turn off Windows Defender Firewall (not recommended)
Private network settings
Turn on Windows Defender Firewall
Block all incoming connections, including those in the list of allowed apps
Notify me when Windows Defender Firewall blocks a new app
Turn off Windows Defender Firewall (not recommended)
Public network settings
Turn on Windows Defender Firewall
Block all incoming connections, including those in the list of allowed apps
Notify me when Windows Defender Firewall blocks a new app
Turn off Windows Defender Firewall (not recommended)
OK
Cancel

After disabling Windows Defender, go back to WIndows Server 2022 and perform the ping test again. Now the ping is successful.



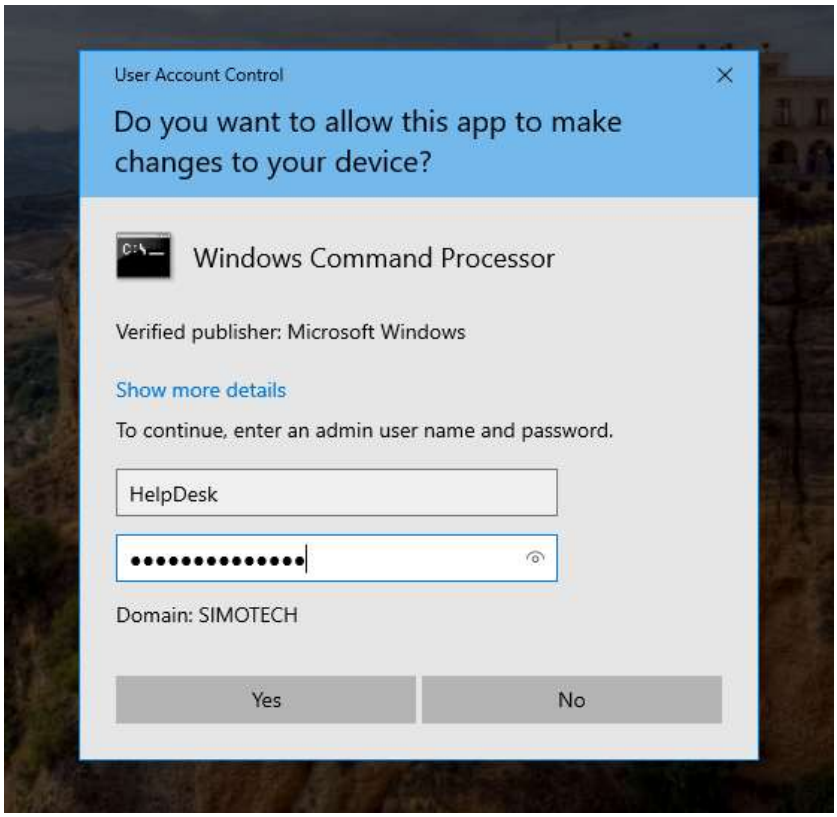
We can prolong the ping test and allow Windows Server 2022 to ping it indefinitely by entering “ping 12.1.10.4 -t”. This will allow us to see network activity over a longer period of time. The standard ping test sends only 4 packets, which is good to see simply if one machine can connect to another machine. But if we want a more in depth look at the connectivity this command can be useful. The pinging will end only if Windows 10 (Employee) is shutdown or if we end the ping inside the command prompt.

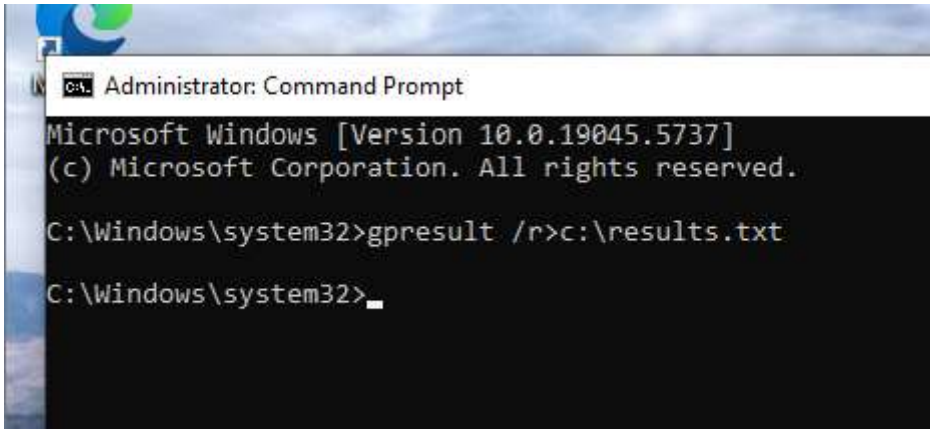


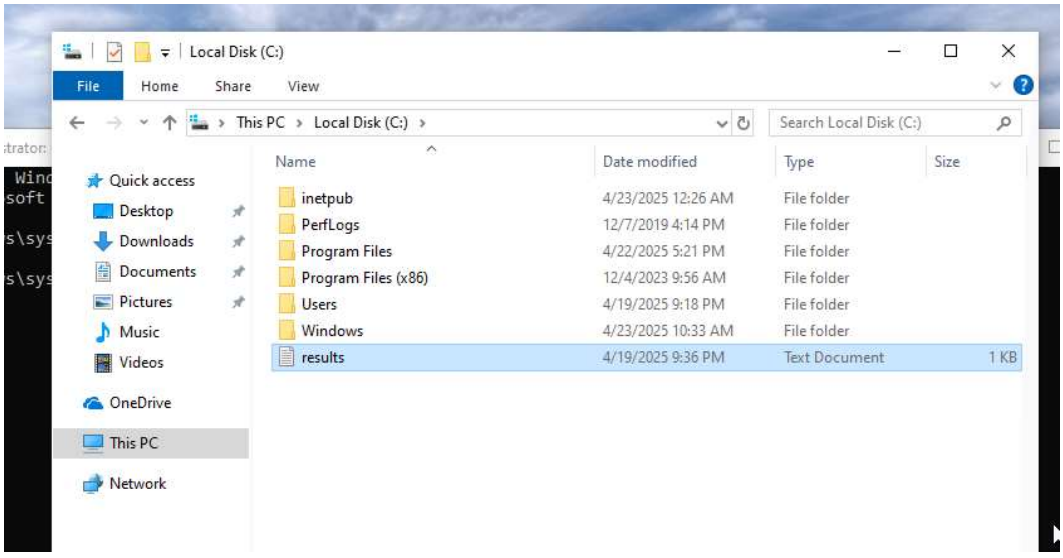
```
Reply from 12.1.10.4: bytes=32 time<1ms TTL=128
Reply from 12.1.10.4: bytes=32 time=2ms TTL=128
Reply from 12.1.10.4: bytes=32 time=1ms TTL=128
Reply from 12.1.10.4: bytes=32 time=1ms TTL=128
Reply from 12.1.10.4: bytes=32 time=1ms TTL=128
Reply from 12.1.10.4: bytes=32 time=1ms TTL=128
Reply from 12.1.10.4: bytes=32 time<1ms TTL=128
Reply from 12.1.10.4: bytes=32 time=2ms TTL=128
Reply from 12.1.10.4: bytes=32 time=1ms TTL=128

Ping statistics for 12.1.10.4:
    Packets: Sent = 39, Received = 39, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 1ms
Control-C
PS C:\Users\Administrator>
```

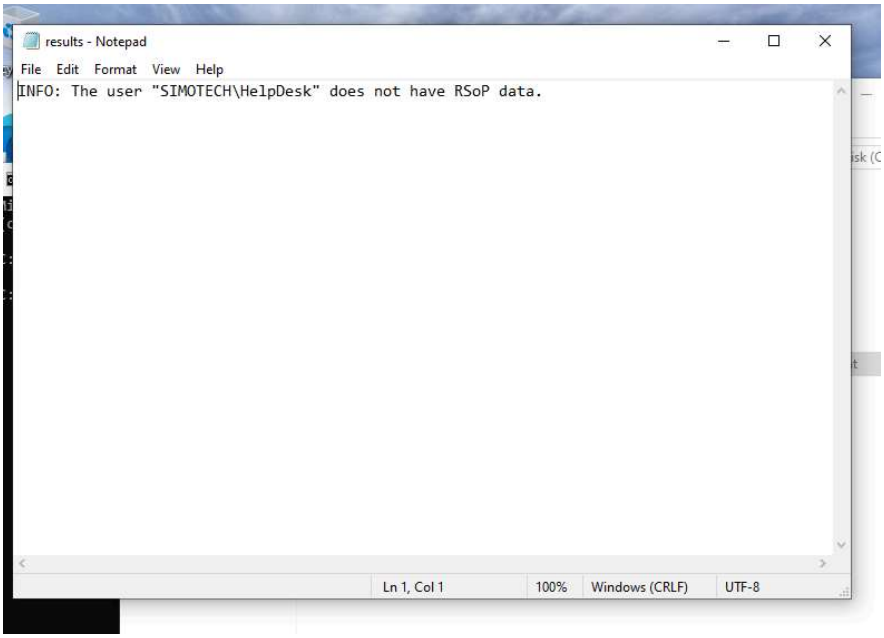
Go back to Windows 10 (Employee) on the local user Naruto account. Open the command prompt as Administrator, using the HelpDesk login credentials, and type this command “gpresult /r > c:\results.txt”. This command will create a group policy report for the PC and store it in the C: drive.



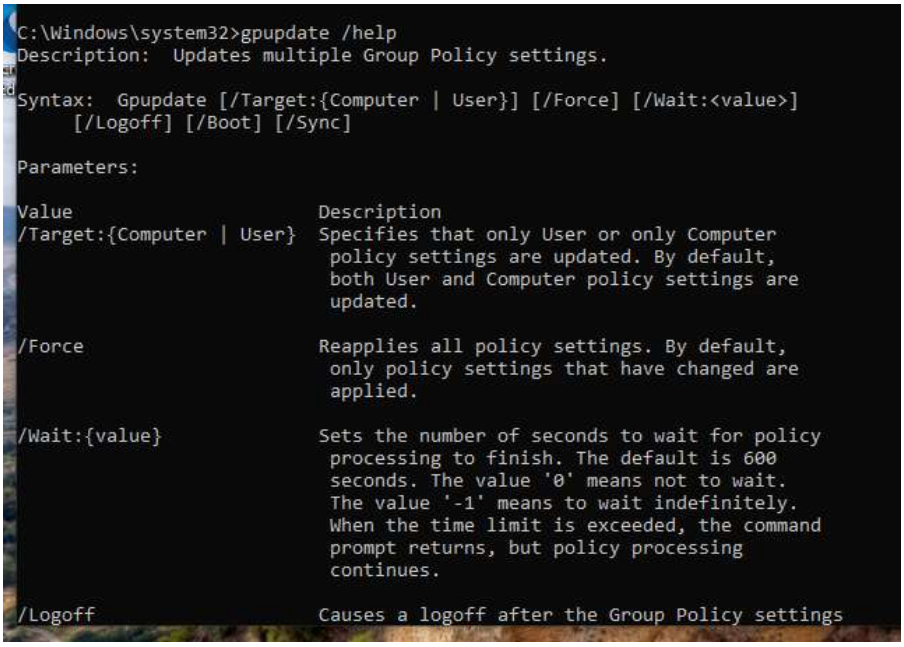




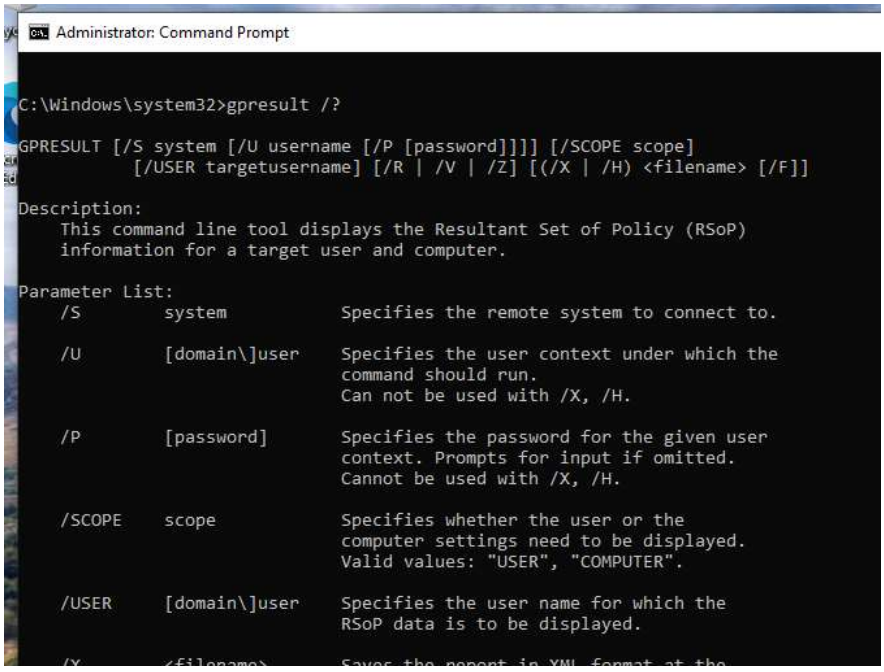
There is no data yet, so the report gives us this message…



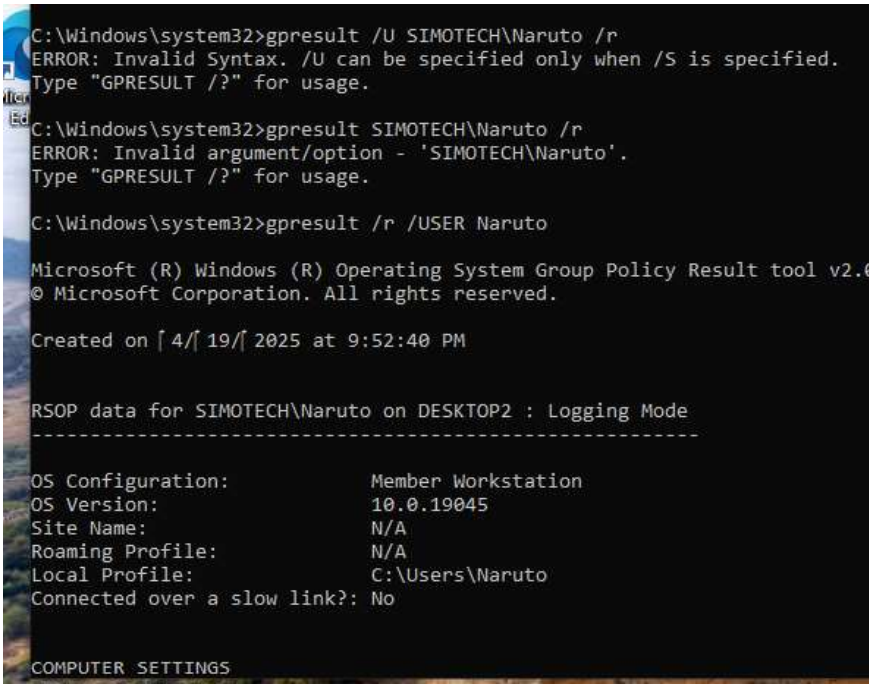
To see a list of commands that update multiple Group Policy settings, use the command “gpupdate /help”.



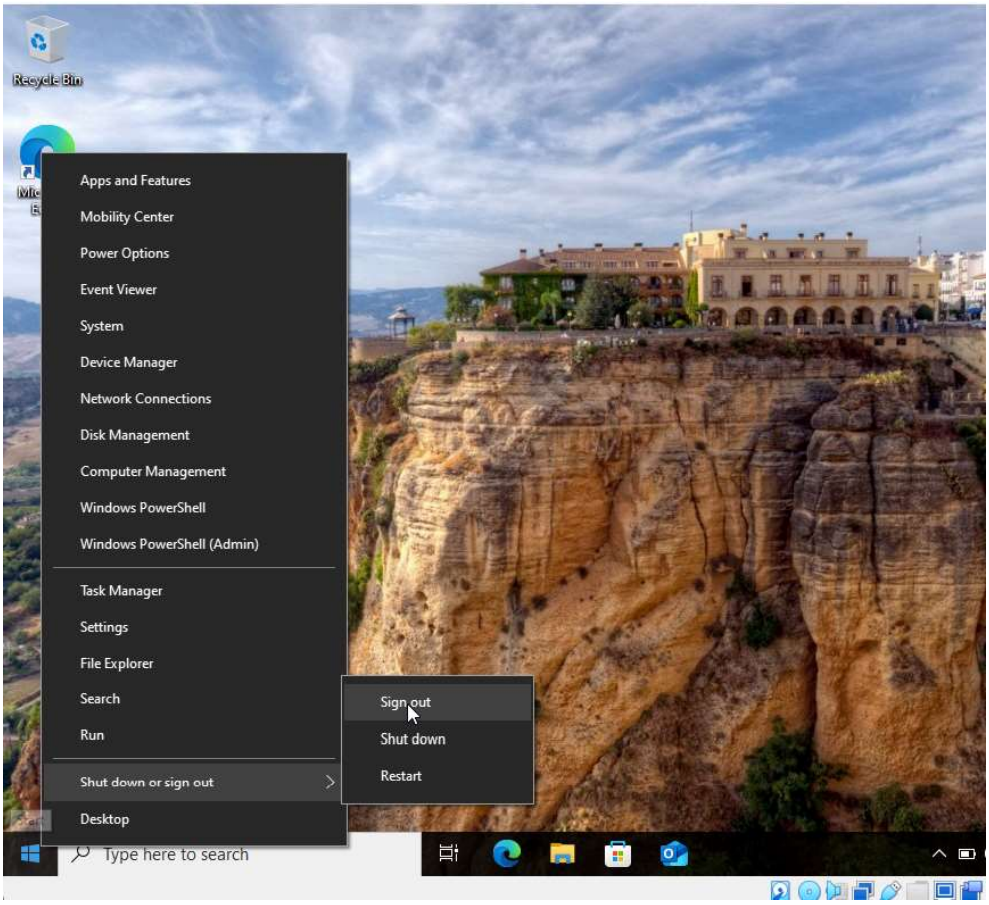
Use the command “Gpresult /?” to display a list of available options for the command.

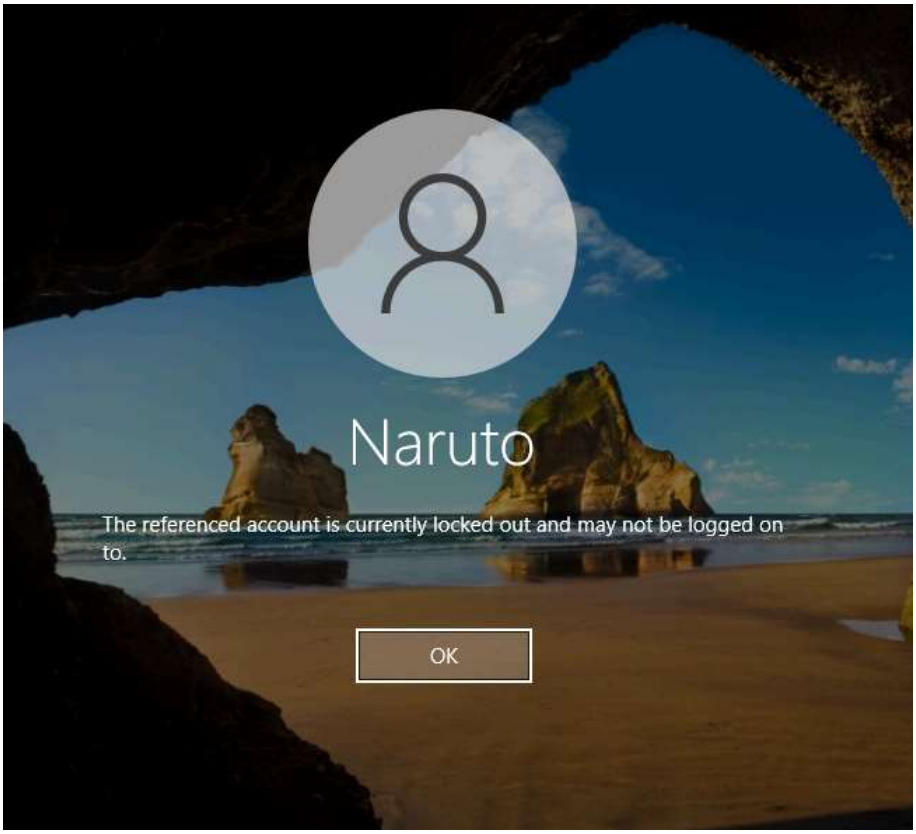


Use the command “gpresult /r /USER Naruto” to see the RSOP (Resultant Set of Policy) report for the local user Naruto.

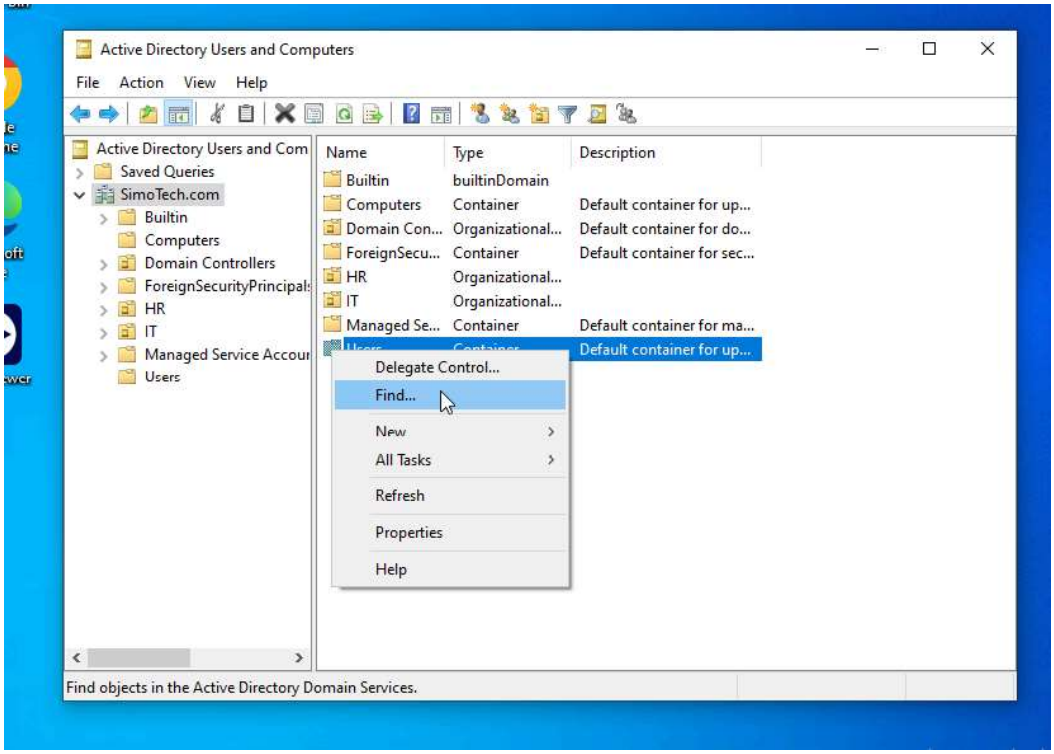


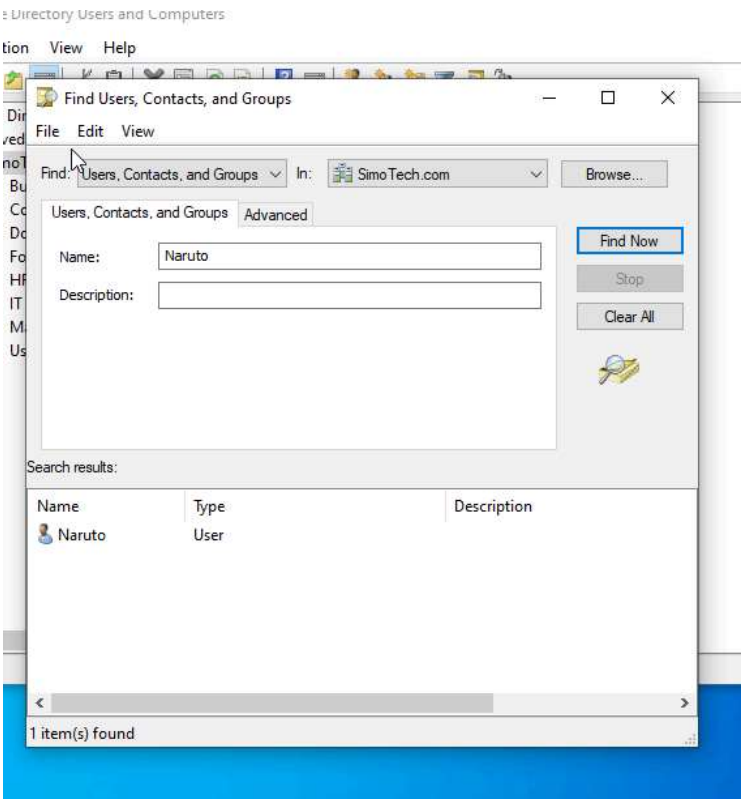
One common problem Helpdesk faces is user lockout. Test this by signing out of the local user account and intentionally entering in the wrong password multiple times.

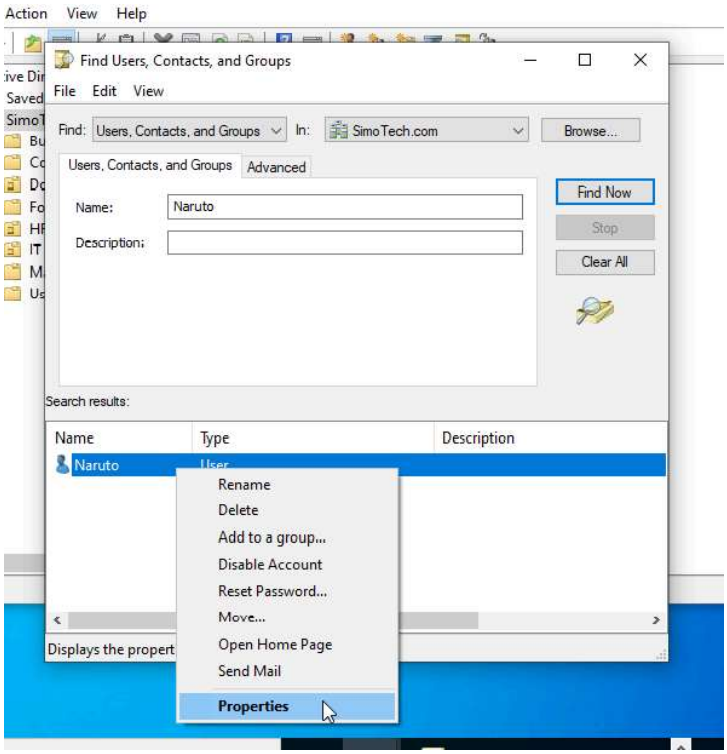




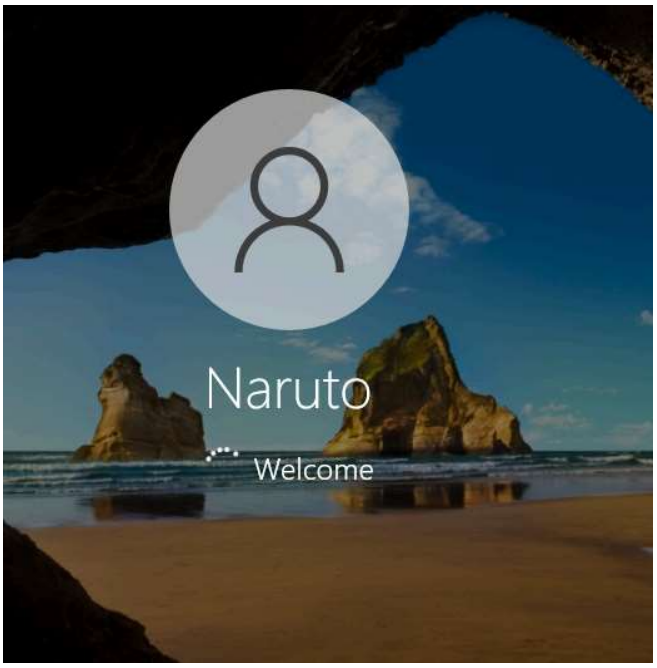
On Windows 10 (Helpdesk) we will act as the helpdesk professional helping the employee who has been locked out. Go to “Active Directory Users and Computers” and search for the locked out user “Naruto”.

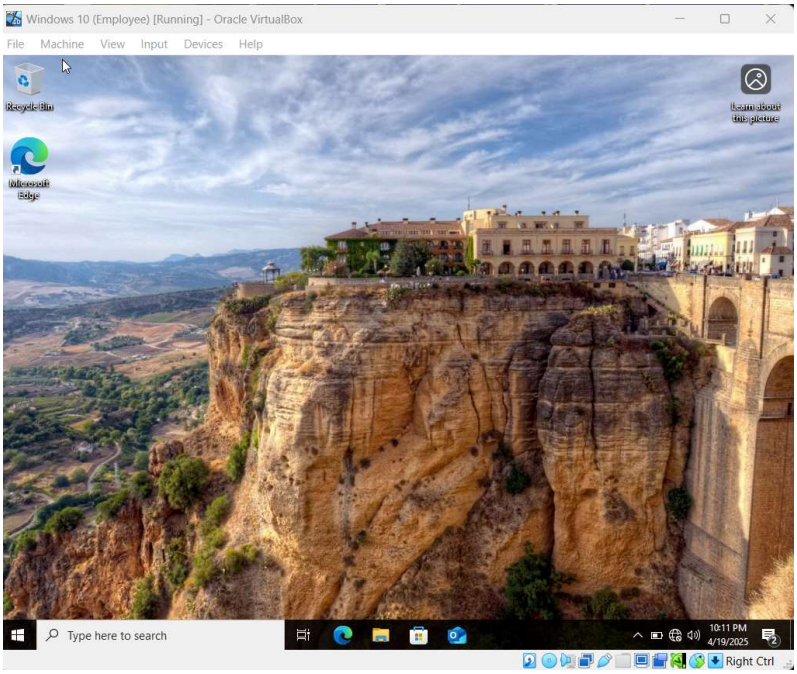

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal
HR
IT
Managed Service Accour
Users
Name Type Description
Builtin builtinDomain
Computers Container Default container for up...
Domain Con... Organizational... Default container for do...
ForeignSecu... Container Default container for sec...
HR Organizational...
IT Organizational...
Managed Se... Container Default container for ma...
Default container for up...
Delegate Control...
Find...
New
All Tasks
Refresh
Properties
Help
Find objects in the Active Directory Domain Services.


Directory Users and Computers
tion View Help
Find Users, Contacts, and Groups
File Edit View
Find: Users, Contacts, and Groups In: SimoTech.com Browse...
Users, Contacts, and Groups Advanced
Name: Naruto
Description:
Find Now
Stop
Clear All
Search results:
Name Type Description
Naruto User
1 item(s) found

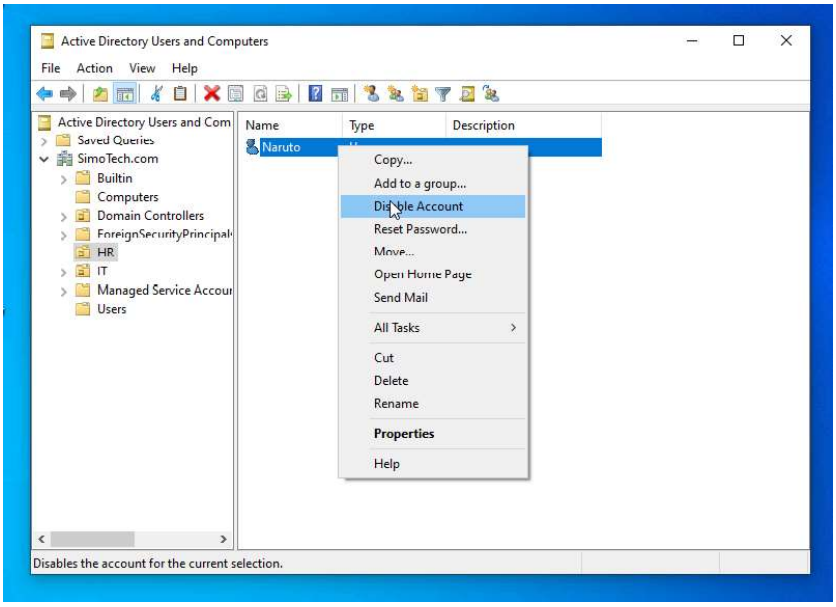


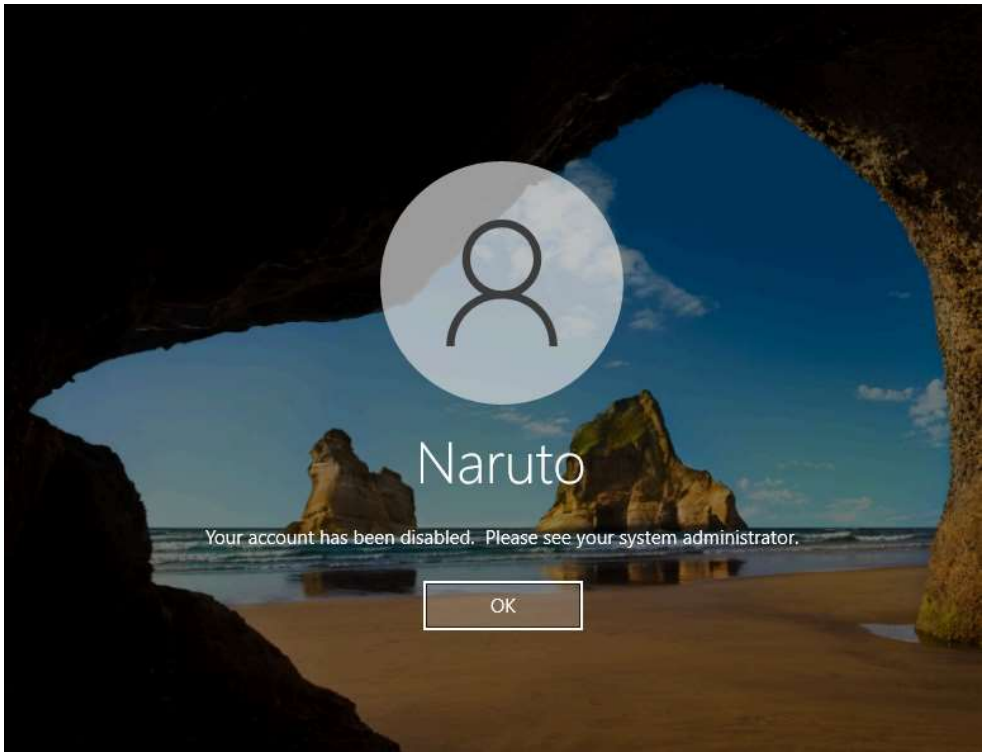
Now we can login to the locked out account.



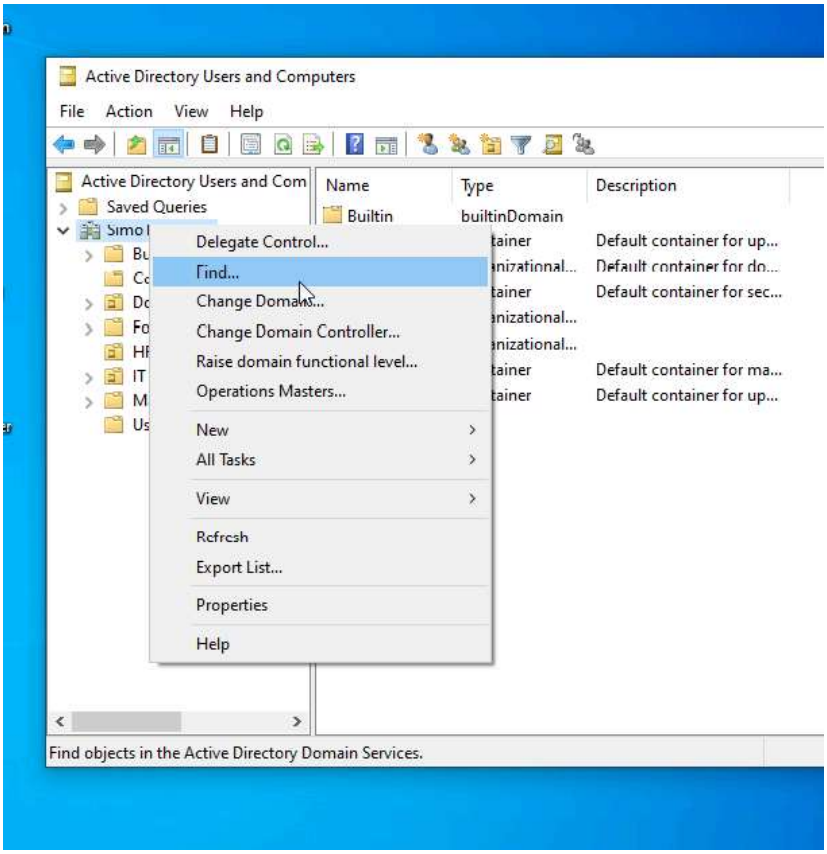


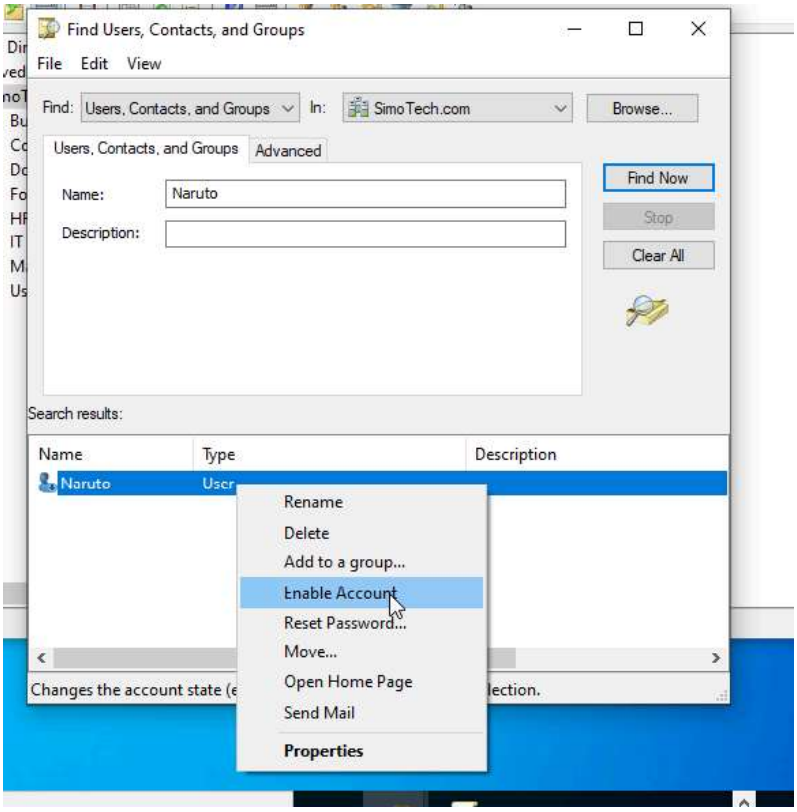
Next, we'll simulate the issue where Naruto's account is disabled and he forgets the password.

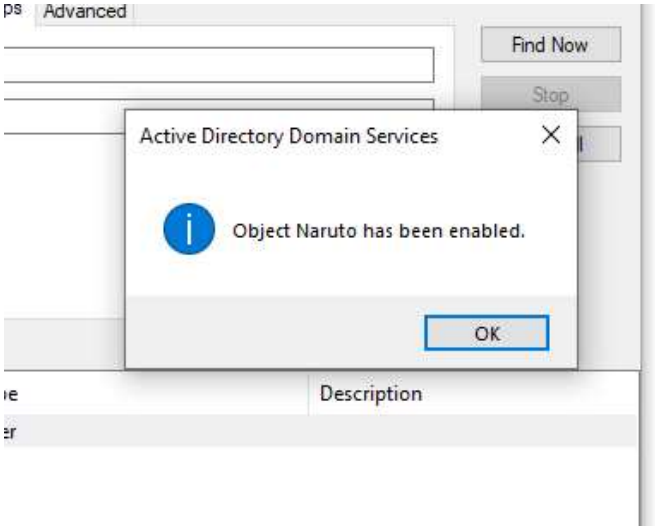




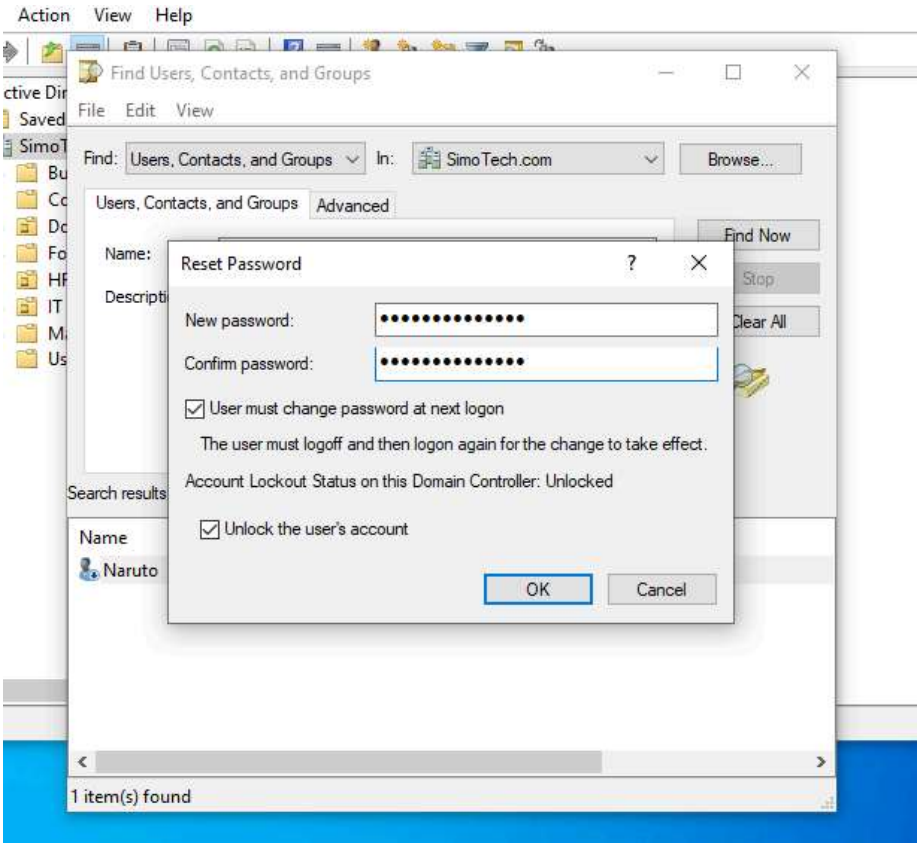
Now, as a helpdesk professional we can go and enable his account and assign him a new password since he forgot it.

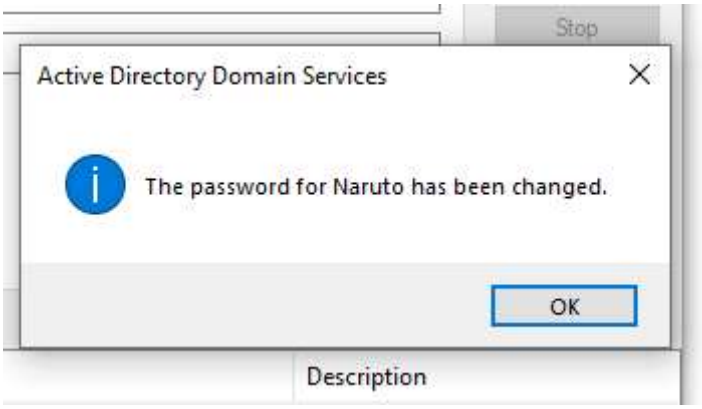

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
Name
Type
Description
Builtin
builtinDomain
Delegate Control...
Find...
Change Domain...
Change Domain Controller...
Raise domain functional level...
Operations Masters...
New
All Tasks
View
Refresh
Export List...
Properties
Help
Default container for up...
Default container for sec...
Default container for ma...
Default container for up...
Find objects in the Active Directory Domain Services.


Find Users, Contacts, and Groups
File Edit View
Find: Users, Contacts, and Groups
In: SimoTech.com
Browse...
Users, Contacts, and Groups
Advanced
Name: Naruto
Description:
Find Now
Stop
Clear All
Search results:
Name
Type
Description
Naruto
Rename
Delete
Add to a group...
Enable Account
Reset Password...
Move...
Open Home Page
Send Mail
Properties

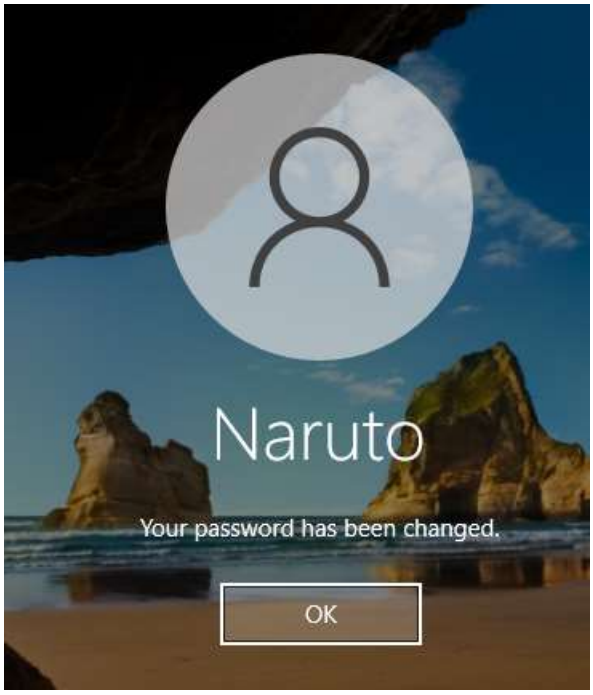


Now you can assign a new password to Naruto's account.

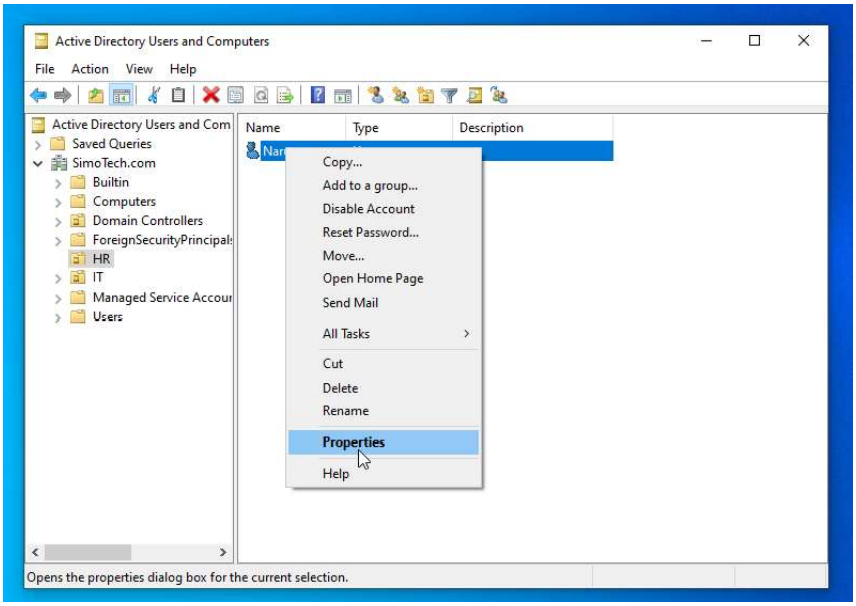


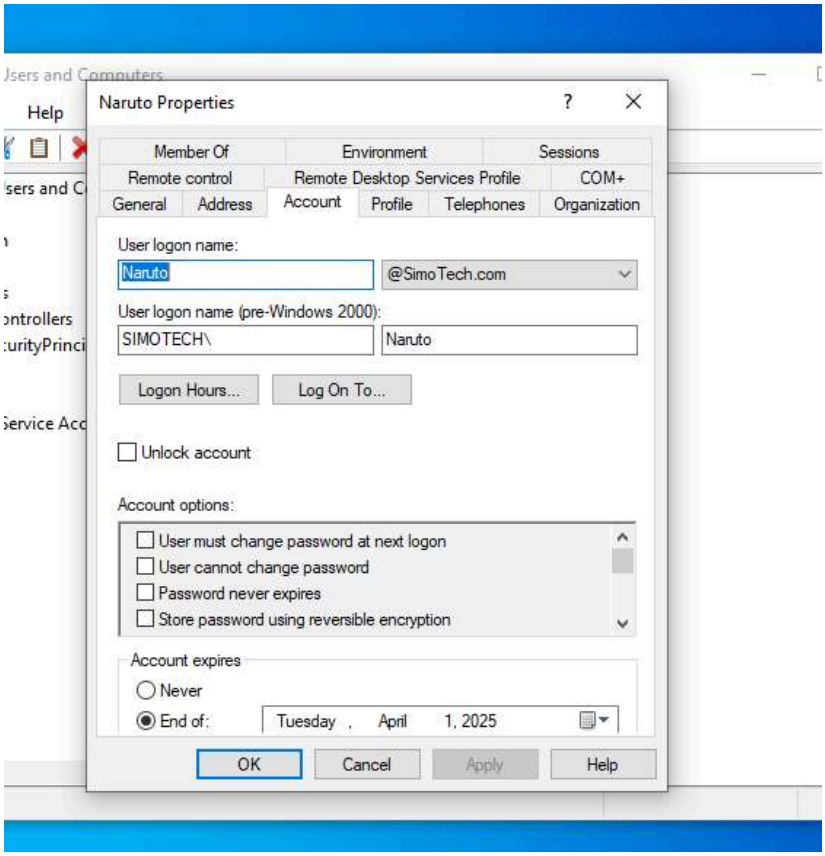

Stop
Active Directory Domain Services
The password for Naruto has been changed.
OK
Description


Naruto
Sign in to: SIMOTECH
How do I sign in to another domain?
Cancel



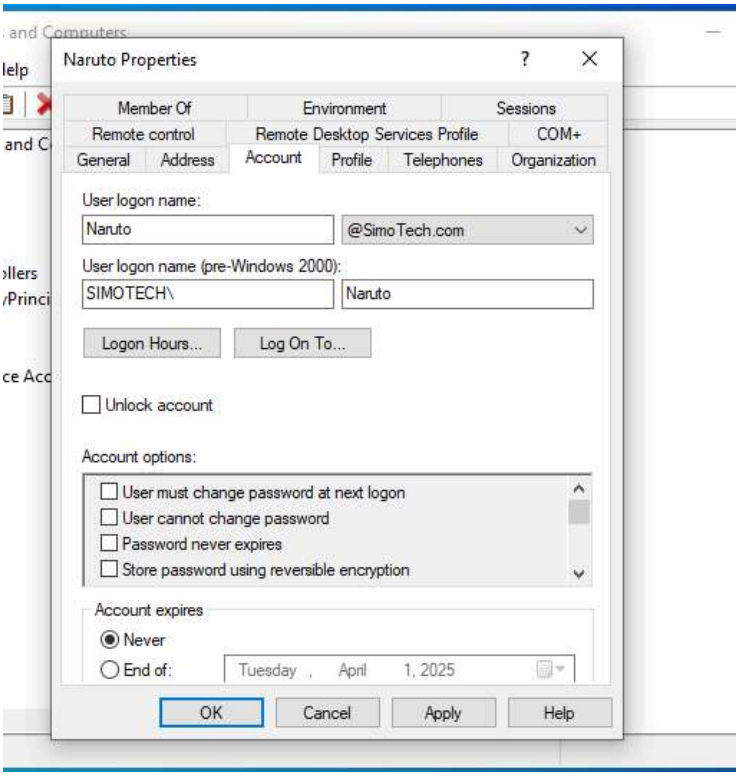
Now we'll simulate another issue where the local user's account expires due to inactivity or because an administrator set an expiration date. Go to "Naruto" in Active Directory Users and Computers. Set the account expiration date to a date that's already passed.



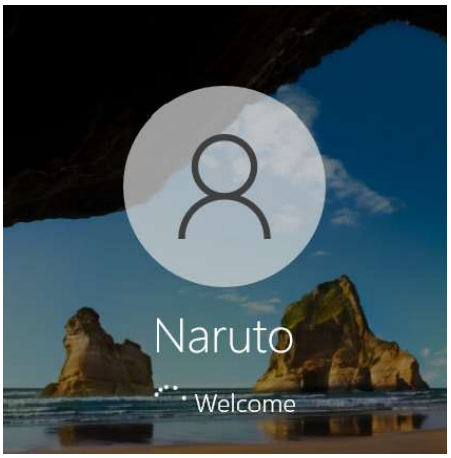

Naruto Properties
Member Of
Environment
Sessions
Remote control
Remote Desktop Services Profile
COM+
General
Address
Account
Profile
Telephones
Organization
User logon name:
Naruto
@SimoTech.com
User logon name (pre-Windows 2000):
SIMOTECH\
Naruto
Logon Hours...
Log On To...
Unlock account
Account options:
User must change password at next logon
User cannot change password
Password never expires
Store password using reversible encryption
Account expires
Never
End of:
Tuesday , April 1, 2025
OK
Cancel
Apply
Help

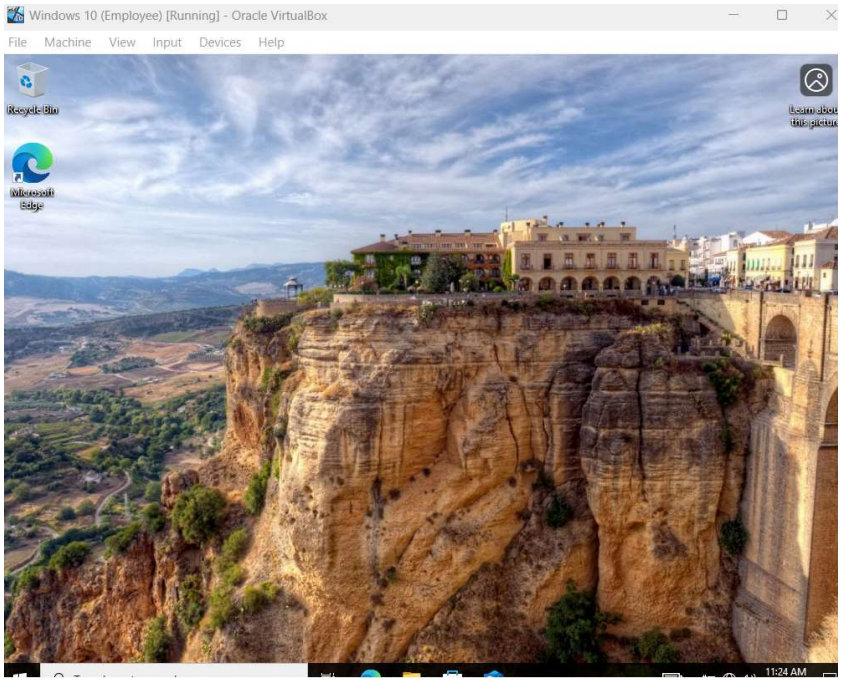

Naruto
The user's account has expired.
OK

If a user’s account expires the helpdesk professional can resolve the issue by setting the account expiration date to “Never”.

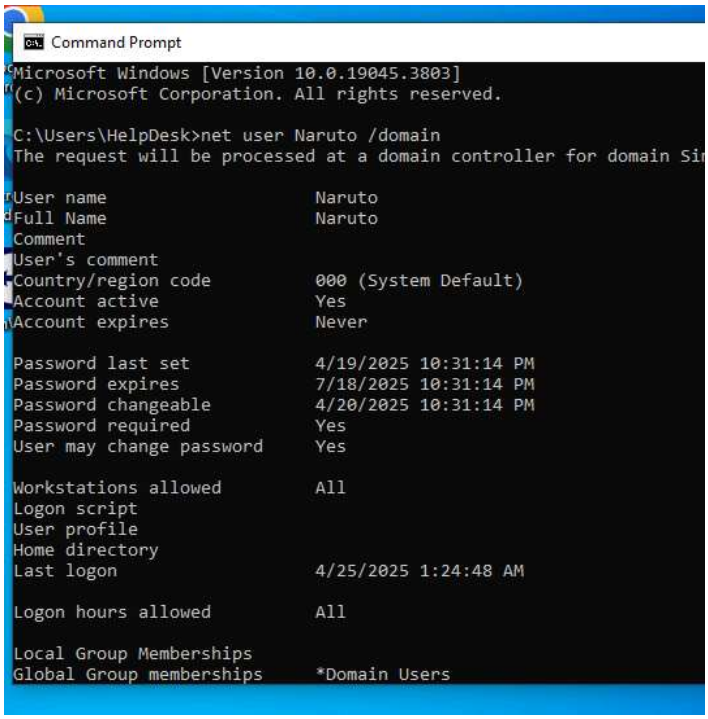


Now we can login to Naruto’s account again.

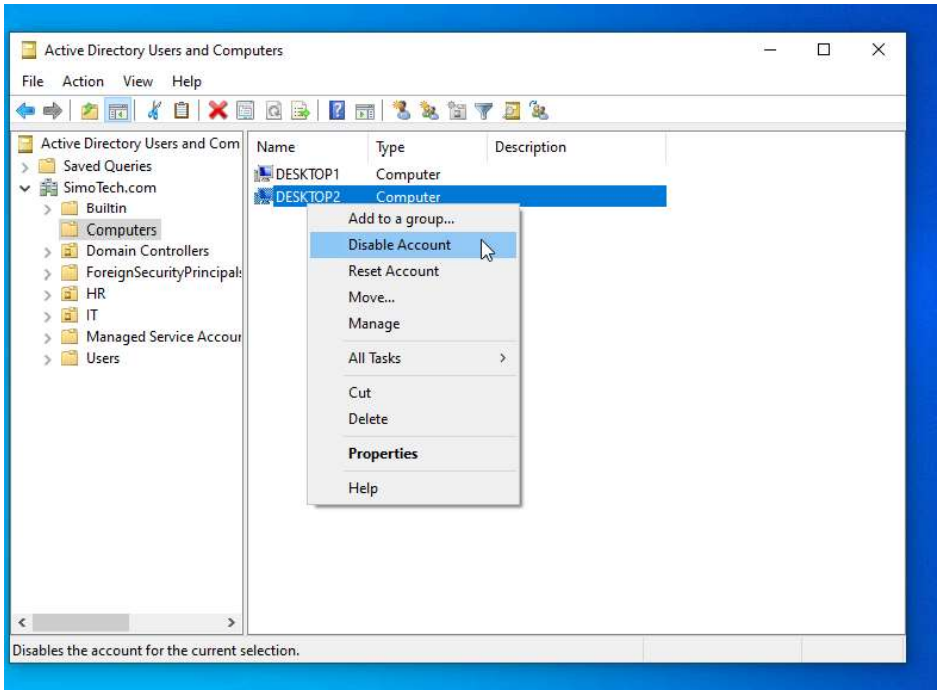


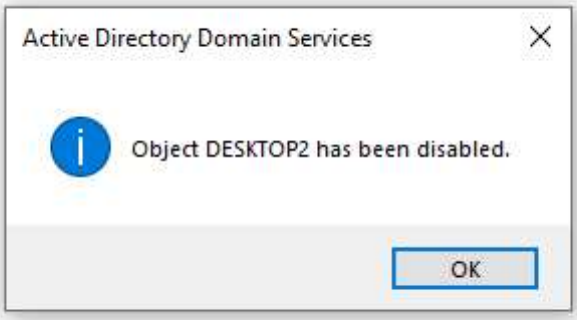


We can make sure Naruto's account is valid by going into the HelpDesk account and running the command "net user Naruto /domain". We can see that the account is active and that the account never expires.

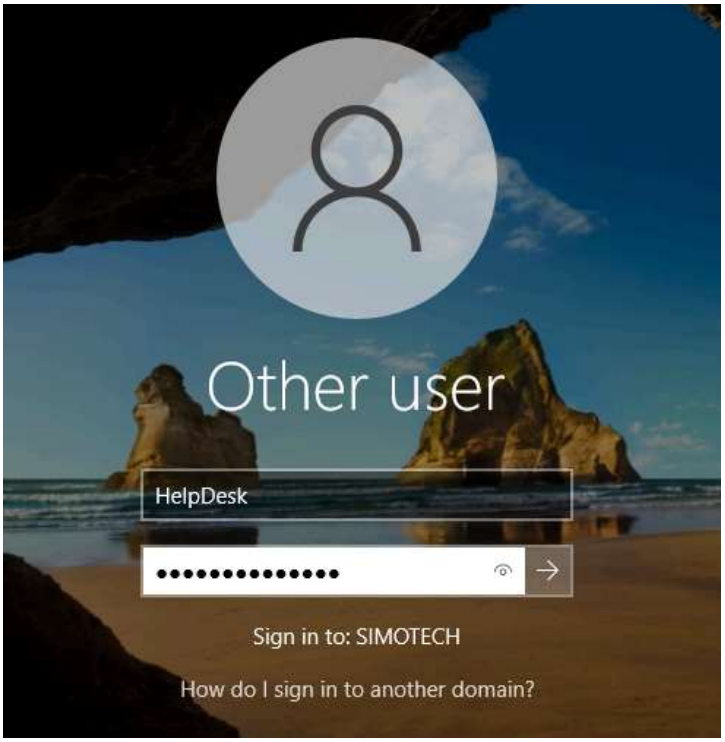


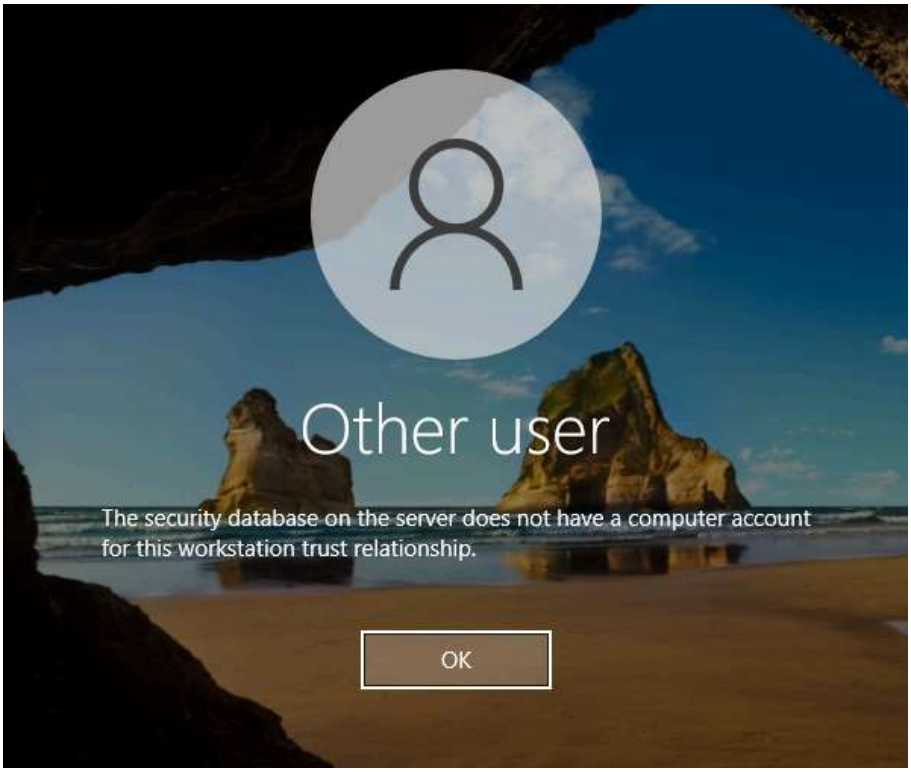
Next, we will simulate the issue where a computer has fallen off of the domain.



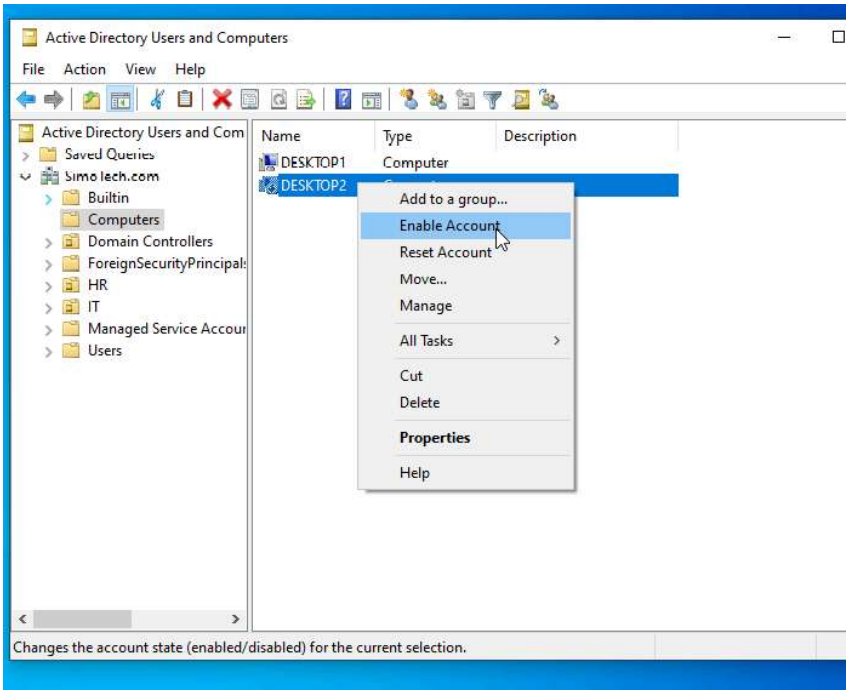


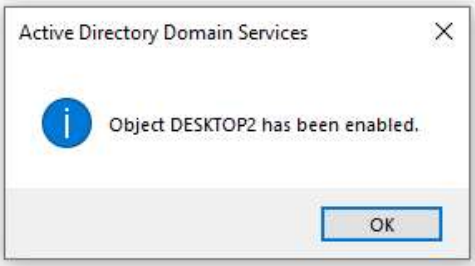
Try to login in on the WIndows 10 (Employee) machine with the HelpDesk credentials.



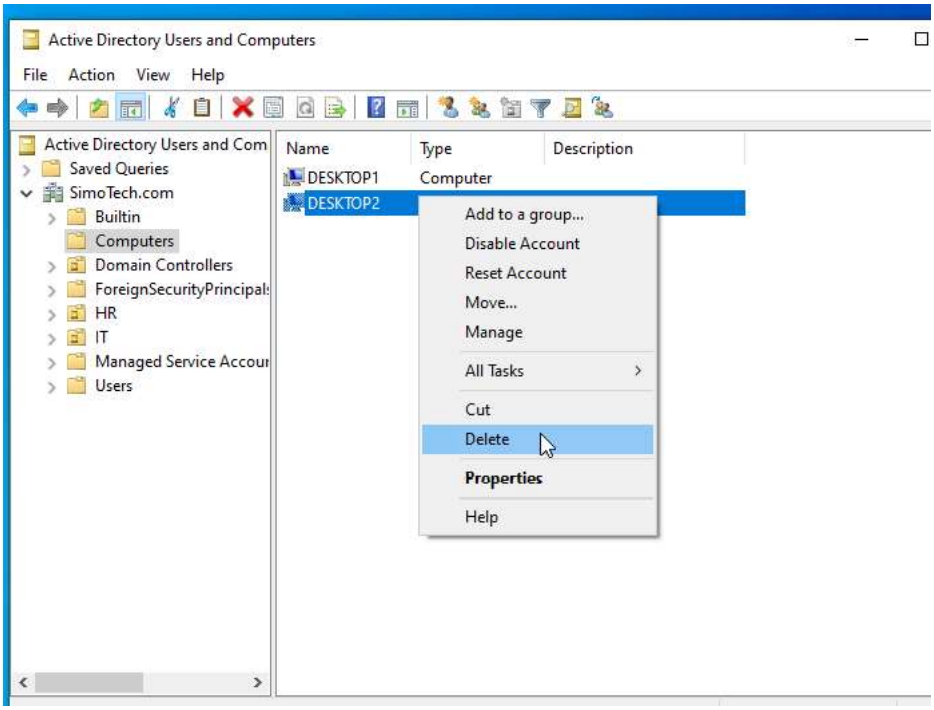


Sometimes we can simply fix this issue by enabling the computer.

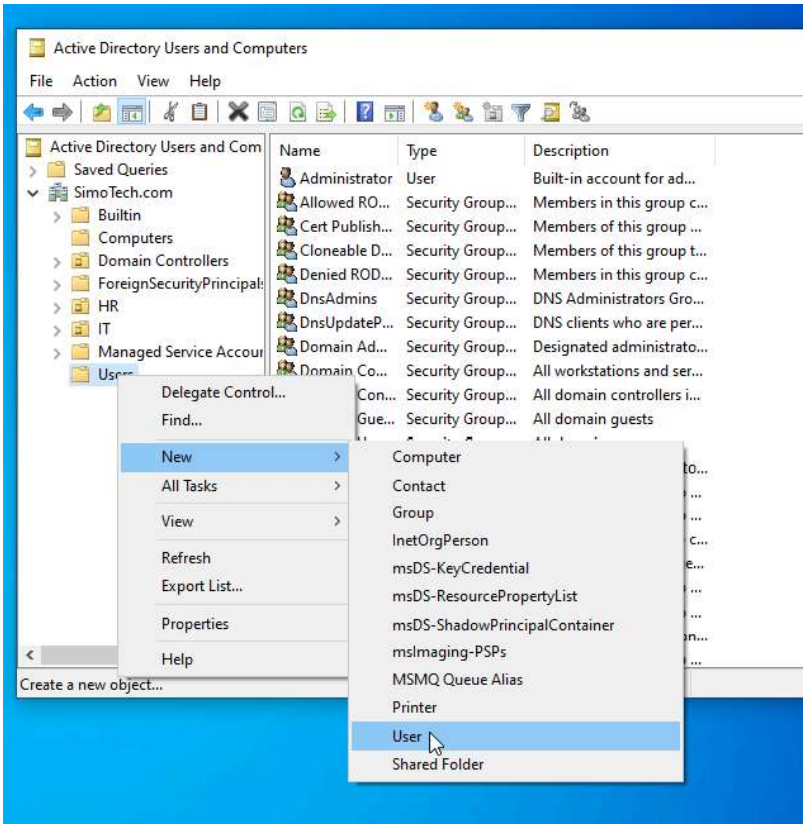


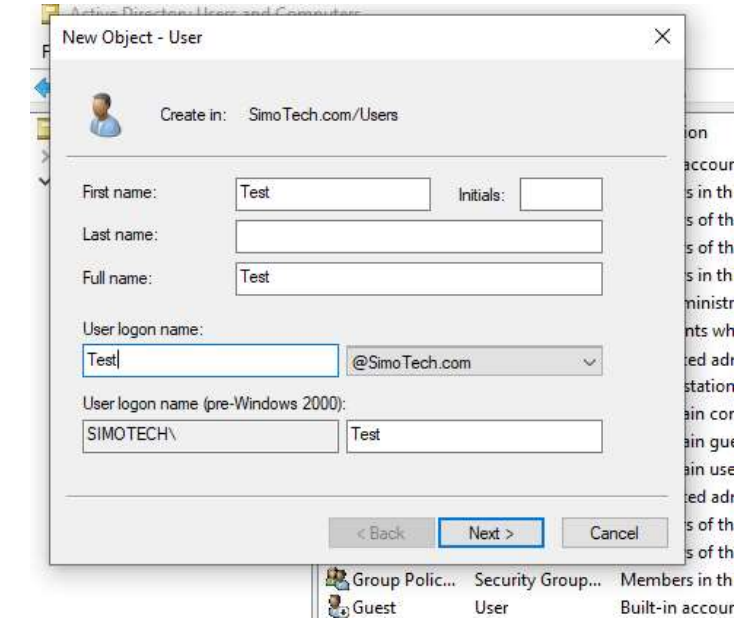


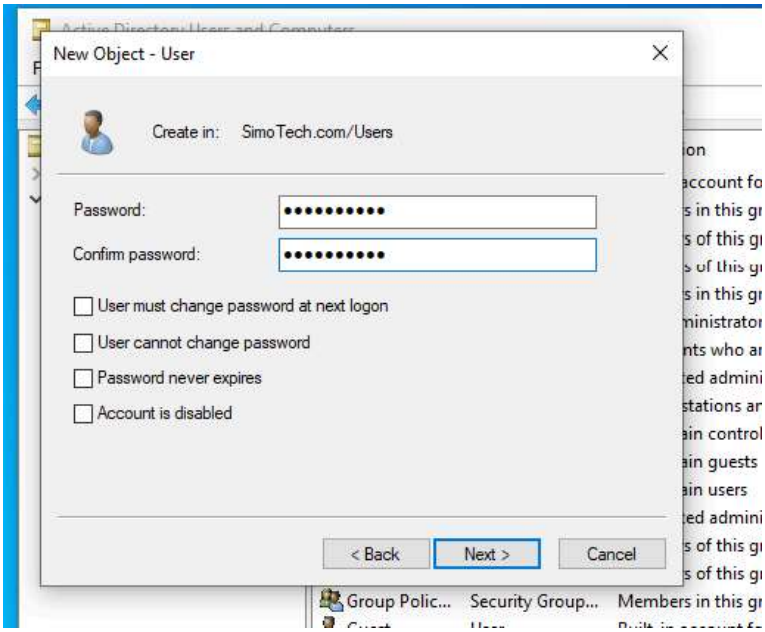
Now, we will simulate the same issue but in a different way. Go to the Active Directory on the HelpDesk machine and delete Desktop2.



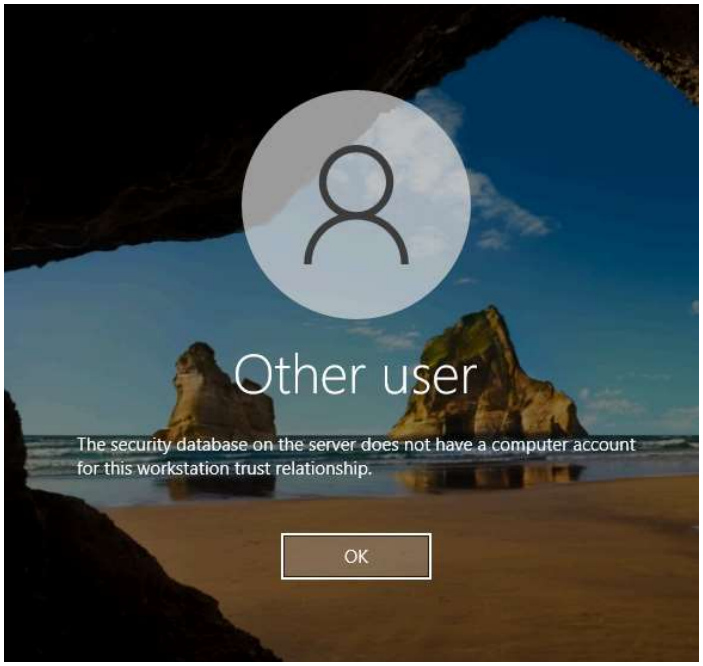
Now create a new user that we will use to test with.



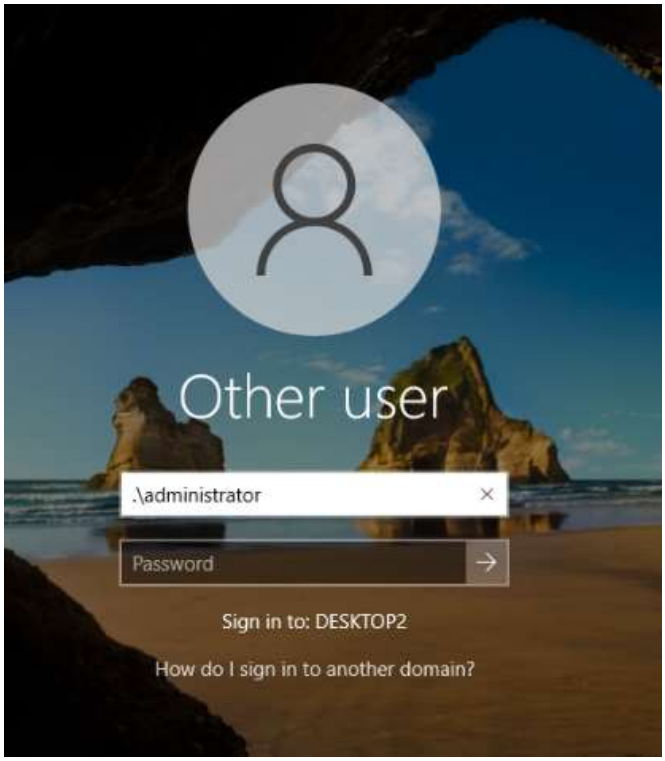




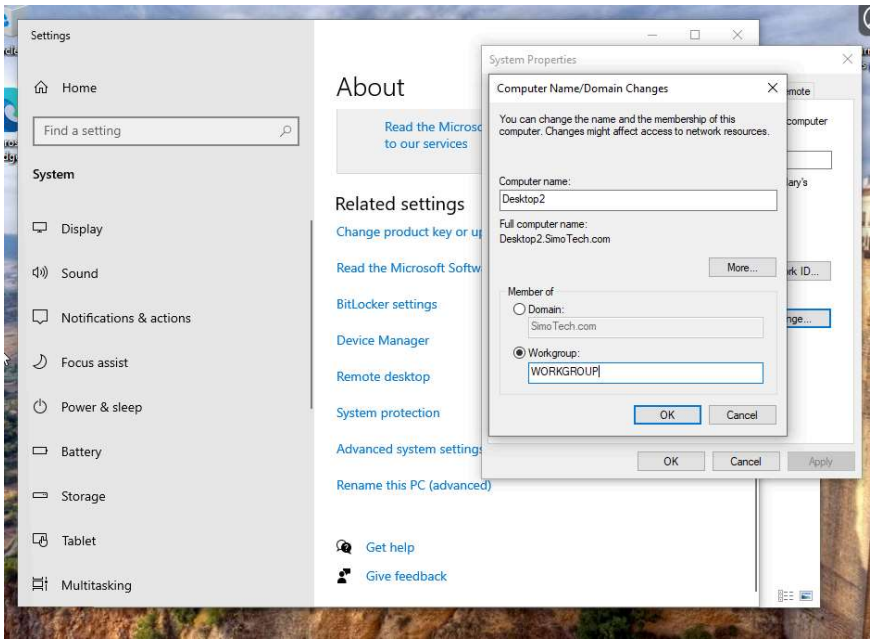
Try to login on Desktop2 with the Test account and we should see and error.

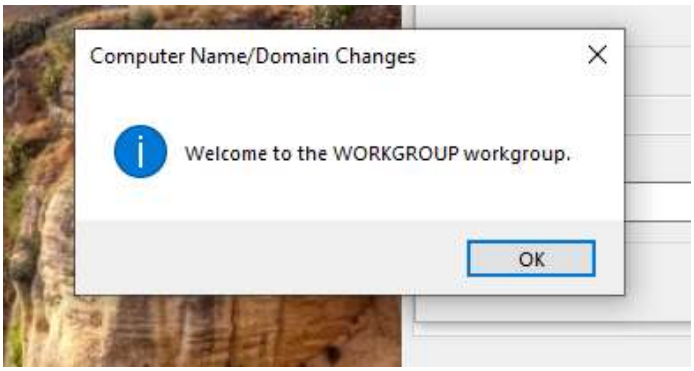


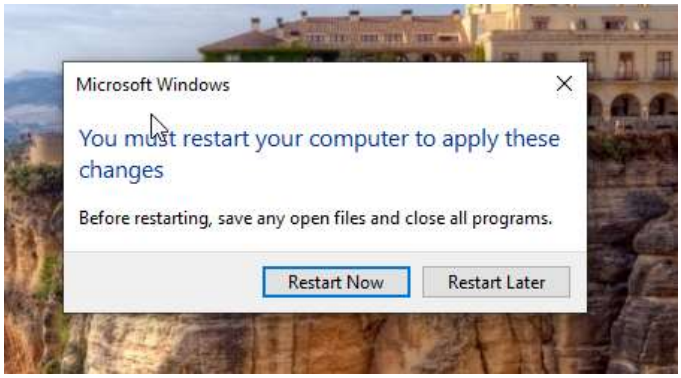
To add Desktop2 back into the domain log into the administrator account with “.\administrator” and enter the password.



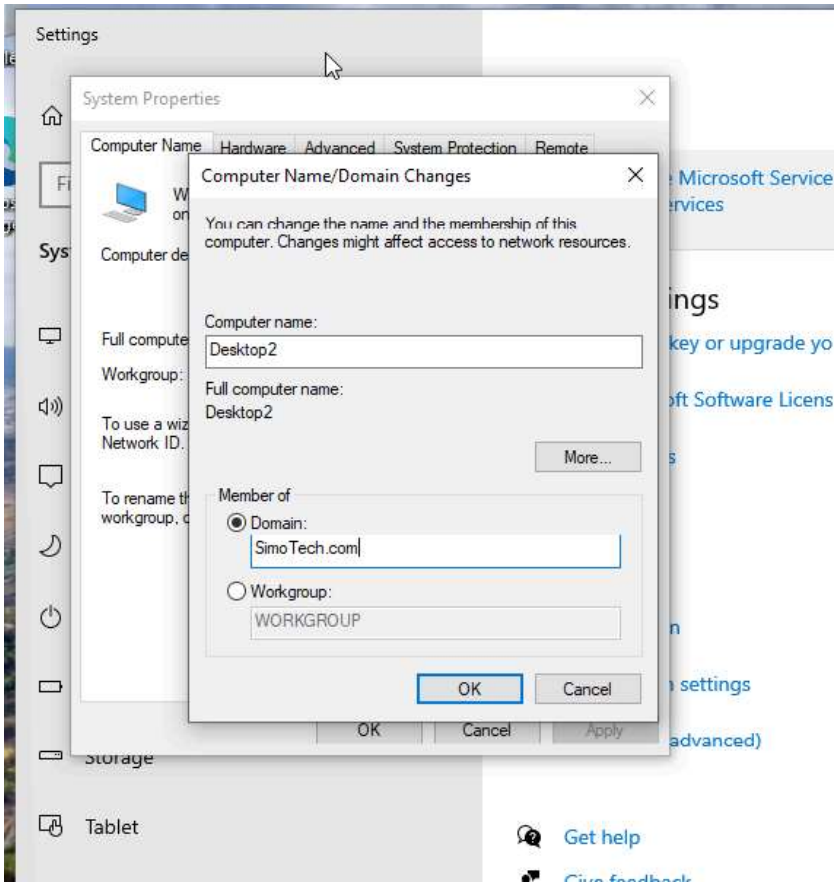
After successfully logging in as the administrator go to “About my PC” then go to “Advanced system settings” then “change” and change “Member of” to “Workgroup”. Then restart.

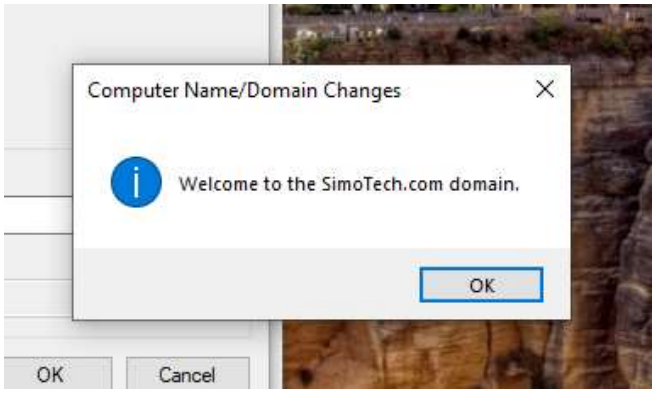




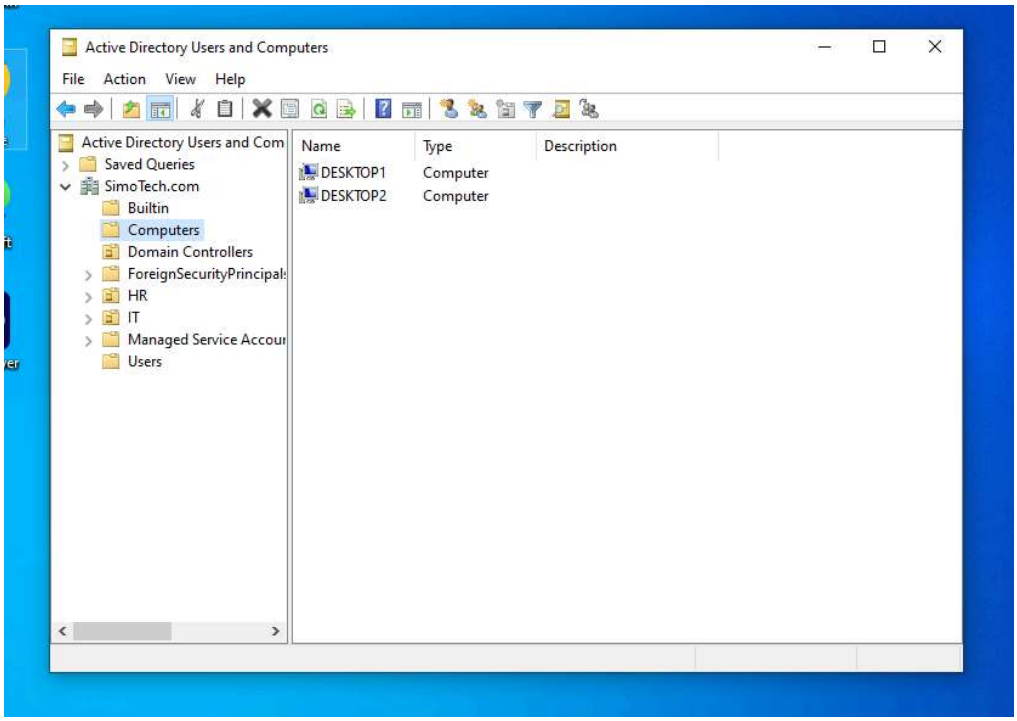


After restarting, login as Administrator and repeat the same process but now change the domain back to “SimoTech.com”.





After restarting, go back to Windows 10 (Helpdesk) and we can see in Active Directory Users and Computers that Desktop2 has been added back to the domain.



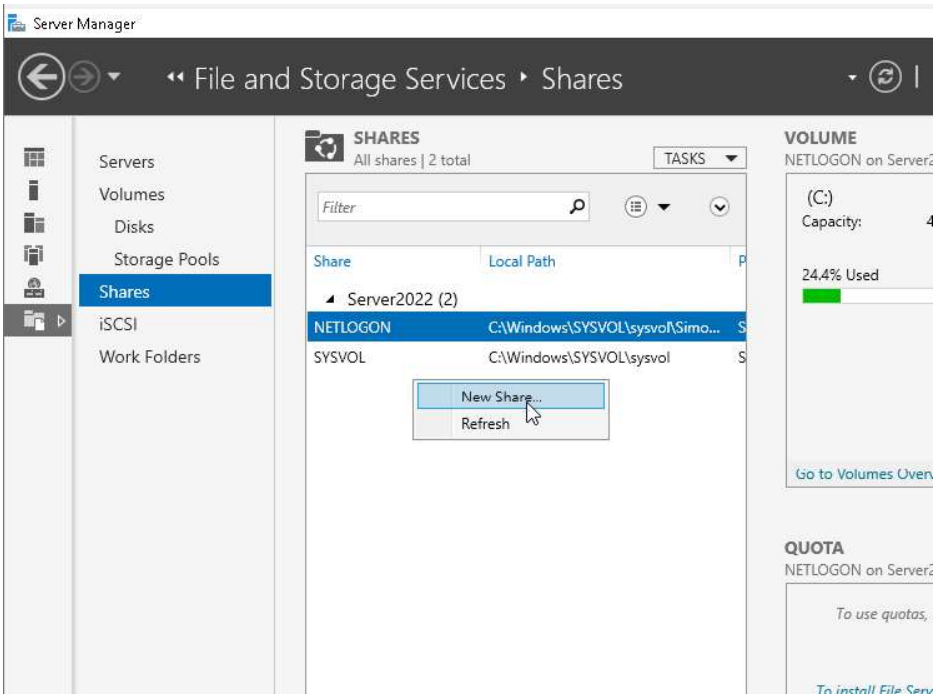
Now we have finished Part 6 of the lab. Tasks completed:

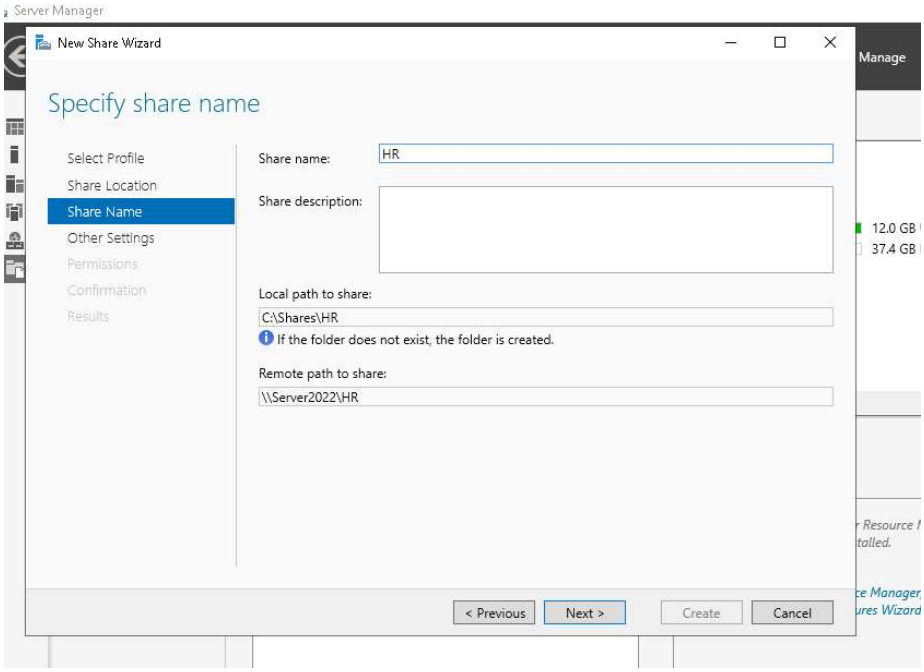
- Handled frequent issues in Active Directory, like user login problems or account lockouts
- Used Command Prompt tools to troubleshoot and fix domain connection and authentication problems
- Solved cases where a computer was disconnected from the domain by checking network settings and domain membership

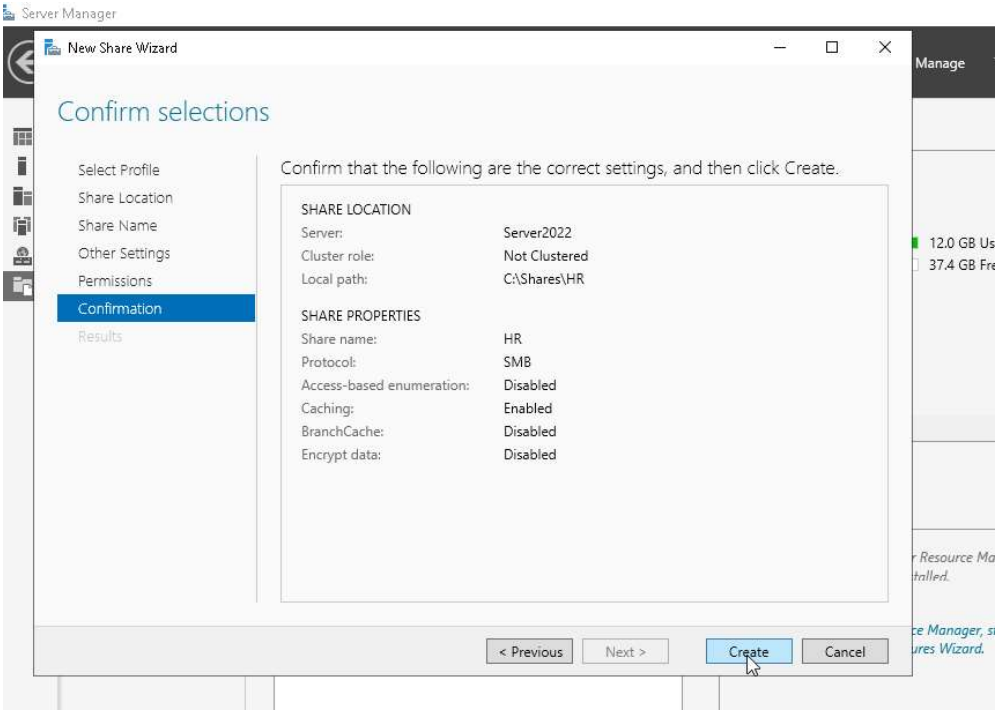
Security Groups, Mapped Drives, Personal Drives, Permission Management

In Part 7 we will focus on configuring Security Groups, Mapped Drives, Personal Drives, Permission Management.

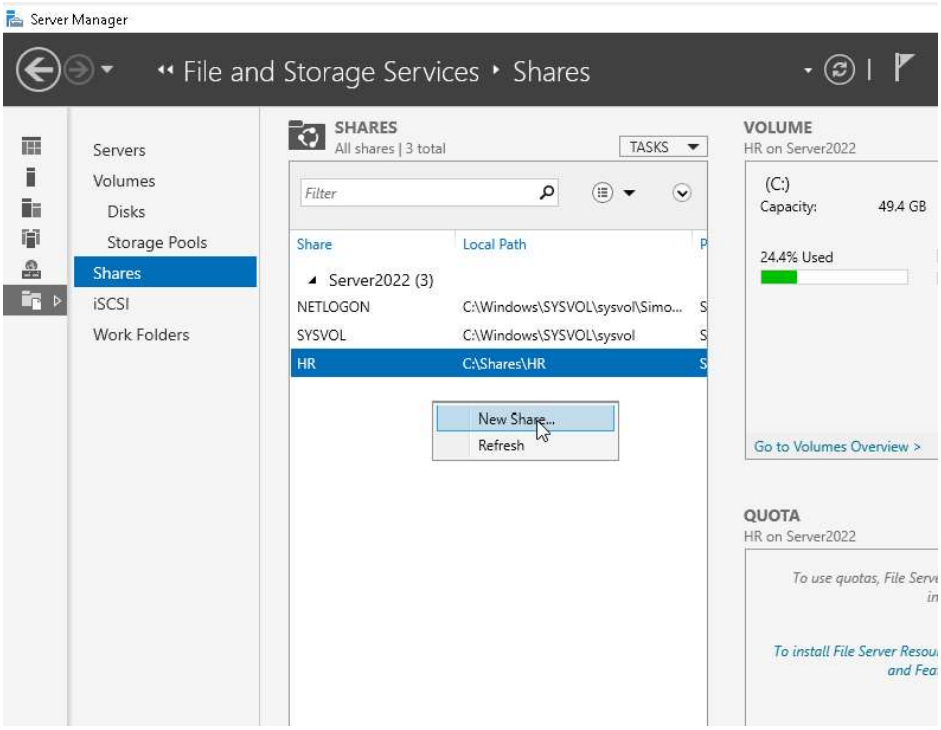
On Windows Server 2022 in the Server Manager go to “File and Storage Services” and right click to create a new Share. We are creating the Mapped and Personal Drives.

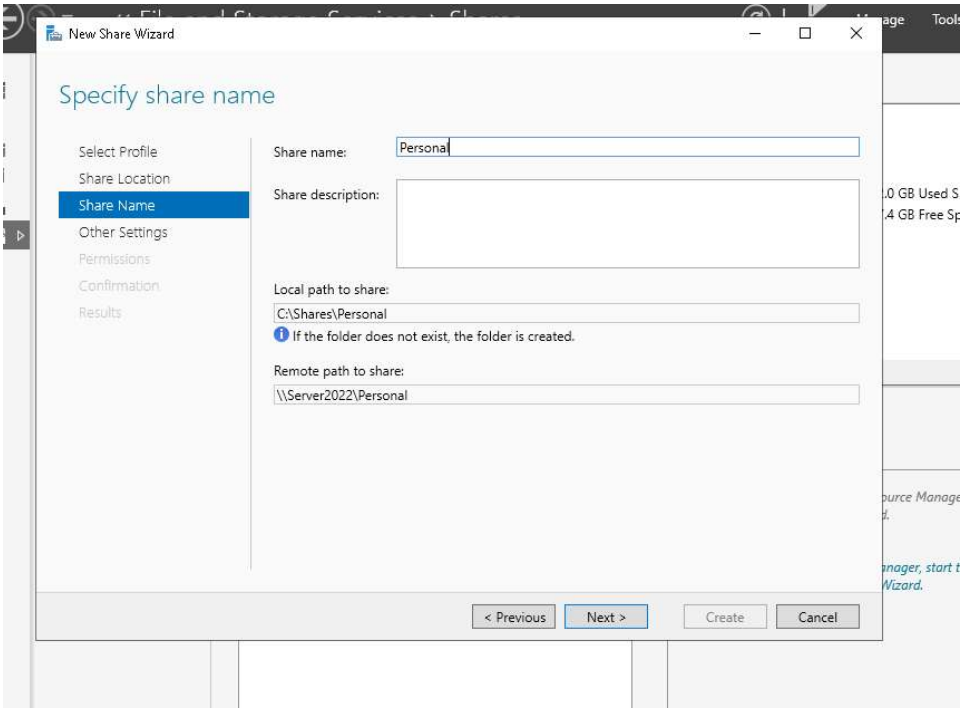


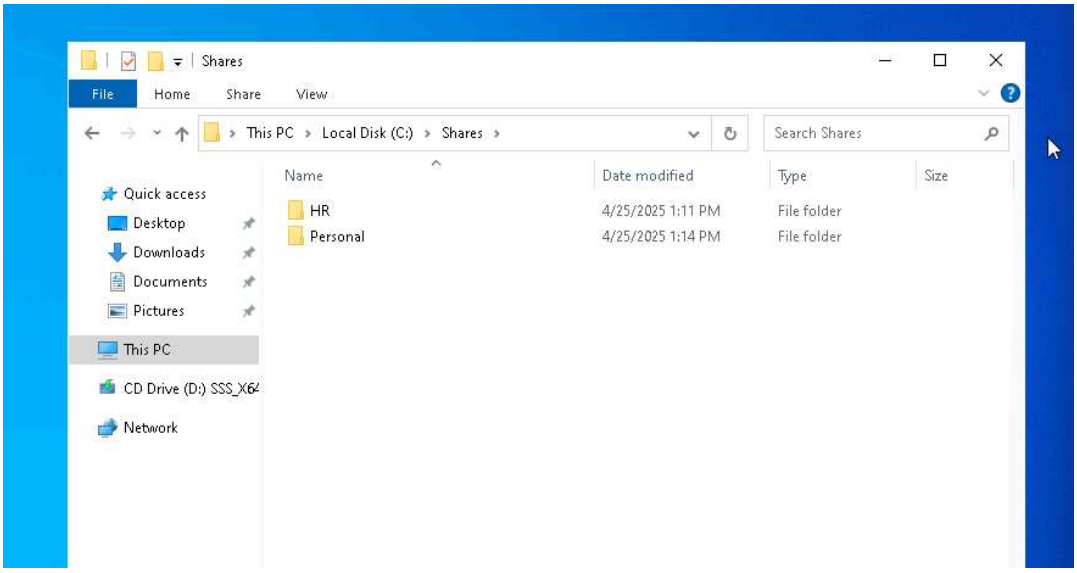




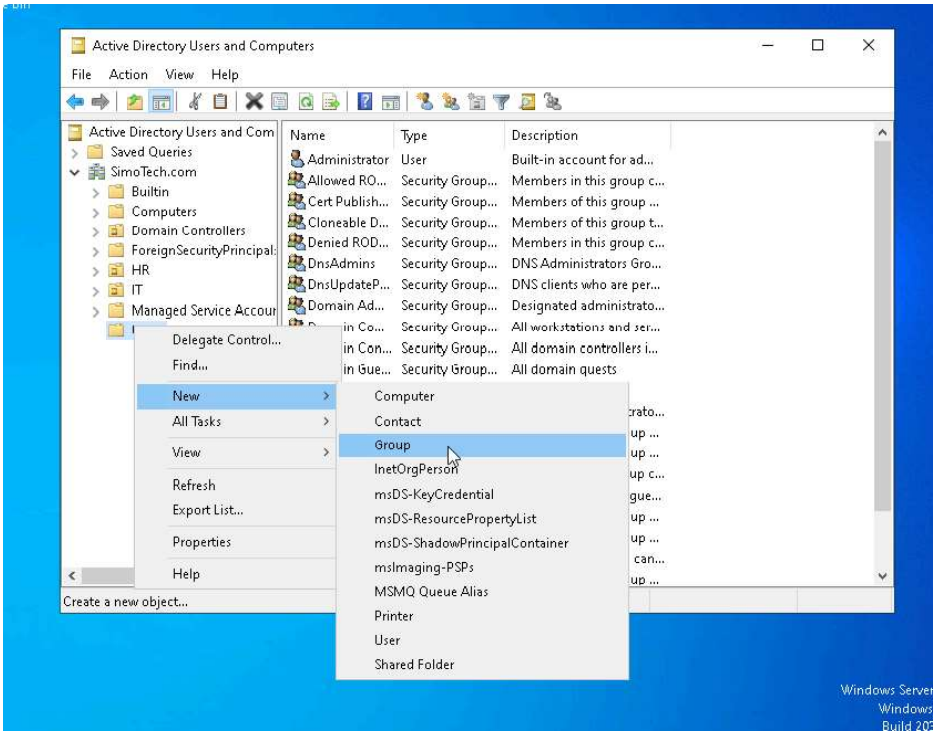
Do the same process but this time name the Share “Personal”.

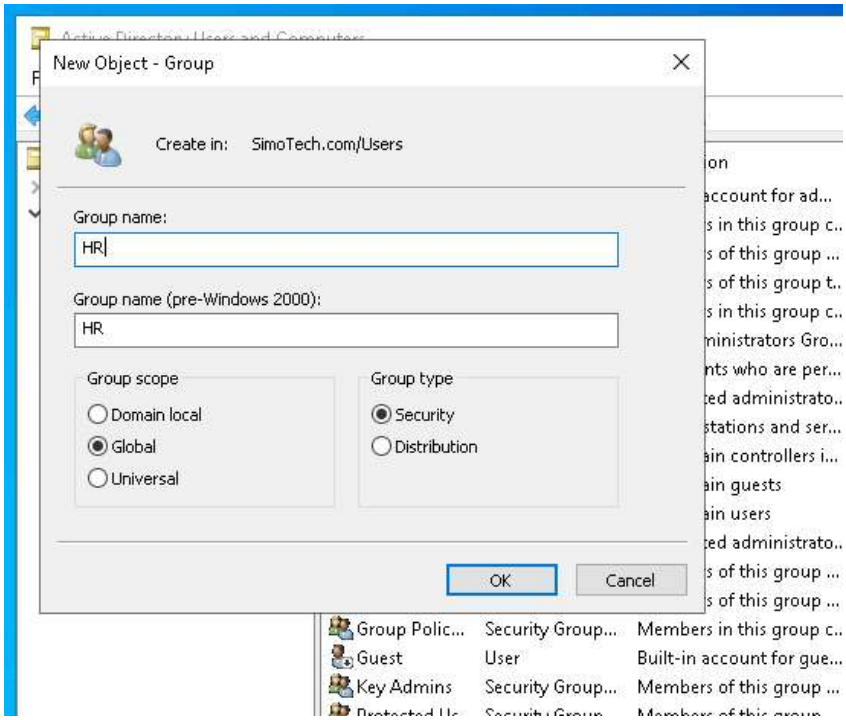

Server Manager
File and Storage Services ▸ Shares
Servers
Volumes
Disks
Storage Pools
Shares
iSCSI
Work Folders
SHARES
All shares | 3 total
TASKS
Filter
Share
Local Path
Server2022 (3)
NETLOGON
C:\Windows\SYSVOL\sysvol\Simo...
SYSVOL
C:\Windows\SYSVOL\sysvol
HR
C:\Shares\HR
New Share...
Refresh
VOLUME
HR on Server2022
(C:)
Capacity:
49.4 GB
24.4% Used
Go to Volumes Overview >
QUOTA
HR on Server2022

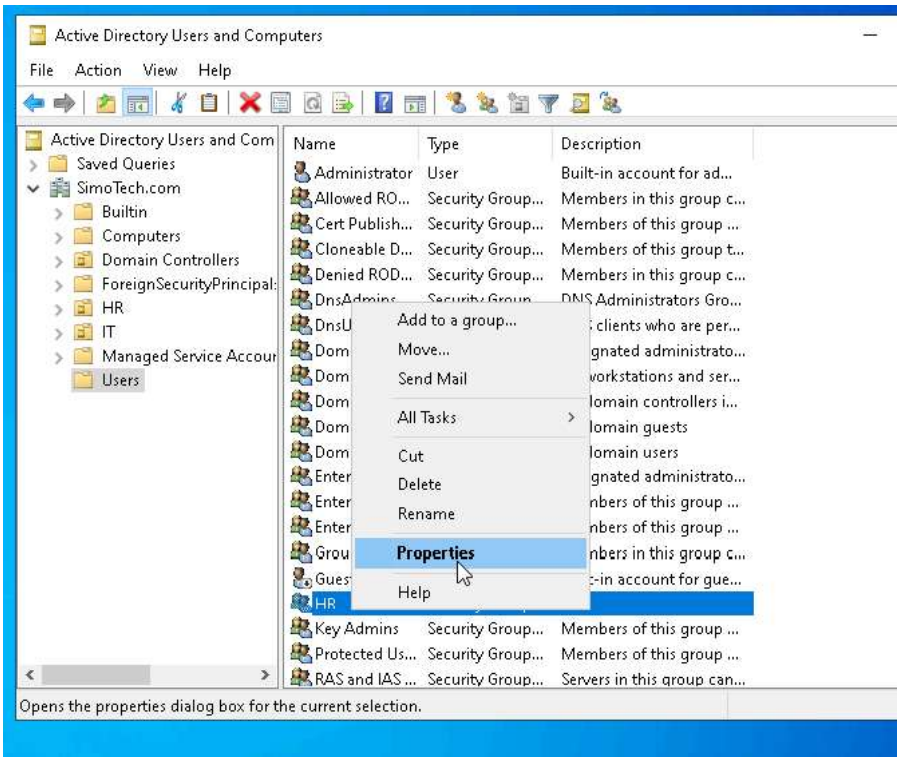

New Share Wizard
Specify share name
Select Profile
Share Location
Share Name
Other Settings
Permissions
Confirmation
Results
Share name:
Personal
Share description:
Local path to share:
C:\Shares\Personal
If the folder does not exist, the folder is created.
Remote path to share:
\\Server2022\Personal
< Previous
Next >
Create
Cancel

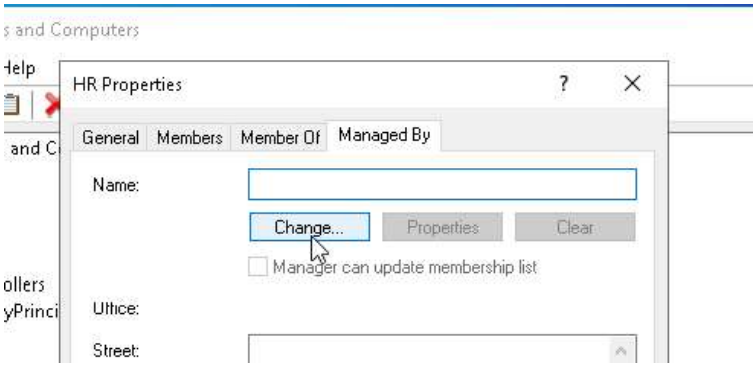


Now we will create a Security Group by going to Active Directory Users and Computers.

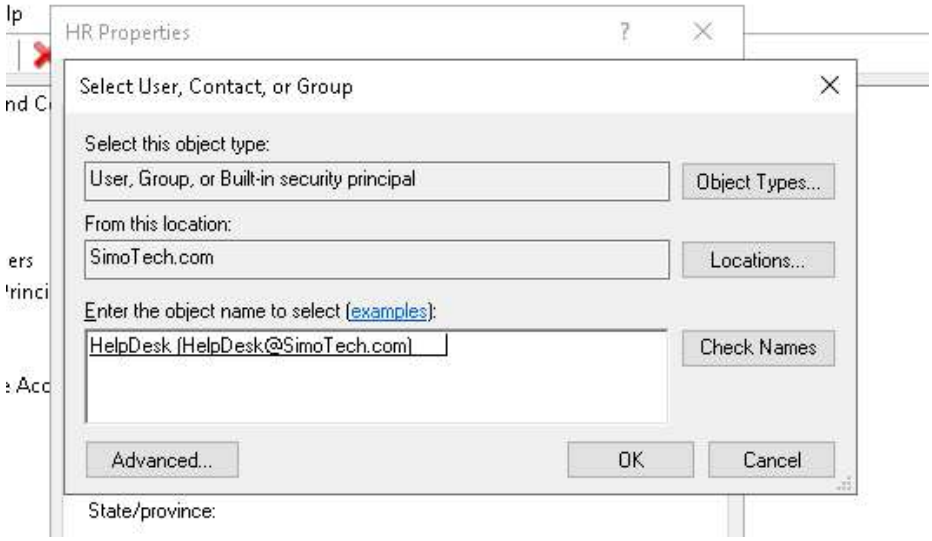



New Object - Group
Create in: SimoTech.com/Users
Group name:
HR
Group name (pre-Windows 2000):
HR
Group scope
Domain local
Global
Universal
Group type
Security
Distribution
OK
Cancel
Group Polic... Security Group... Members in this group c...
Guest User Built-in account for gue...
Key Admins Security Group... Members of this group ...

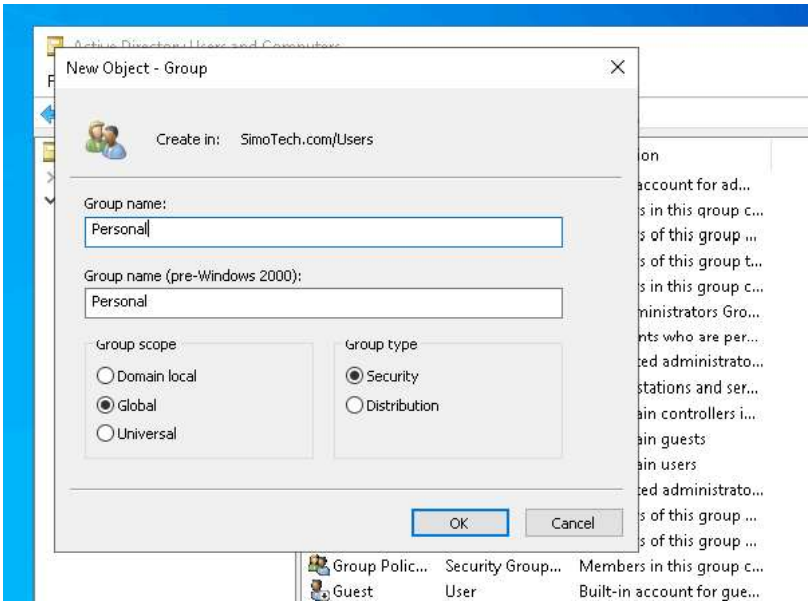

Active Directory Users and Computers
File Action View Help
Active Directory Users and Com
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal:
HR
IT
Managed Service Accour
Users
Name Type Description
Administrator User Built-in account for ad...
Allowed RO... Security Group... Members in this group c...
Cert Publish... Security Group... Members of this group ...
Cloneable D... Security Group... Members of this group t...
Denied ROD... Security Group... Members in this group c...
Add to a group...
Move...
Send Mail
All Tasks
Cut
Delete
Rename
Properties
Help
HR
Key Admins Security Group... Members of this group ...
Protected Us... Security Group... Members of this group ...
RAS and IAS ... Security Group... Servers in this group can...
Opens the properties dialog box for the current selection.

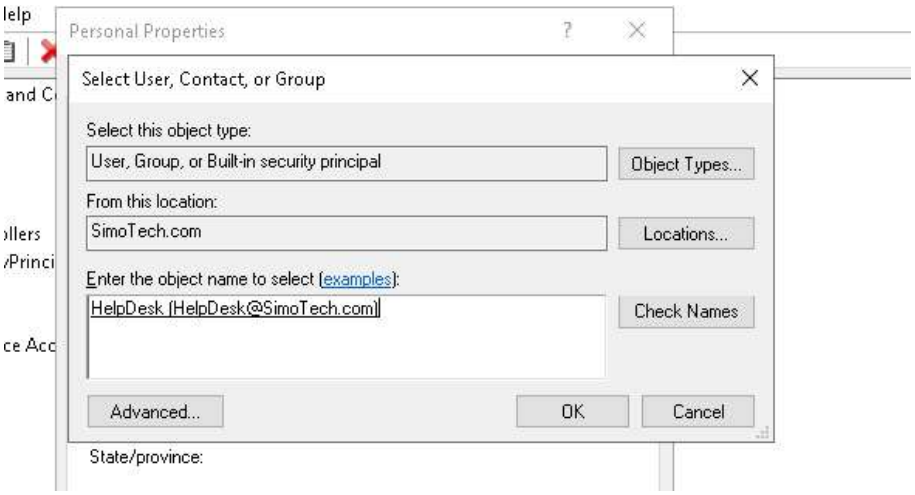


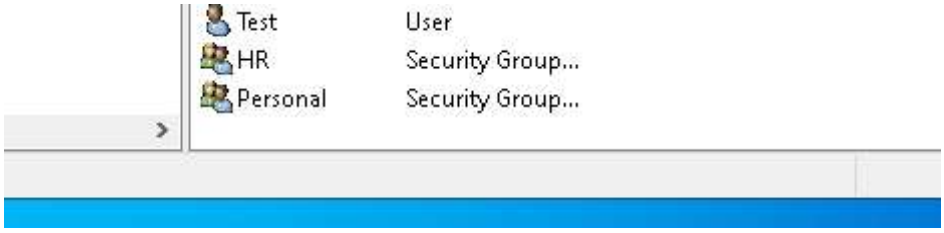
Go to “Advanced” and find the helpdesk account and then click on it.



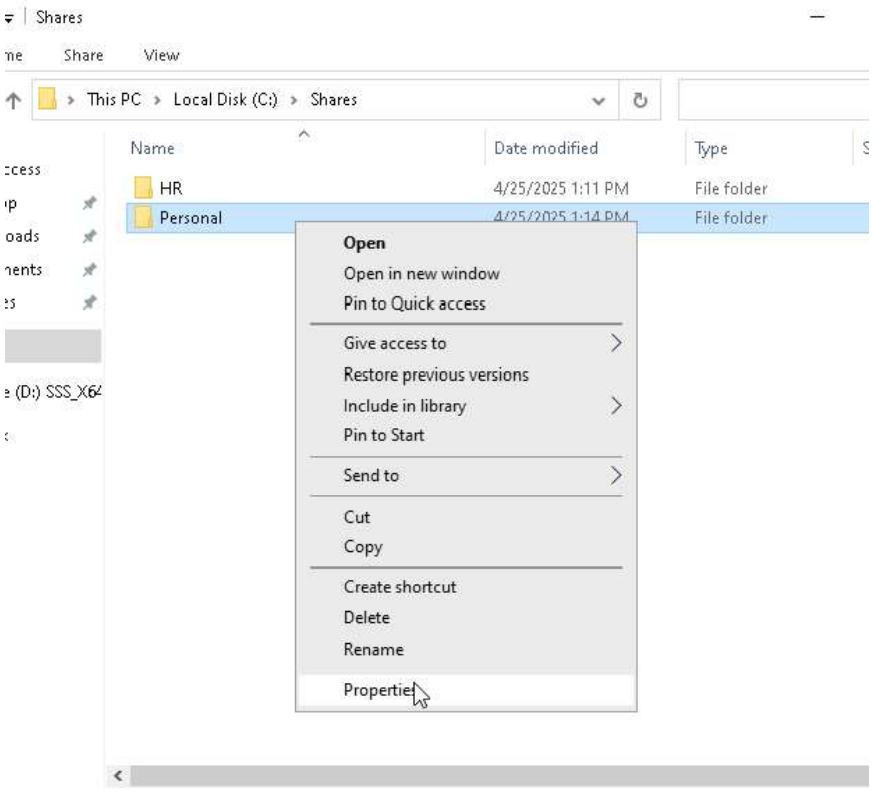
Do the same process but create a group called “Personal” run by the HelpDesk account.

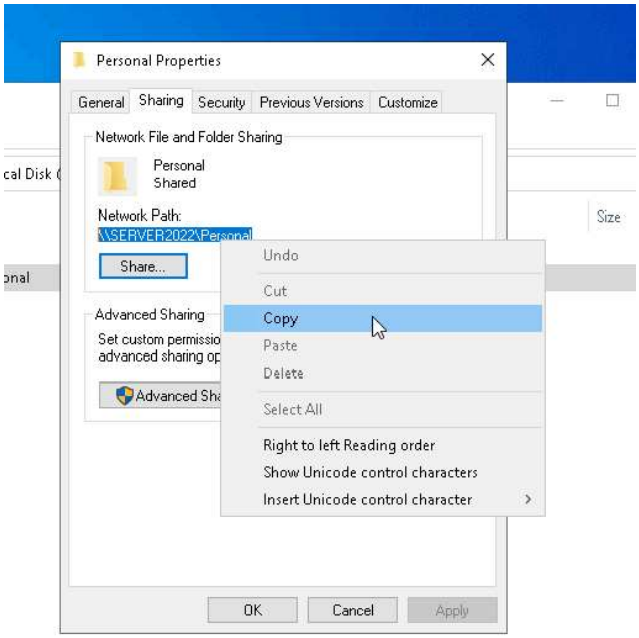


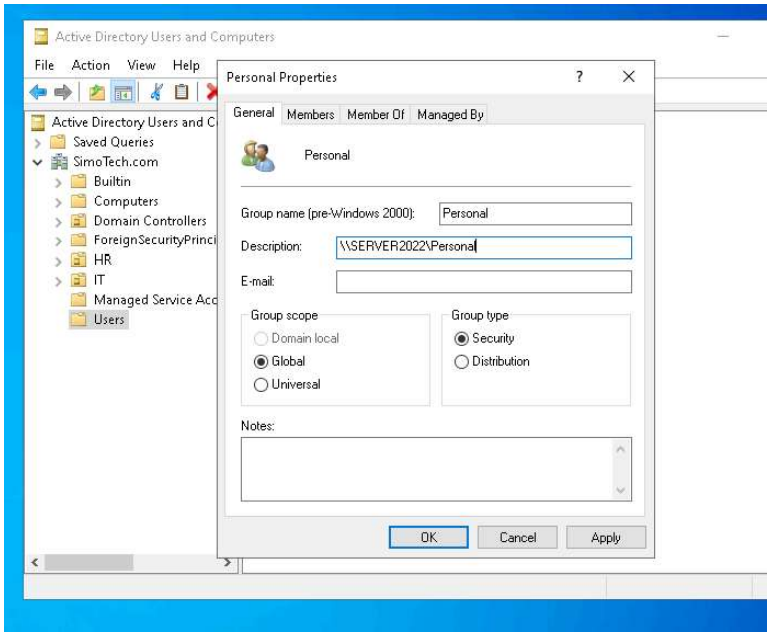




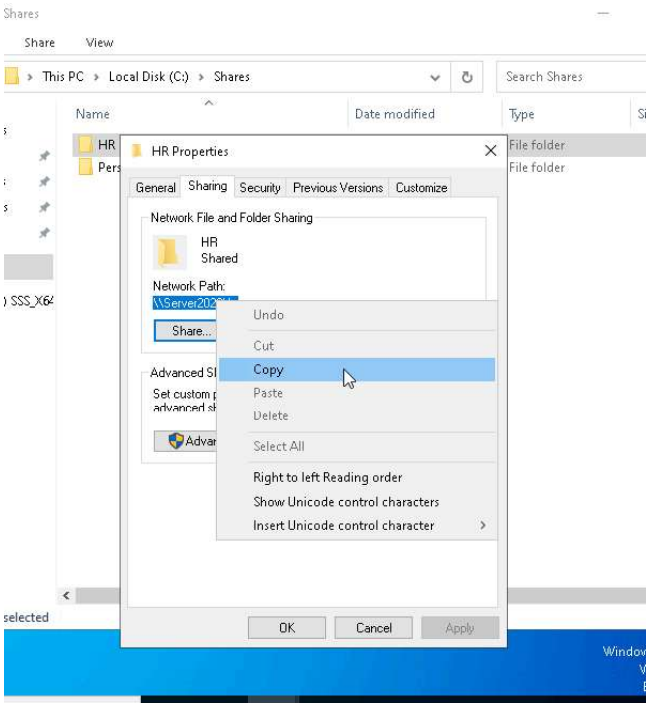
Go back to the “Shares” folder and copy the Network Path and paste it into the Description of the Personal Security Group in Active Directory Users and Computers.

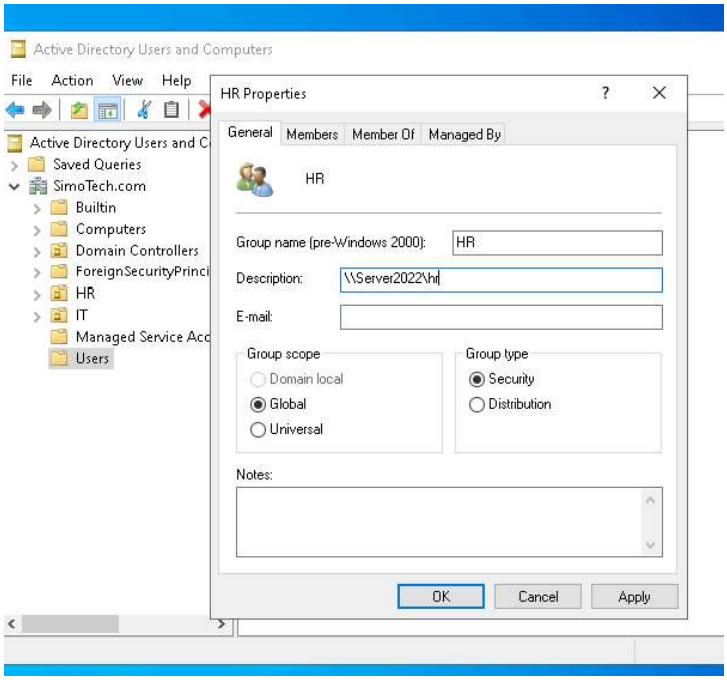

Shares
Share
View
This PC
Local Disk (C:)
Shares
Name
Date modified
Type
HR
4/25/2025 1:11 PM
File folder
Personal
File folder
Open
Open in new window
Pin to Quick access
Give access to
Restore previous versions
Include in library
Pin to Start
Send to
Cut
Copy
Create shortcut
Delete
Rename
Properties

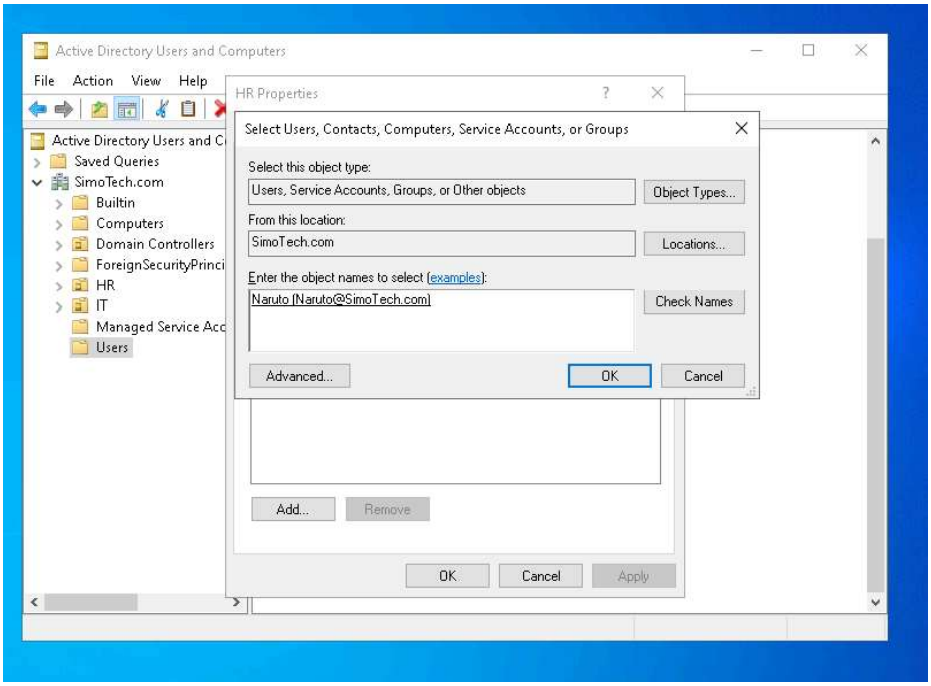

Personal Properties
General
Sharing
Security
Previous Versions
Customize
Network File and Folder Sharing
Personal
Shared
Network Path:
\\SERVER2022\Personal
Share...
Advanced Sharing
Undo
Cut
Copy
Paste
Delete
Select All
Right to left Reading order
Show Unicode control characters
Insert Unicode control character
OK
Cancel
Apply

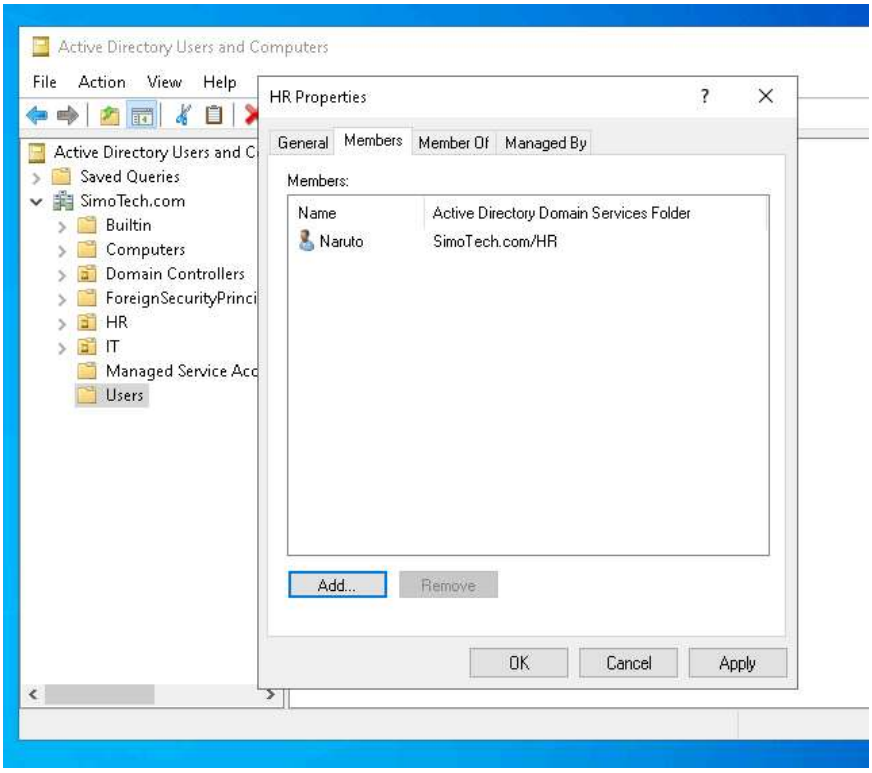


Repeat the same process for the HR Security Group and then go to HR “Properties” and go to “Members” then add the local user “Naruto” to the group.

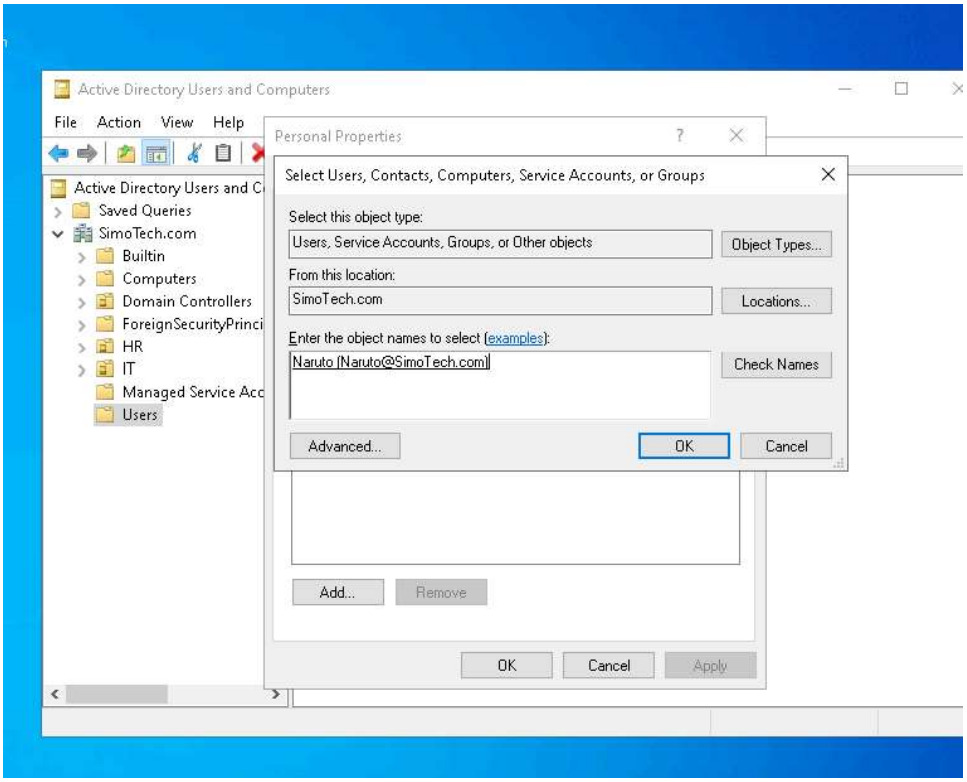


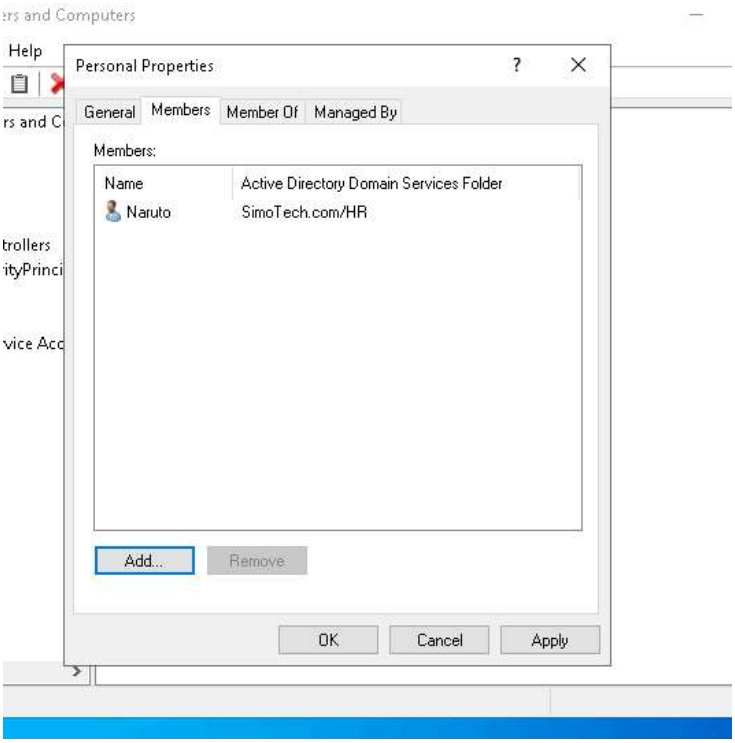

Active Directory Users and Computers
File Action View Help
Active Directory Users and C
Saved Queries
SimoTech.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrinci
HR
IT
Managed Service Acc
Users
HR Properties
General Members Member Of Managed By
HR
Group name (pre-Windows 2000): HR
Description: \\Server2022\hr
E-mail:
Group scope
Domain local
Global
Universal
Group type
Security
Distribution
Notes:
OK Cancel Apply


Active Directory Users and Computers
File Action View Help
HR Properties
Select Users, Contacts, Computers, Service Accounts, or Groups
Select this object type:
Users, Service Accounts, Groups, or Other objects
Object Types...
From this location:
SimoTech.com
Locations...
Enter the object names to select (examples):
Naruto (Naruto@SimoTech.com)
Check Names
Advanced...
OK Cancel
Add... Remove
OK Cancel Apply

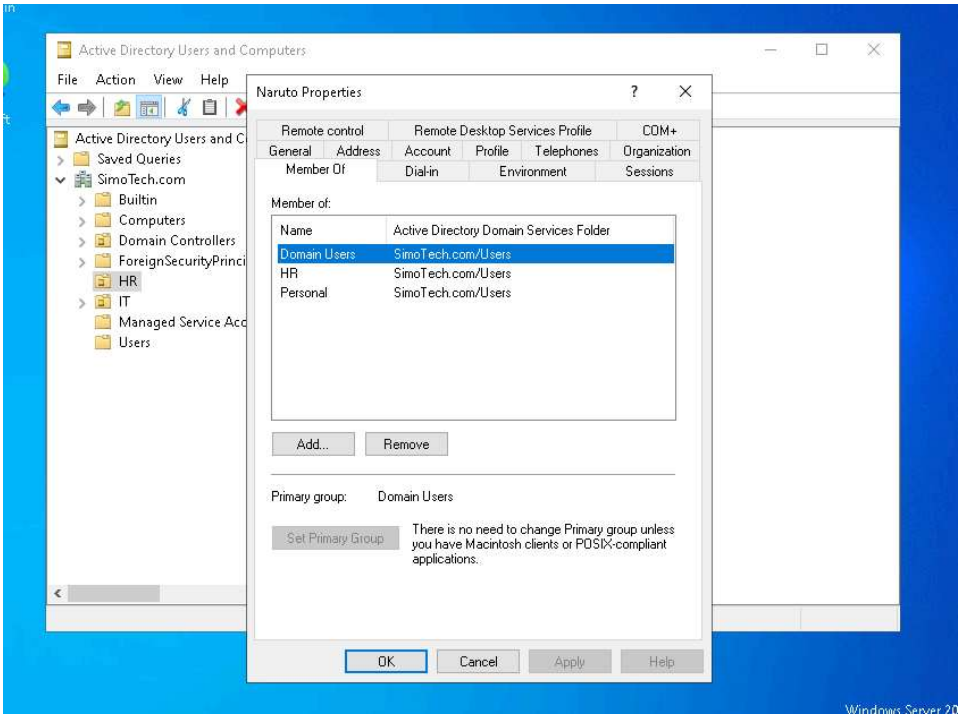


Add the local user Naruto to the Personal Security Group as well.

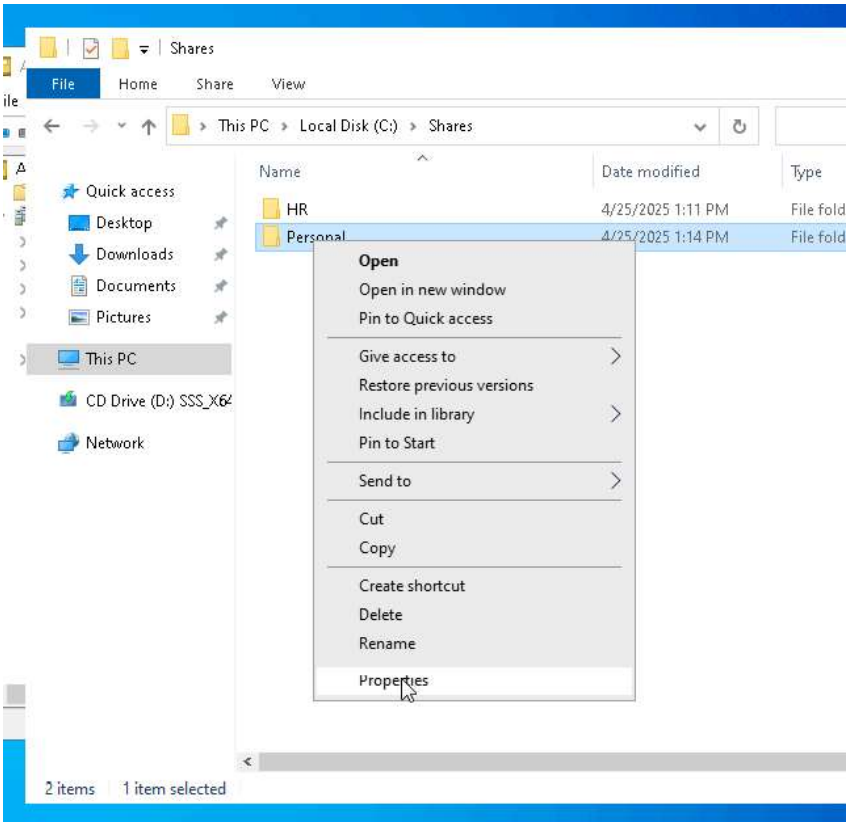


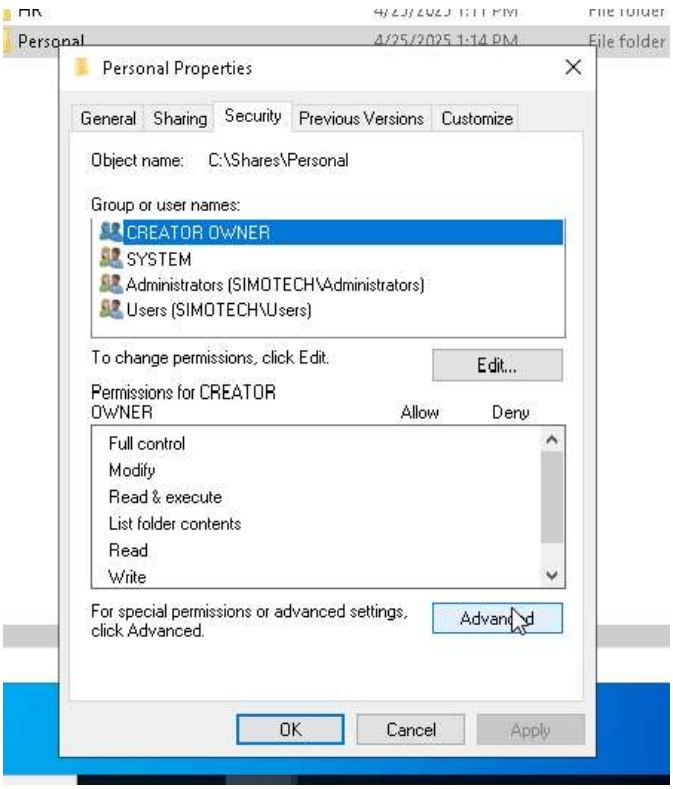


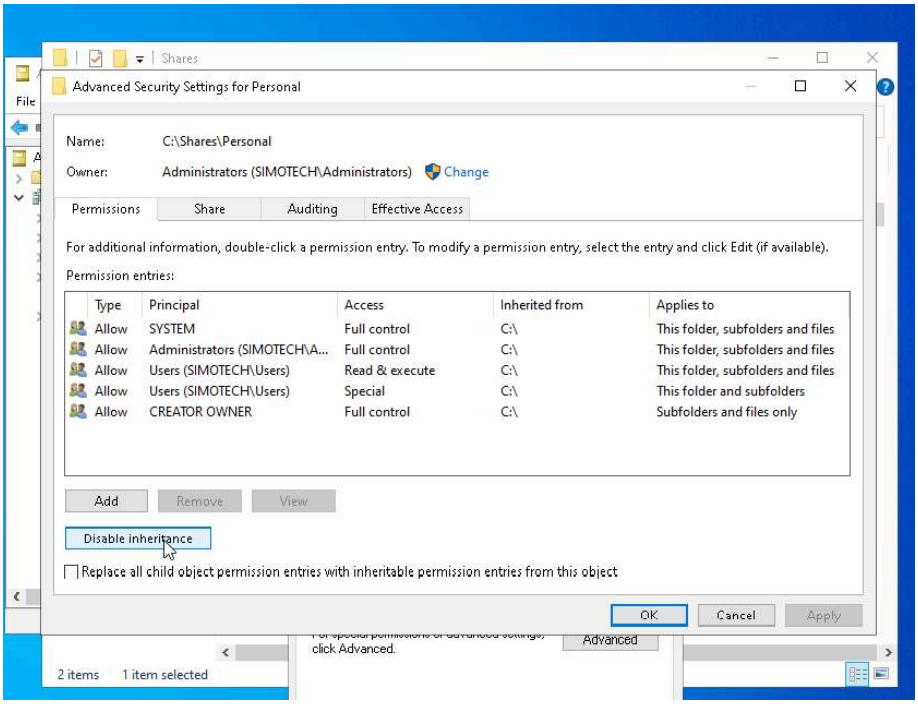
Then we can verify that Naruto was added successfully to the Security Groups.



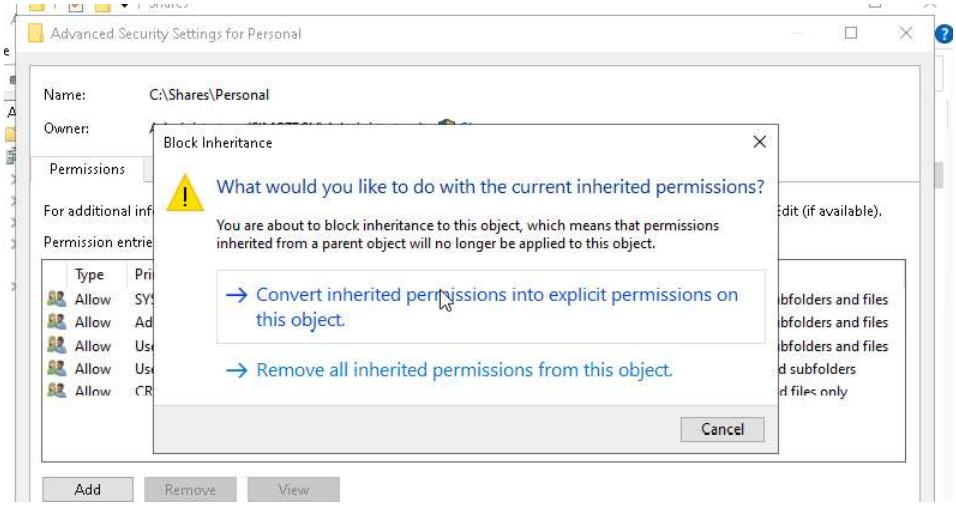
Now we will set the correct permissions. GO to the Shares folder and right click the “Personal” folder and click “Properties”. Then follow the steps below.



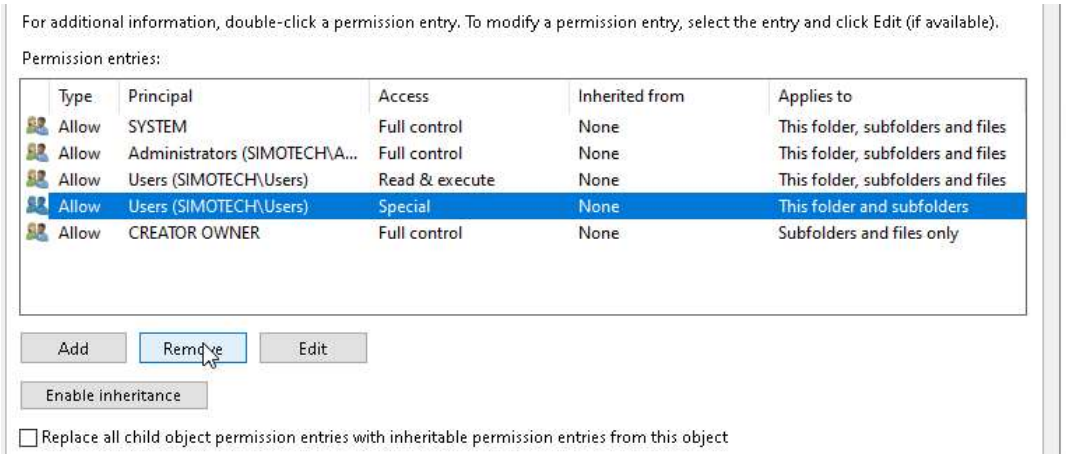


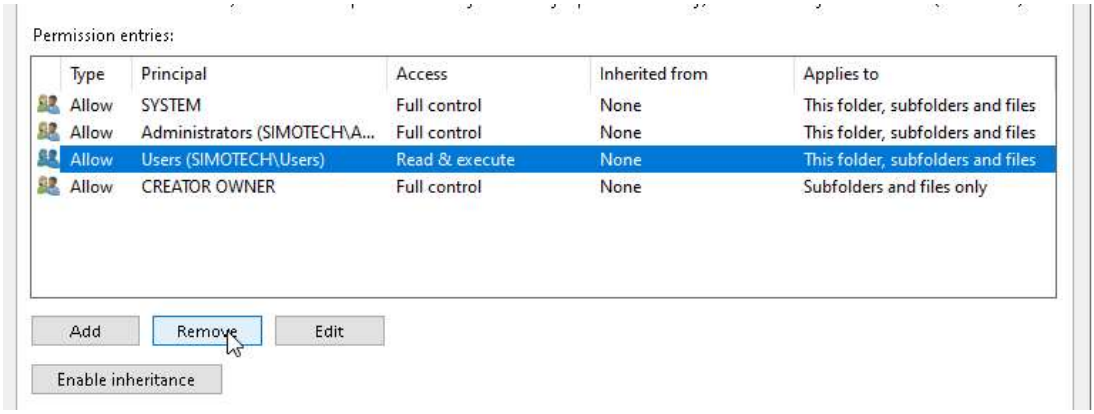


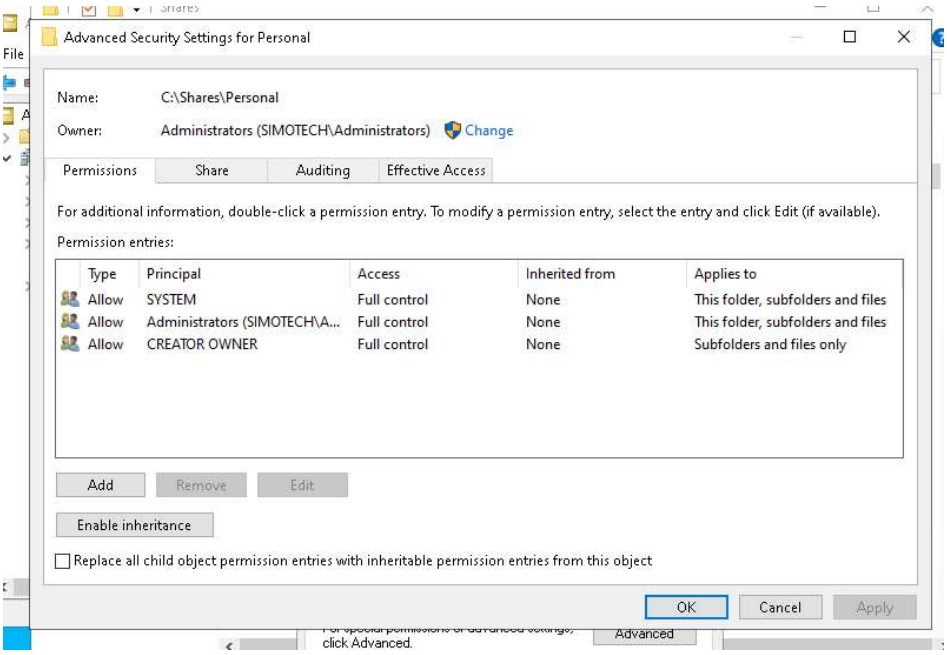
Select the first option “Convert inherited permissions…”.



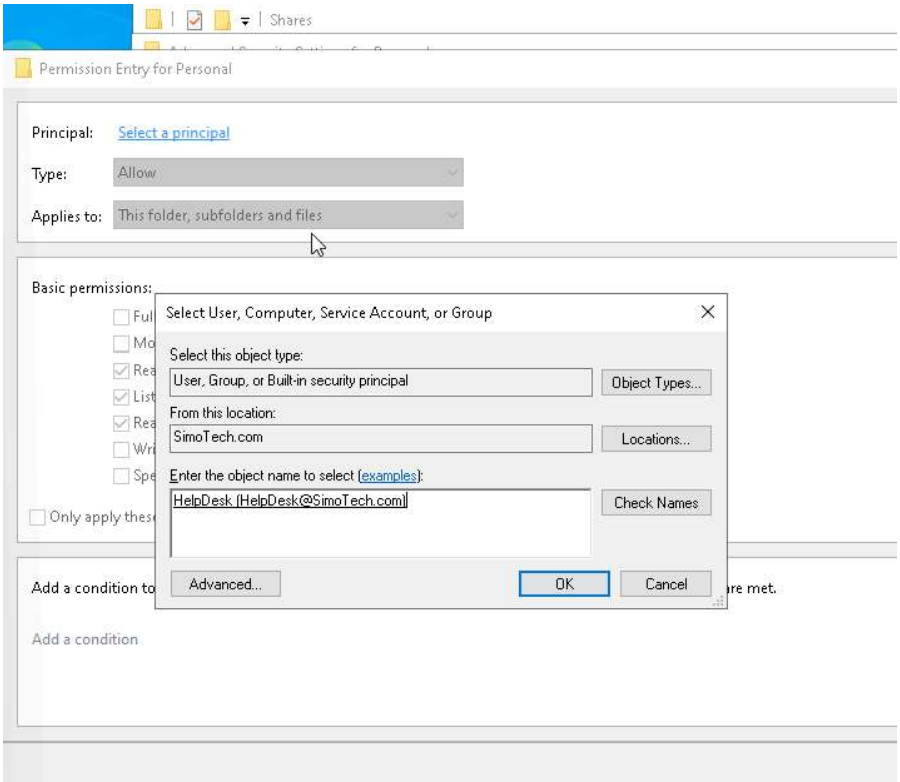
Now remove the “Users”.

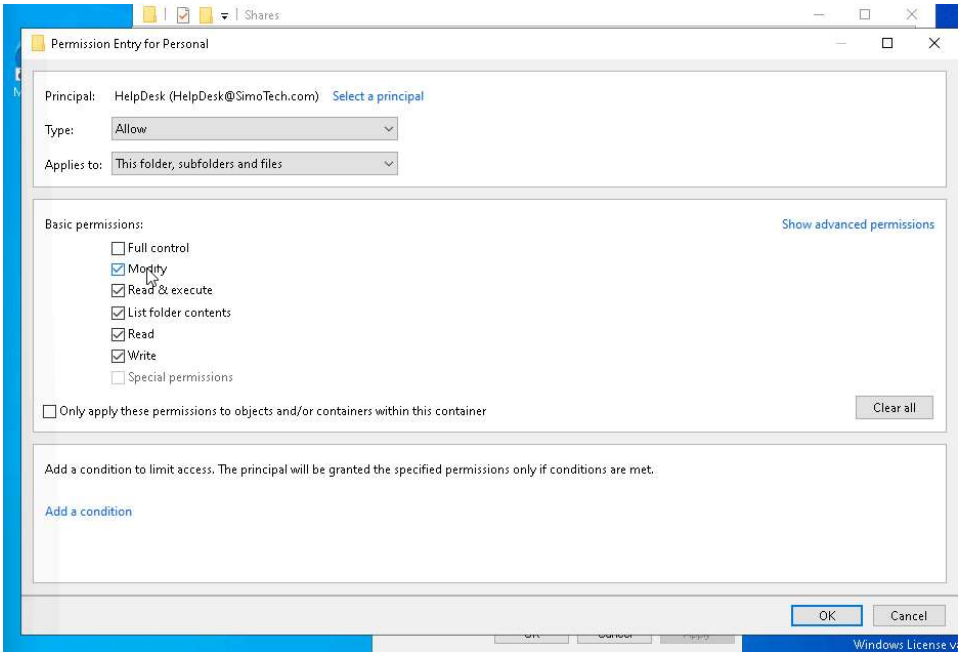




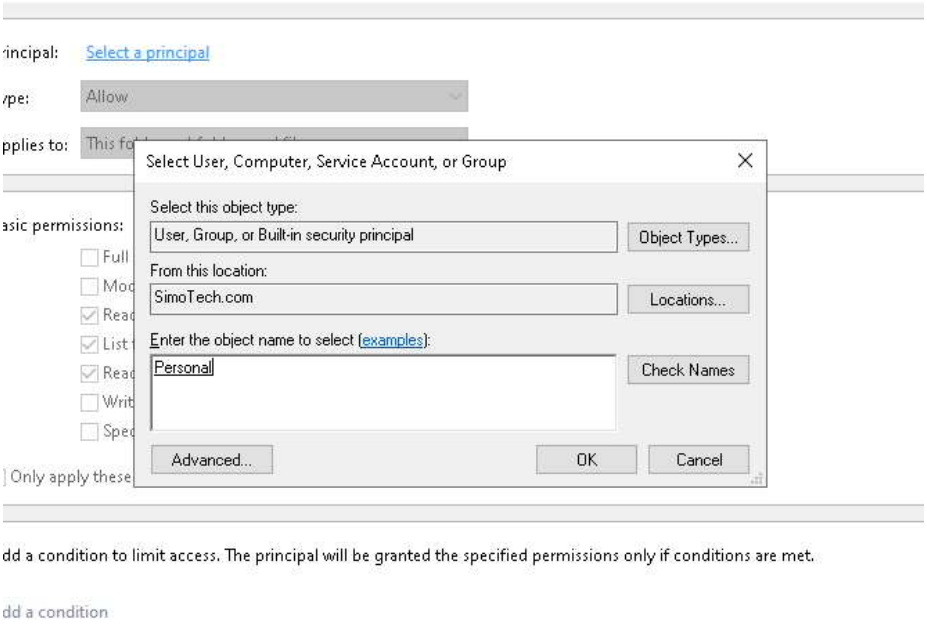


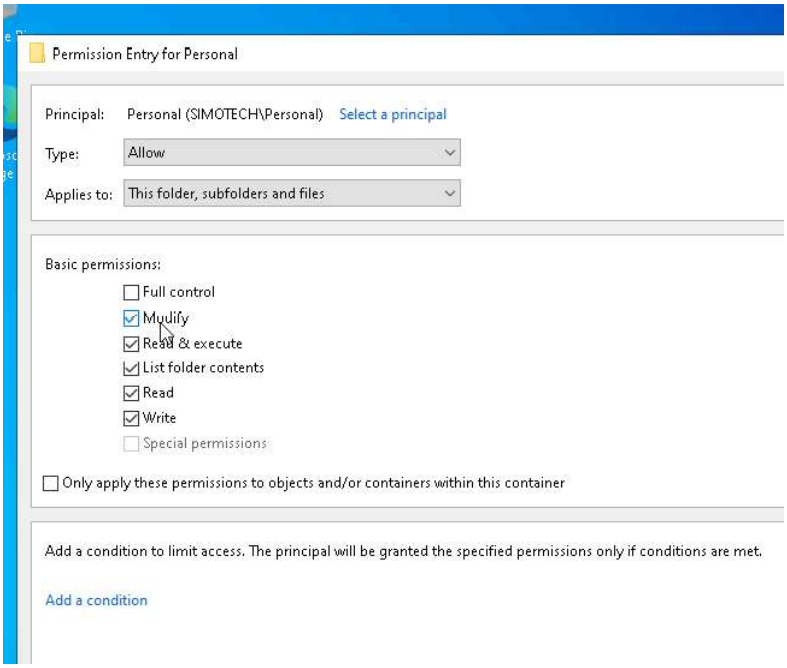
Now add HelpDesk as a “Principal” and give it Modify permissions.





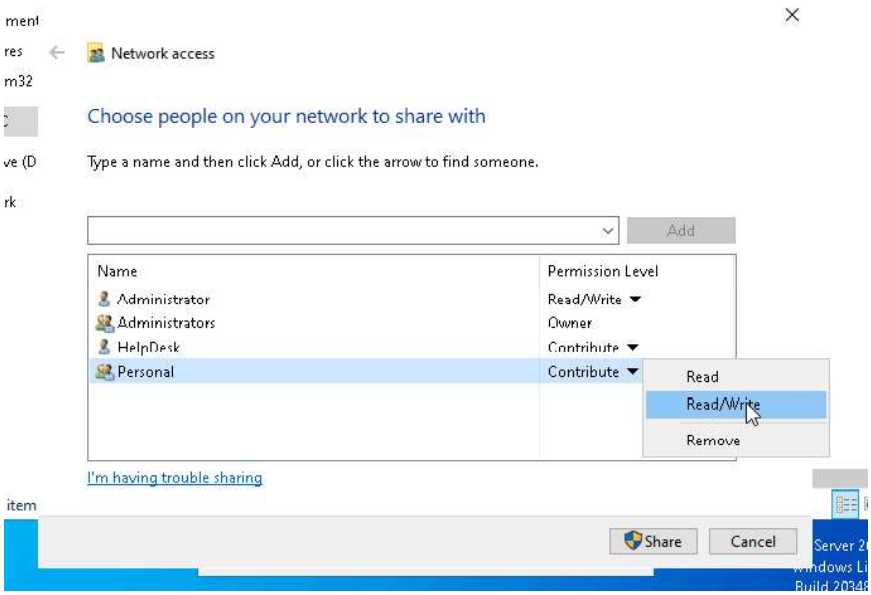
Do the same process for the group “Personal”.



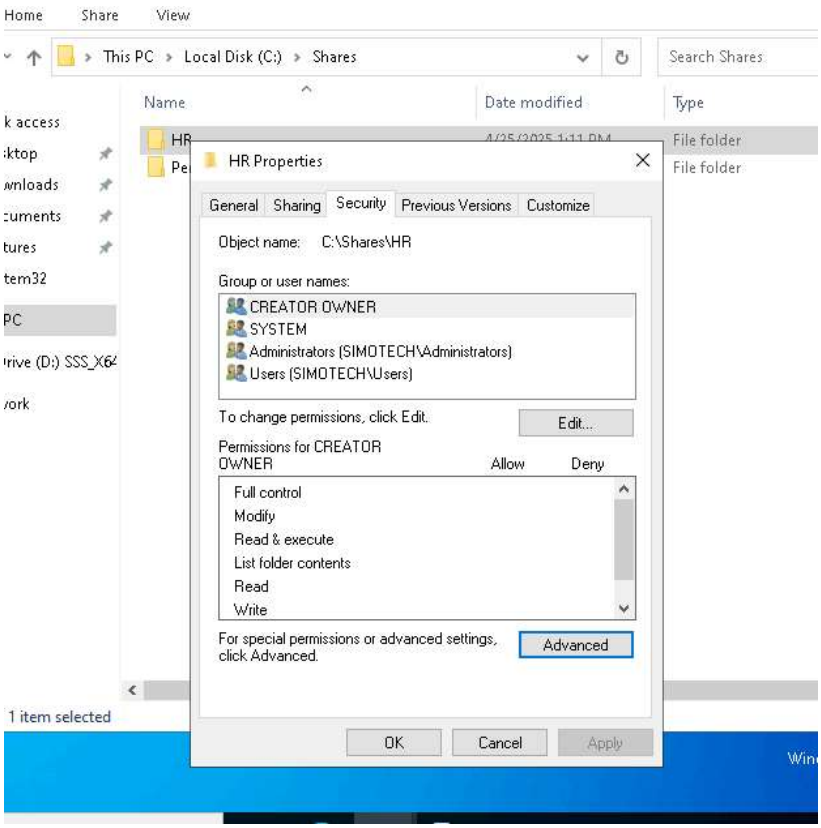


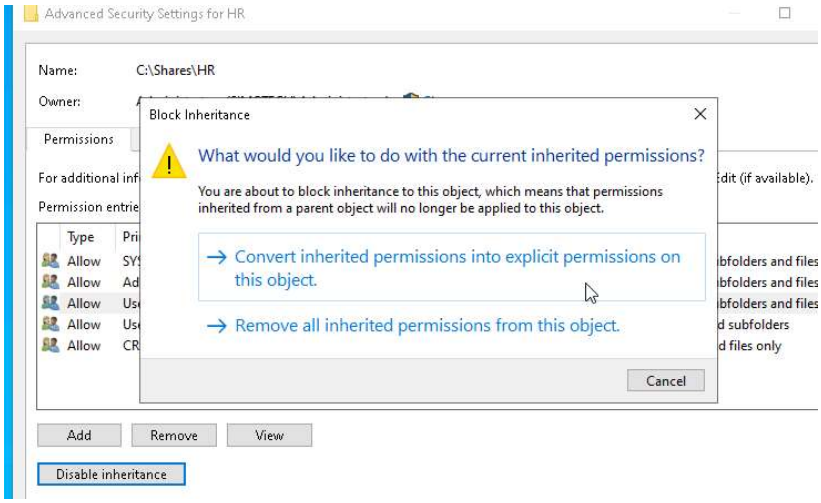
Allow	HelpDesk (HelpDesk@SimoTe...	Modify	None	This folder, subfolders and files
Allow	Personal (SIMOTECH\Personal)	Modify	None	This folder, subfolders and files

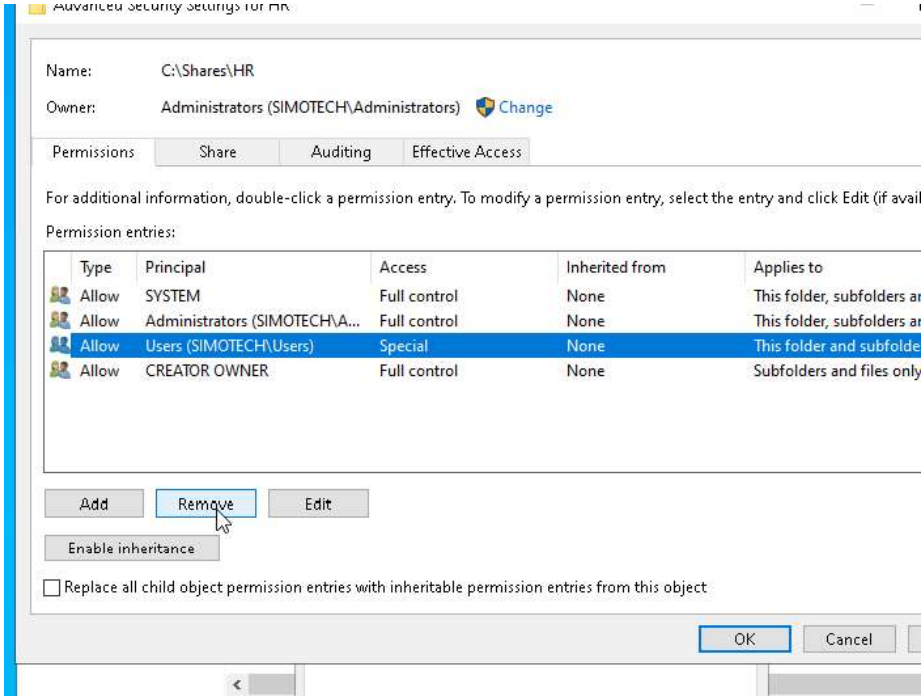
Go to the “Sharing” tab in Personal Properties and change Personal’s Permission Level to Read/Write. Click “Share”.

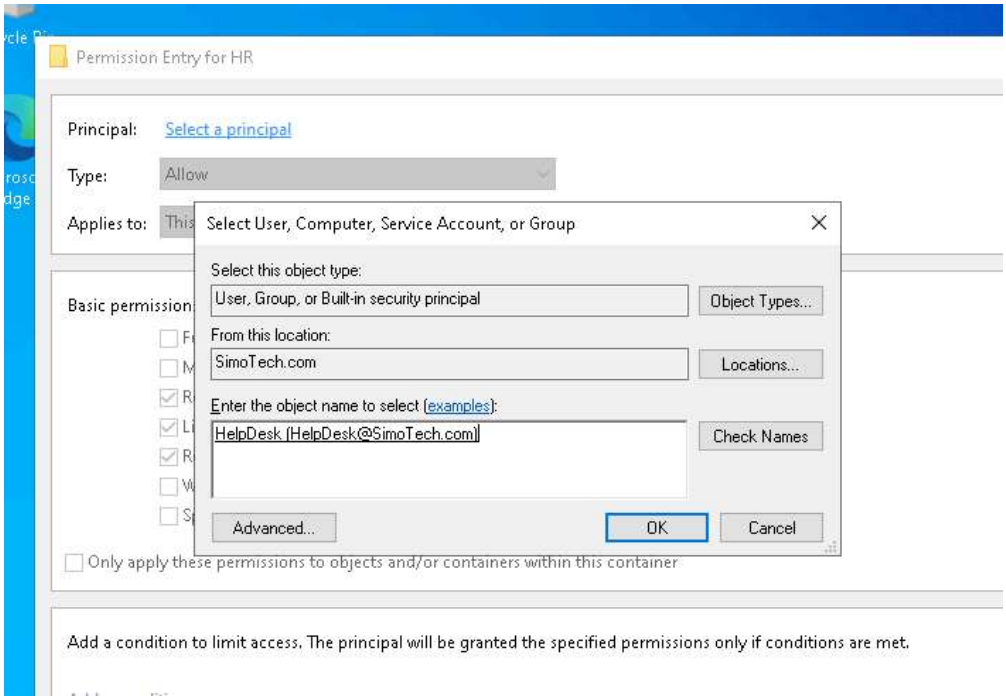


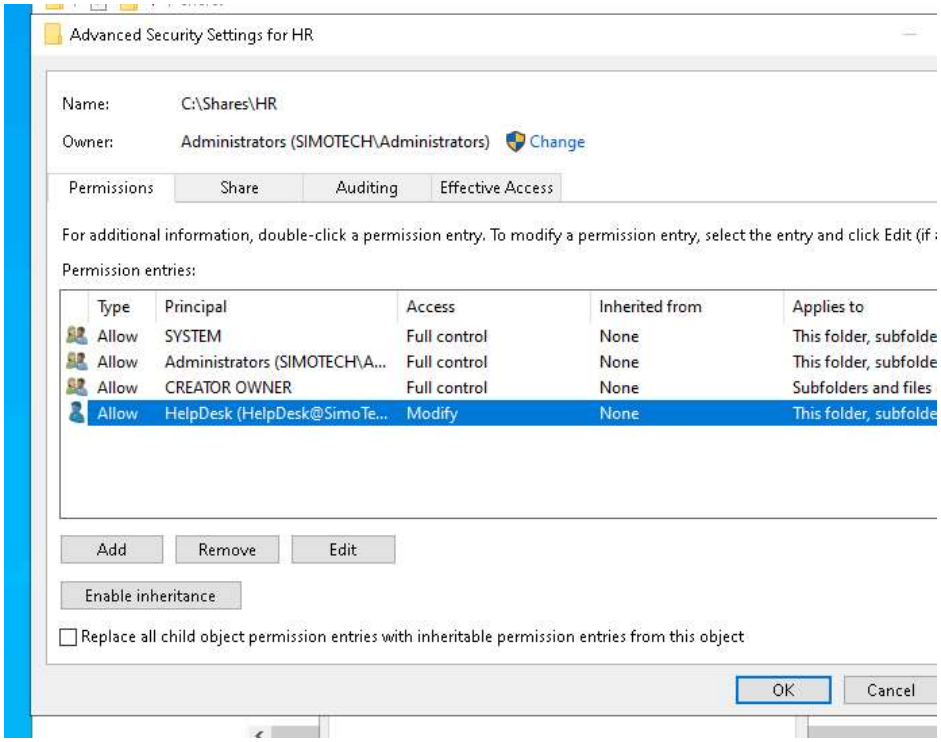
Do the same process with the HR folder.

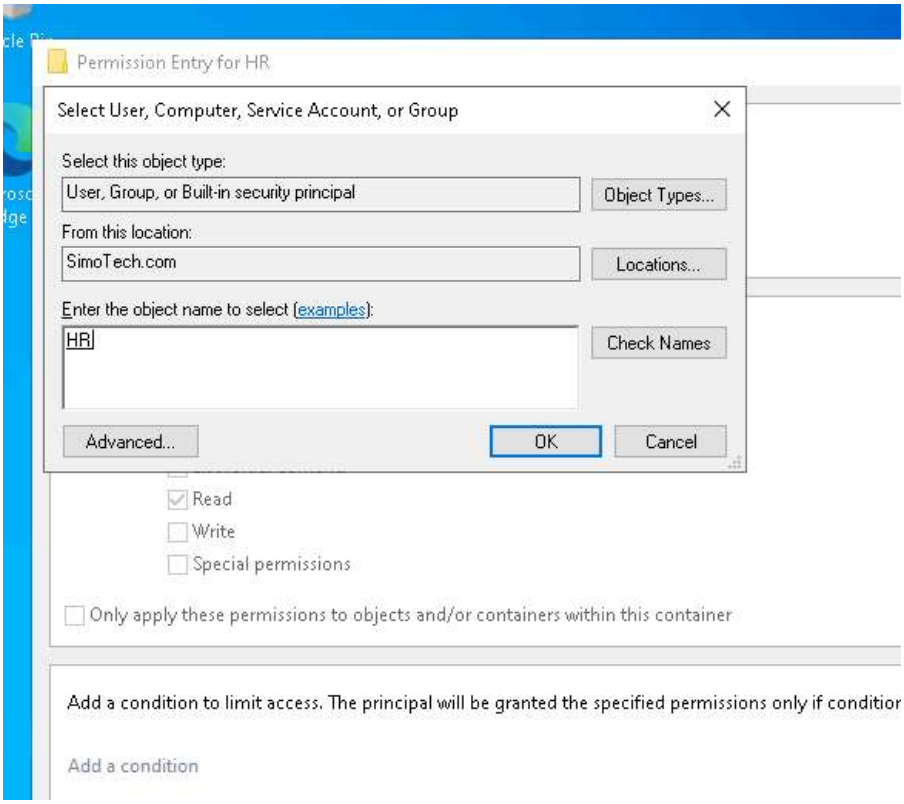


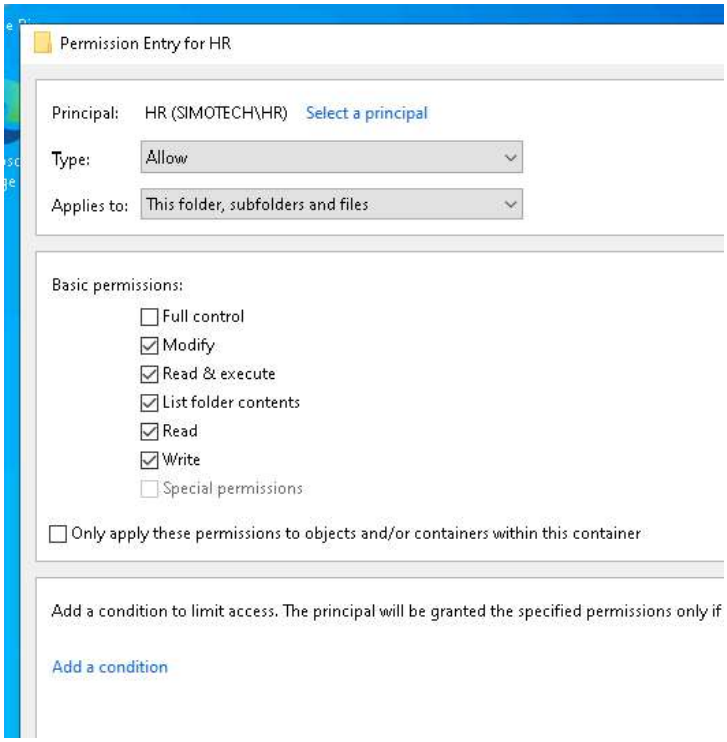


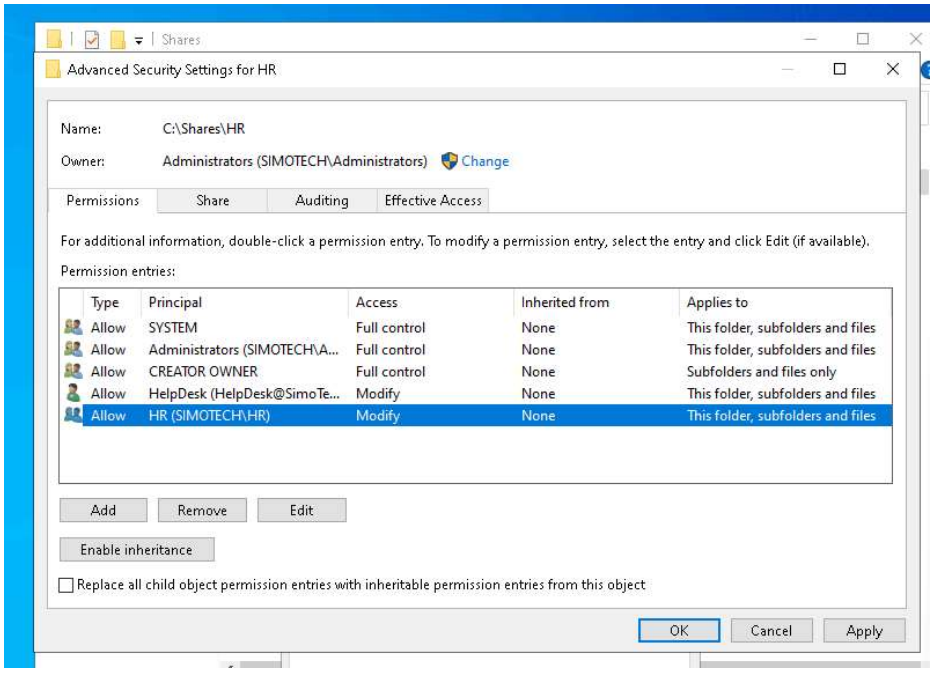

Advanced Security Settings for HR
Name: C:\Shares\HR
Owner: Administrators (SIMOTECH\Administrators) Change
Permissions Share Auditing Effective Access
For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if avail
Permission entries:
Type Principal Access Inherited from Applies to
Allow SYSTEM Full control None This folder, subfolders ar
Allow Administrators (SIMOTECH\A... Full control None This folder, subfolders ar
Allow Users (SIMOTECH\Users) Special None This folder and subfolde
Allow CREATOR OWNER Full control None Subfolders and files only
Add Remove Edit
Enable inheritance
Replace all child object permission entries with inheritable permission entries from this object
OK Cancel


Permission Entry for HR
Principal: Select a principal
Type: Allow
Applies to:
Basic permission
Select User, Computer, Service Account, or Group
Select this object type:
User, Group, or Built-in security principal
Object Types...
From this location:
SimoTech.com
Locations...
Enter the object name to select (examples):
HelpDesk (HelpDesk@SimoTech.com)
Check Names
Advanced...
OK
Cancel
Only apply these permissions to objects and/or containers within this container
Add a condition to limit access. The principal will be granted the specified permissions only if conditions are met.

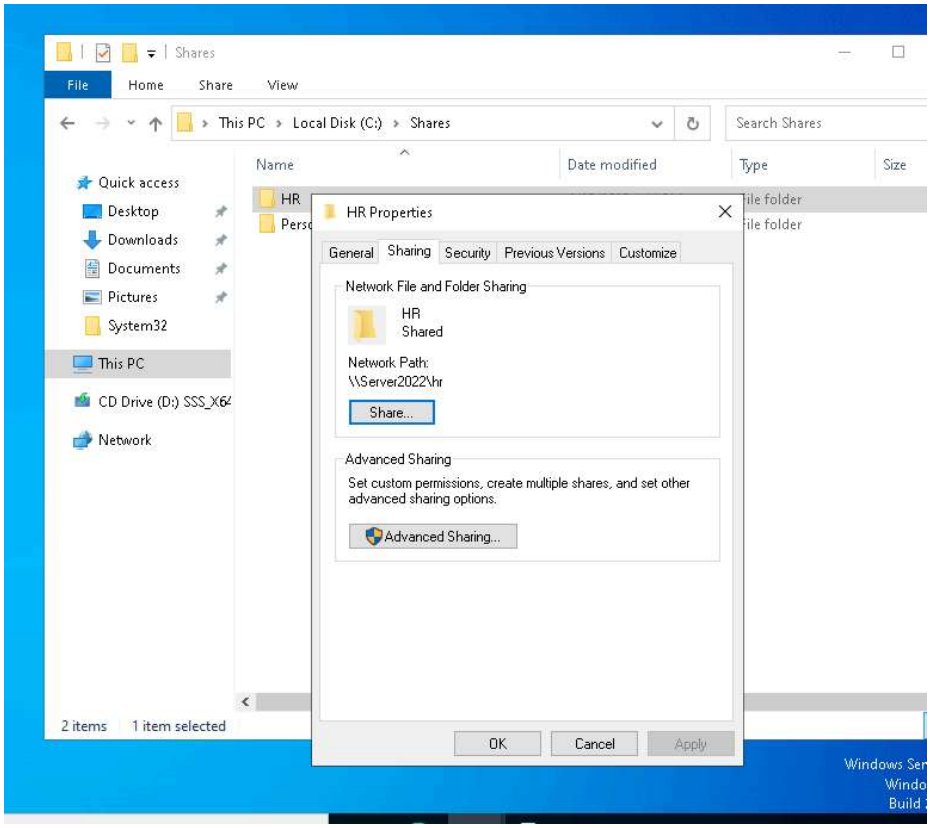

Advanced Security Settings for HR
Name: C:\Shares\HR
Owner: Administrators (SIMOTECH\Administrators) Change
Permissions Share Auditing Effective Access
For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if
Permission entries:
Type Principal Access Inherited from Applies to
Allow SYSTEM Full control None This folder, subfolde
Allow Administrators (SIMOTECH\A... Full control None This folder, subfolde
Allow CREATOR OWNER Full control None Subfolders and files
Allow HelpDesk (HelpDesk@SimoTe... Modify None This folder, subfolde
Add Remove Edit
Enable inheritance
Replace all child object permission entries with inheritable permission entries from this object
OK Cancel

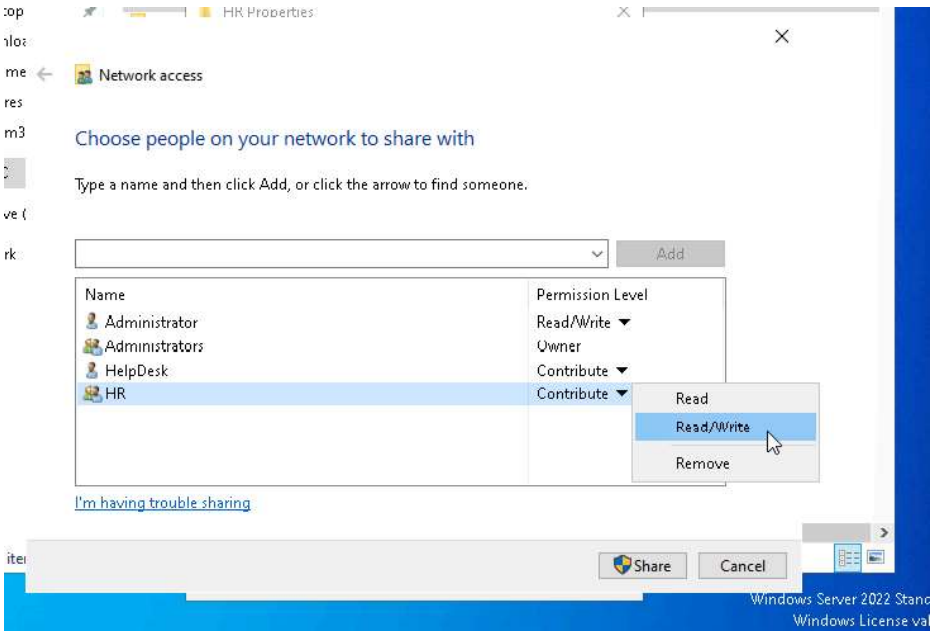

Permission Entry for HR
Select User, Computer, Service Account, or Group
Select this object type:
User, Group, or Built-in security principal
Object Types...
From this location:
SimoTech.com
Locations...
Enter the object name to select (examples):
HR
Check Names
Advanced...
OK
Cancel
Read
Write
Special permissions
Only apply these permissions to objects and/or containers within this container
Add a condition to limit access. The principal will be granted the specified permissions only if condition
Add a condition



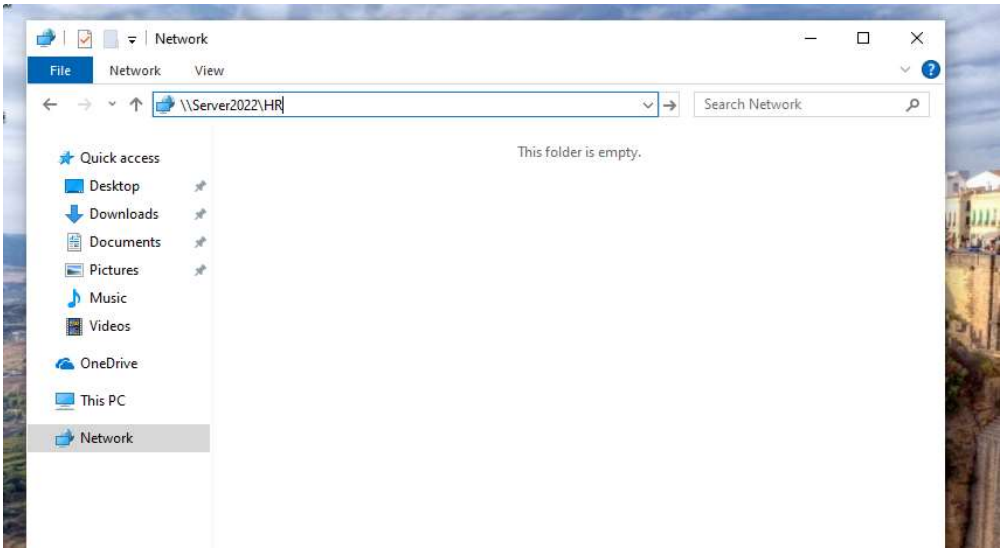


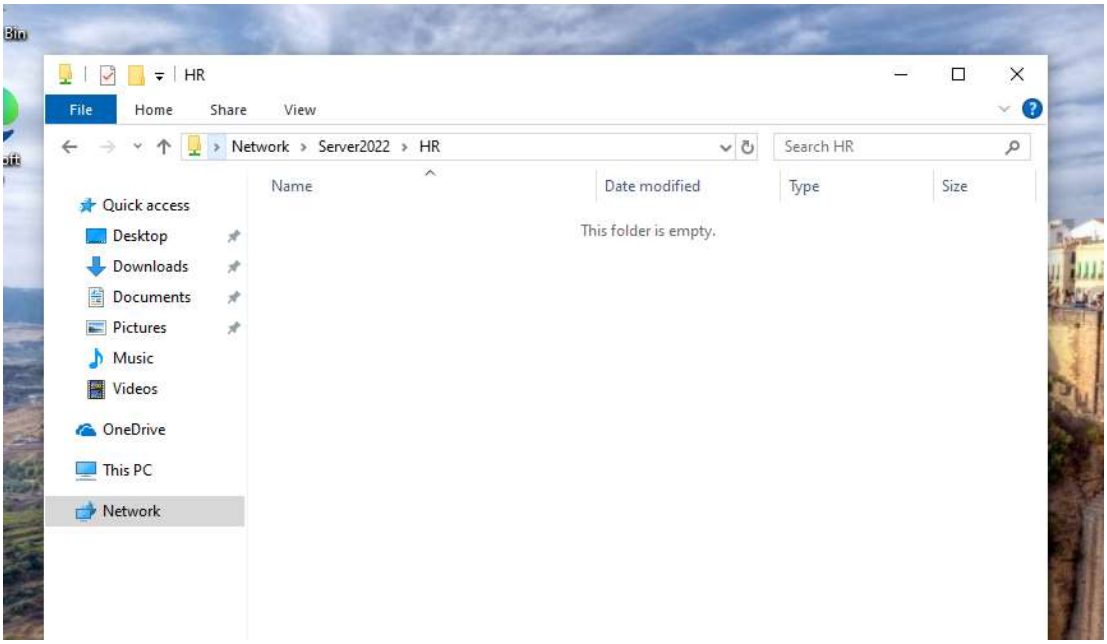
Give the HR group “read/write” properties in the sharing properties.

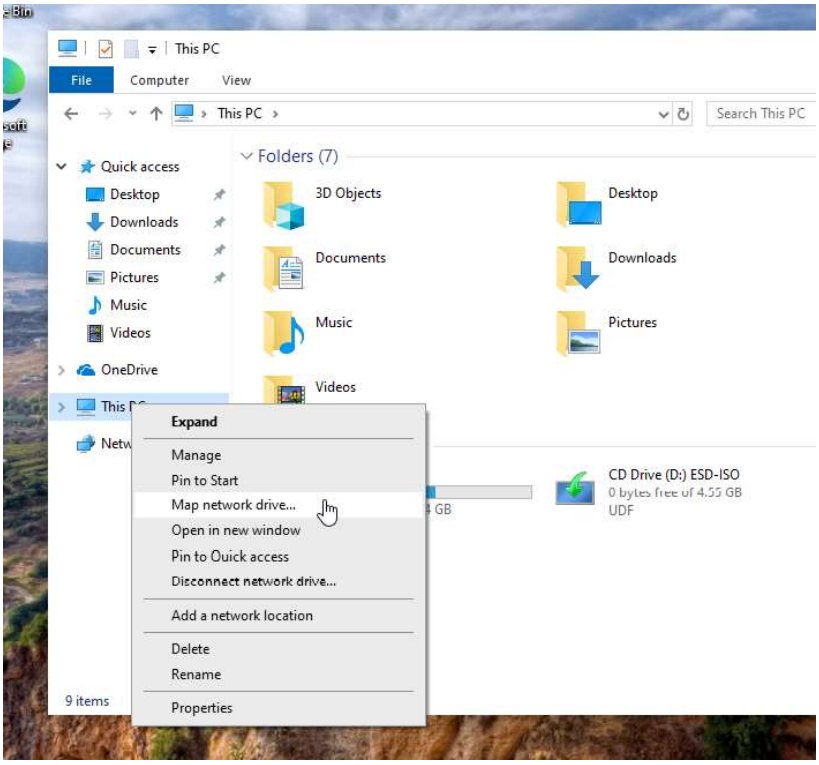


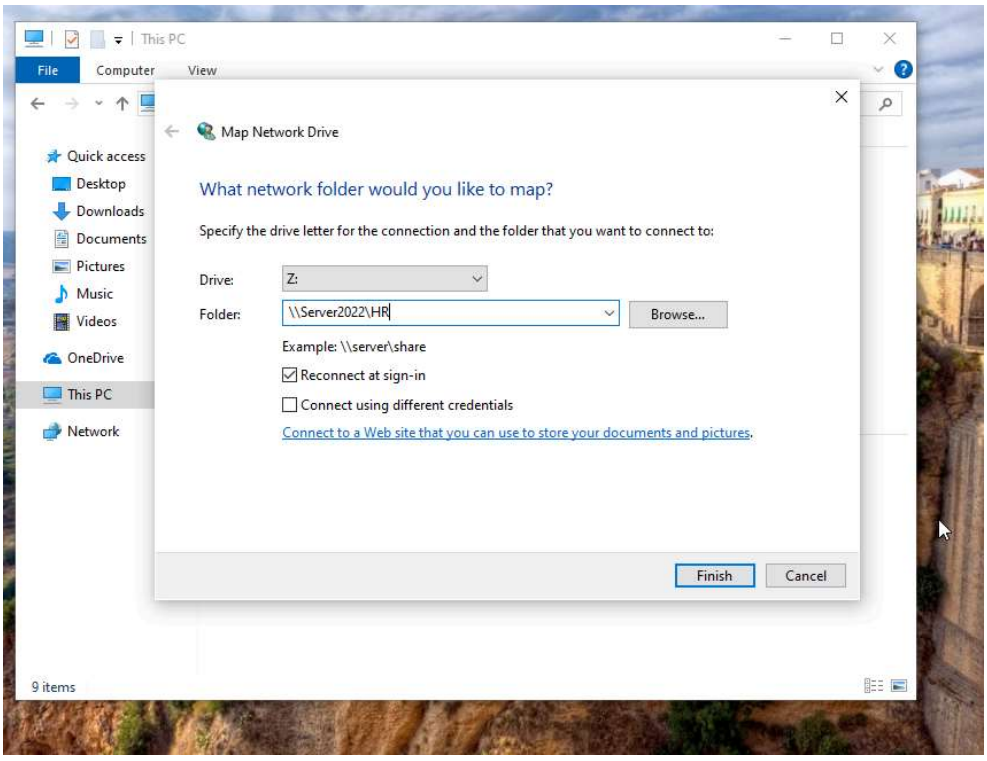


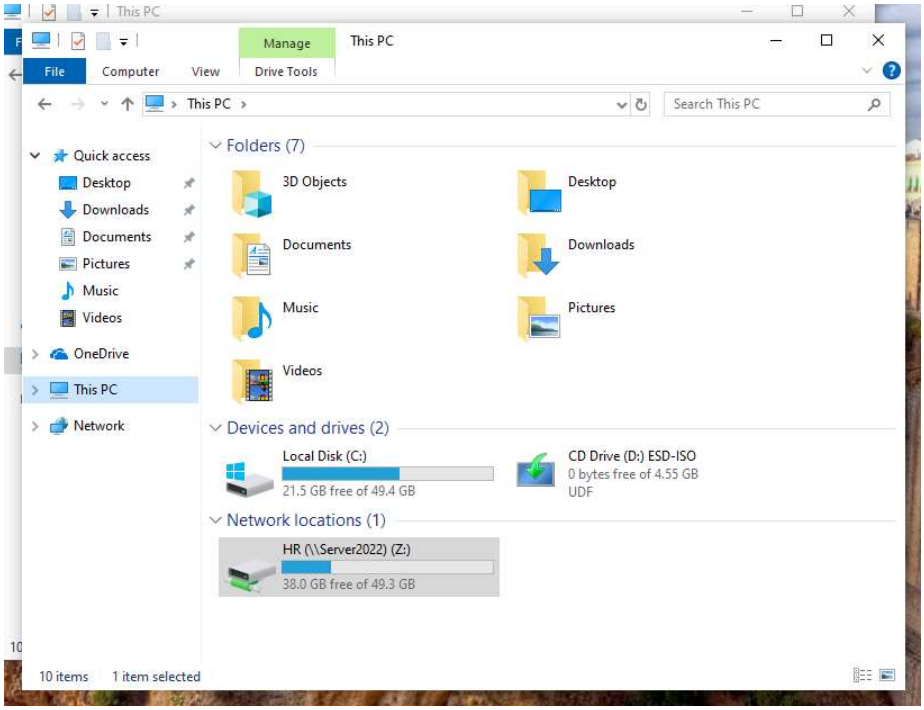
Check the local user Naruto’s access to the HR folder. Login to Windows 10 (Employee). Type “\\Server2022\HR” into the address bar.


Network
File
Network
View
\\Server2022\HR
Search Network
This folder is empty.
Quick access
Desktop
Downloads
Documents
Pictures
Music
Videos
OneDrive
This PC
Network

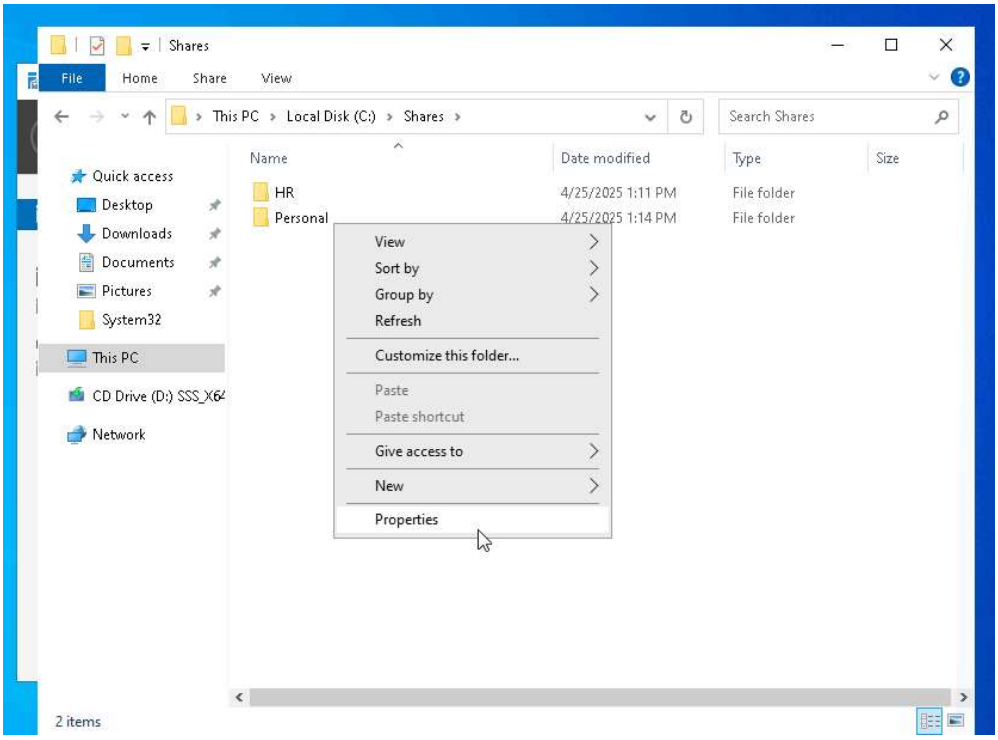

HR
File
Home
Share
View
Network
Server2022
HR
Search HR
Name
Date modified
Type
Size
This folder is empty.
Quick access
Desktop
Downloads
Documents
Pictures
Music
Videos
OneDrive
This PC
Network

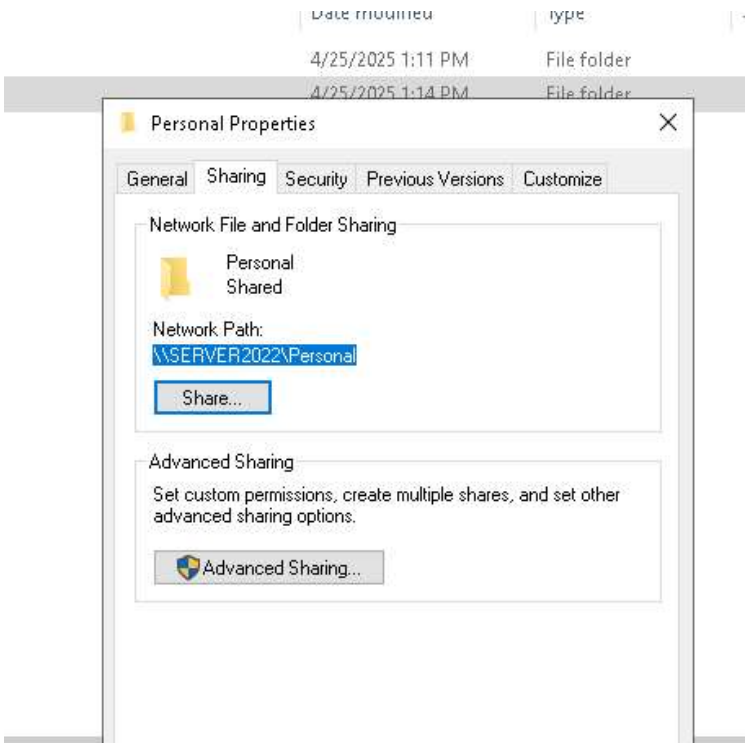

This PC
File
Computer
View
This PC ›
Search This PC
Quick access
Desktop
Downloads
Documents
Pictures
Music
Videos
OneDrive
This PC
Network
Folders (7)
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
CD Drive (D:) ESD-ISO
0 bytes free of 4.55 GB
UDF
Expand
Manage
Pin to Start
Map network drive...
Open in new window
Pin to Quick access
Disconnect network drive...
Add a network location
Delete
Rename
Properties
9 items

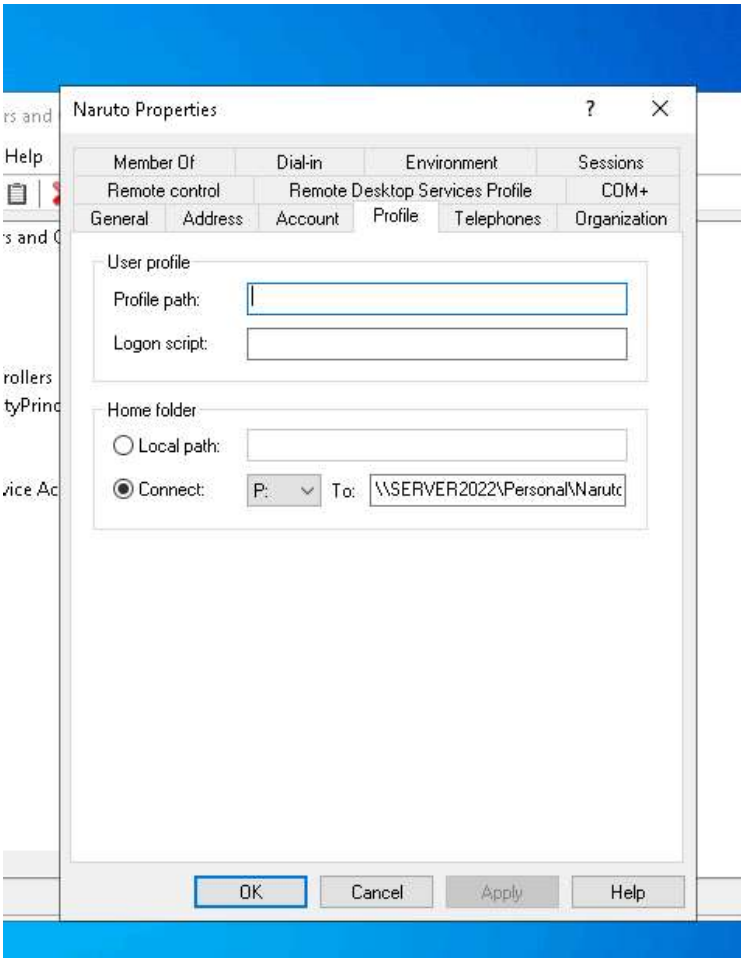

This PC
File
Computer
View
Quick access
Desktop
Downloads
Documents
Pictures
Music
Videos
OneDrive
This PC
Network
Map Network Drive
What network folder would you like to map?
Specify the drive letter for the connection and the folder that you want to connect to:
Drive:
Z:
Folder:
\\Server2022\HR
Browse...
Example: \\server\share
Reconnect at sign-in
Connect using different credentials
Connect to a Web site that you can use to store your documents and pictures.
Finish
Cancel
9 items

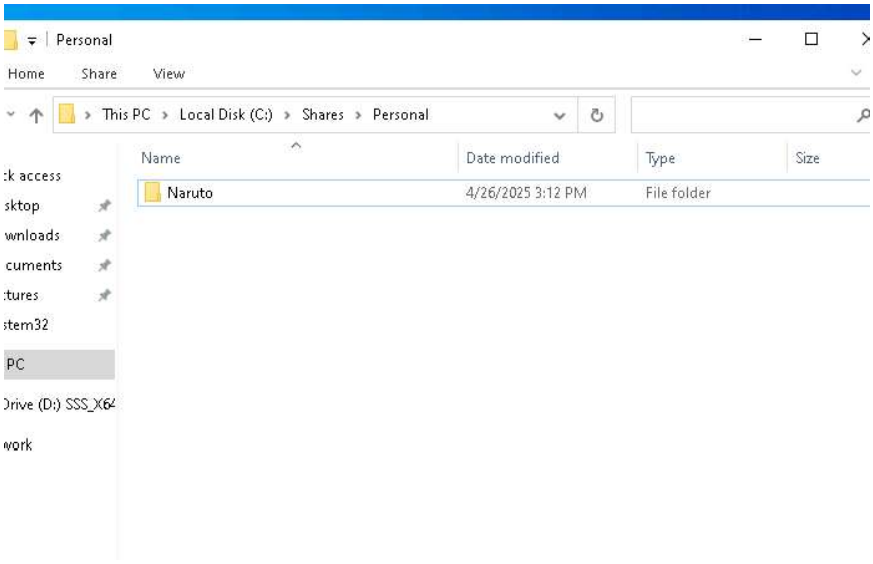


We can map the Personal drive in a different way by going to Windows Server 2022.

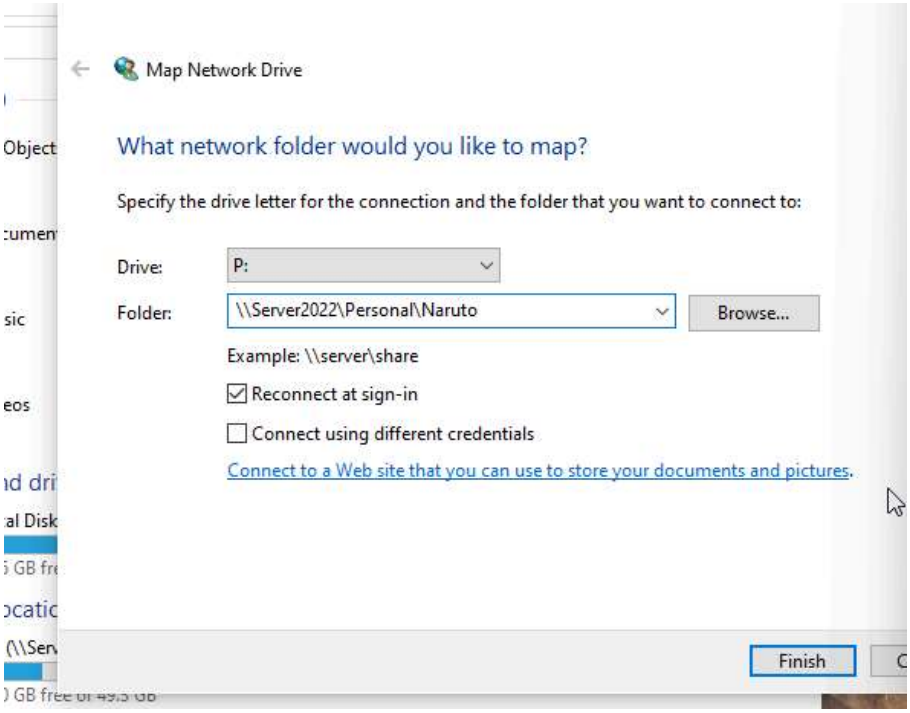



Date modified
Type
4/25/2025 1:11 PM
File folder
4/25/2025 1:14 PM
File folder
Personal Properties
General
Sharing
Security
Previous Versions
Customize
Network File and Folder Sharing
Personal
Shared
Network Path:
\\SERVER2022\Personal
Share...
Advanced Sharing
Set custom permissions, create multiple shares, and set other advanced sharing options.
Advanced Sharing...

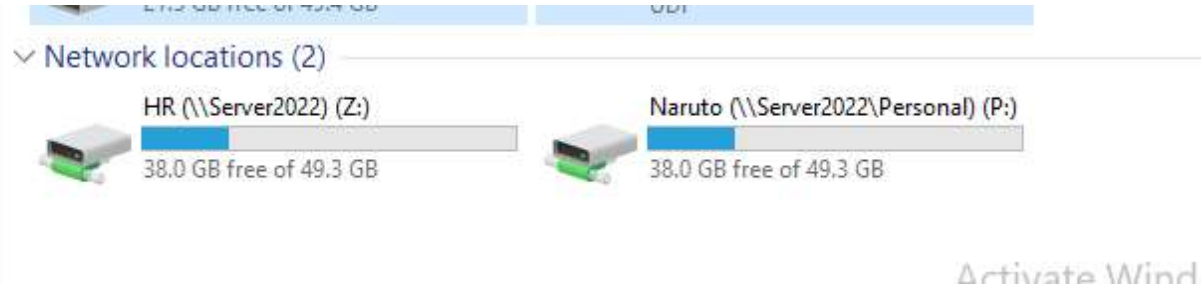

Naruto Properties
Member Of
Dial-in
Environment
Sessions
Remote control
Remote Desktop Services Profile
COM+
General
Address
Account
Profile
Telephones
Organization
User profile
Profile path:
Logon script:
Home folder
Local path:
Connect:
P:
To:
\\SERVER2022\Personal\Naruto
OK
Cancel
Apply
Help


Personal
Home
Share
View
This PC
Local Disk (C:)
Shares
Personal
Name
Date modified
Type
Size
Naruto
4/26/2025 3:12 PM
File folder

Then we go back to Windows 10 (Employee) logged in as the local user Naruto and we map the network drive again and create the drive for Naruto.



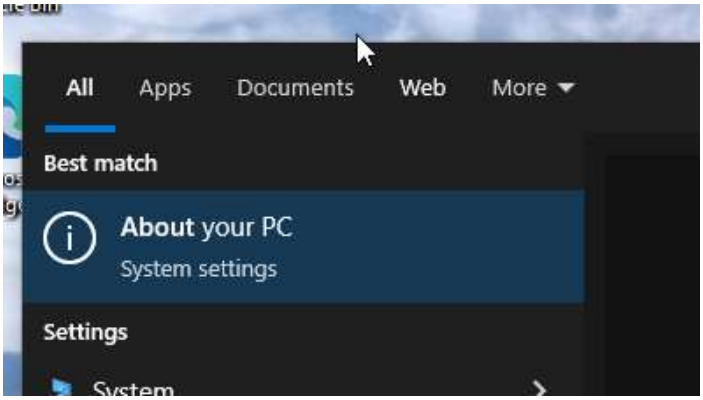
Now we can see both the Personal drive and HR drive are mapped.

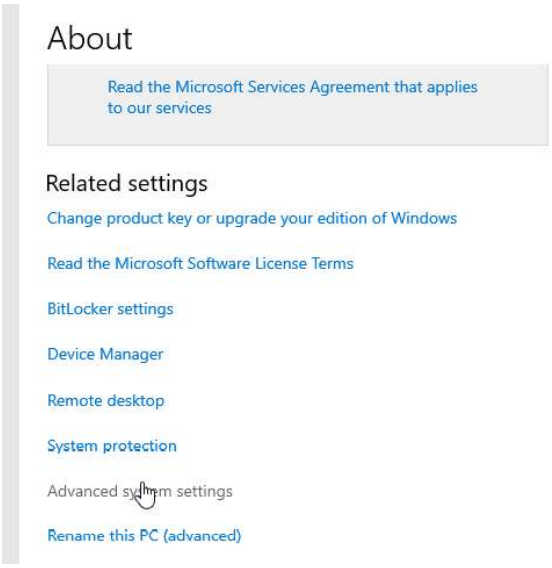


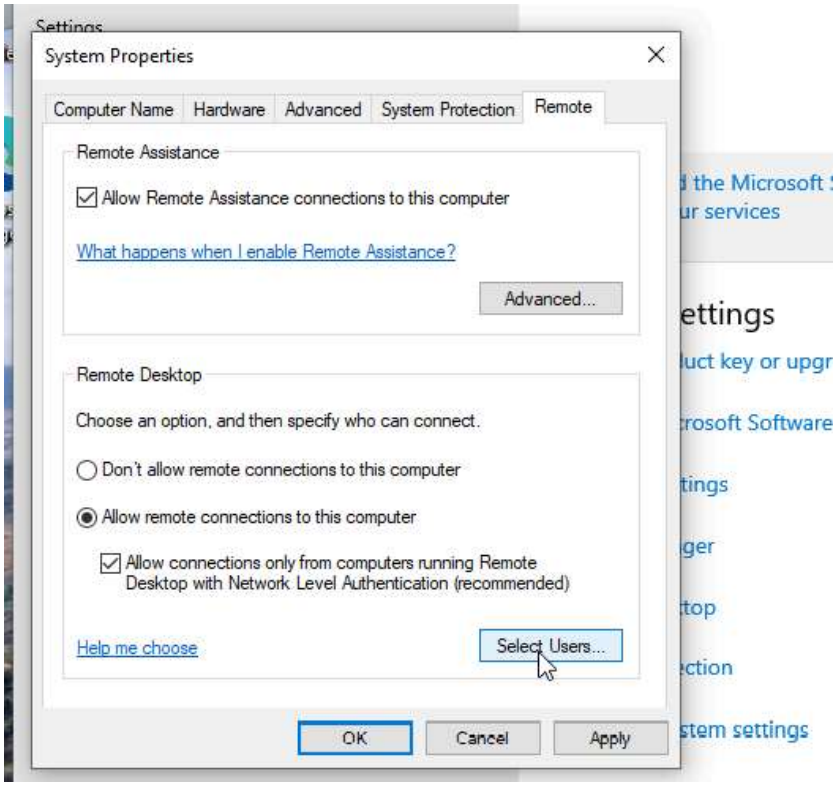
Windows 10 Remote Access: Remote Desktop, Remote Registry

In Part 8 we will configure remote access for Windows 10, practice with the Remote Registry tool to manage registry settings, configuring and using Remote Desktop to manage Windows machines, and utilizing C$ administrative share.

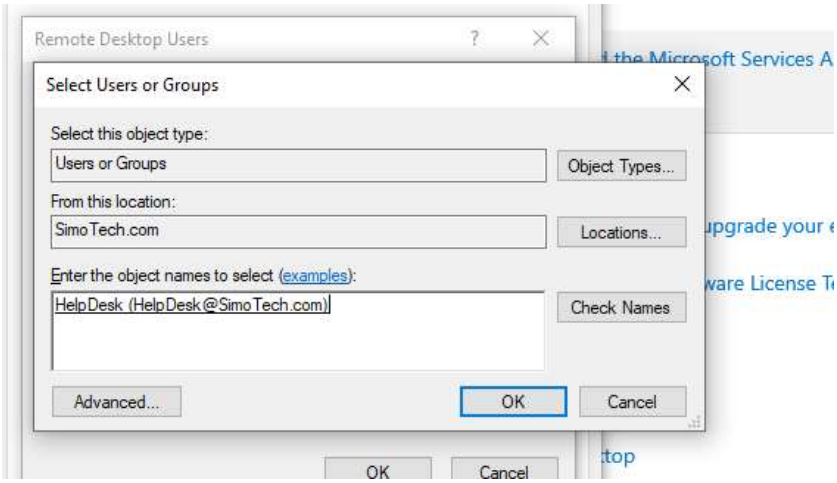
First, we will allow remote connections to Naruto's PC. Open Windows 10 (Employee). Go to "About your PC" and then "Advanced system settings". Click the circle for "Allow remote connections to this computer" and then "Select Users"

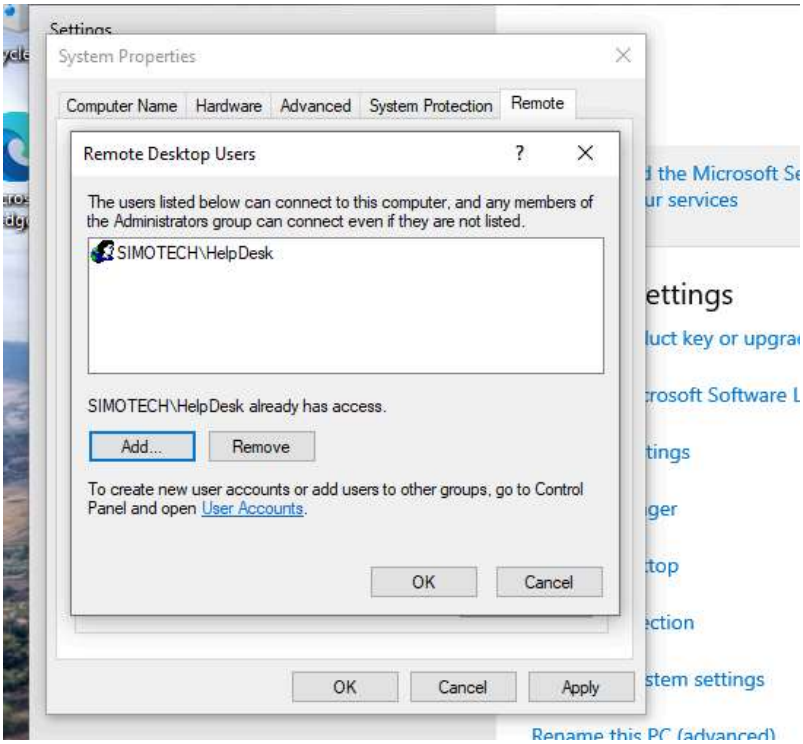




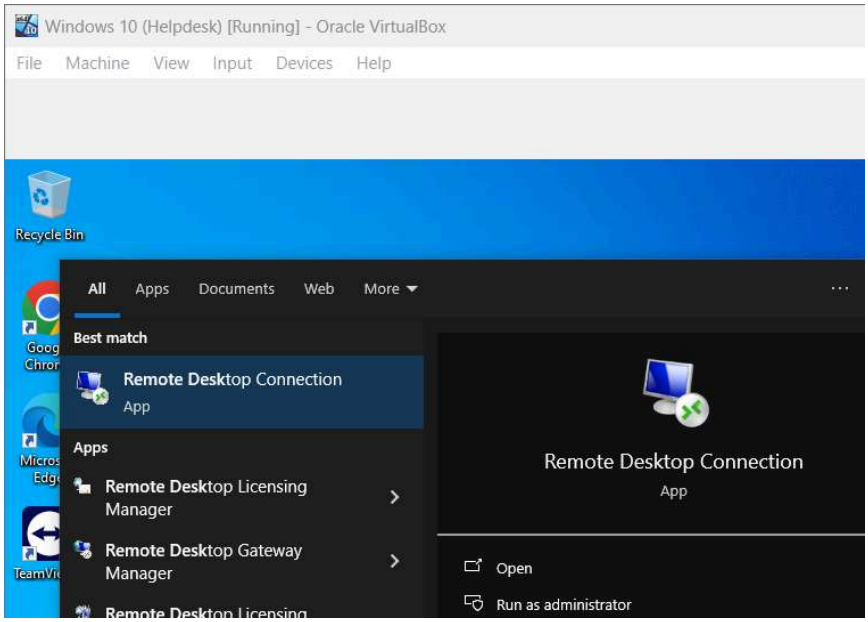


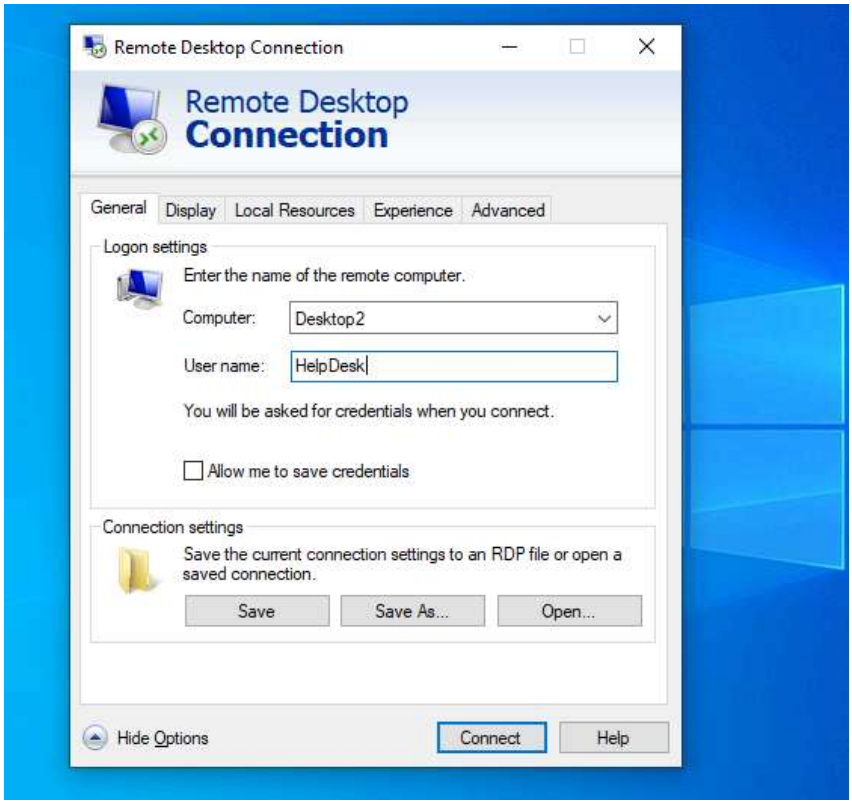
Add HelpDesk as one of the Remote Desktop Users.

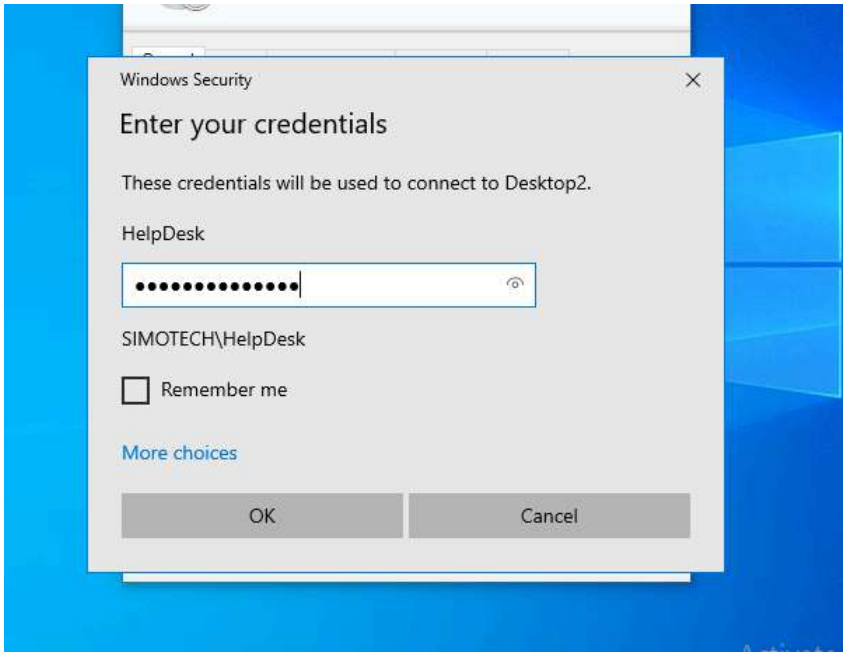


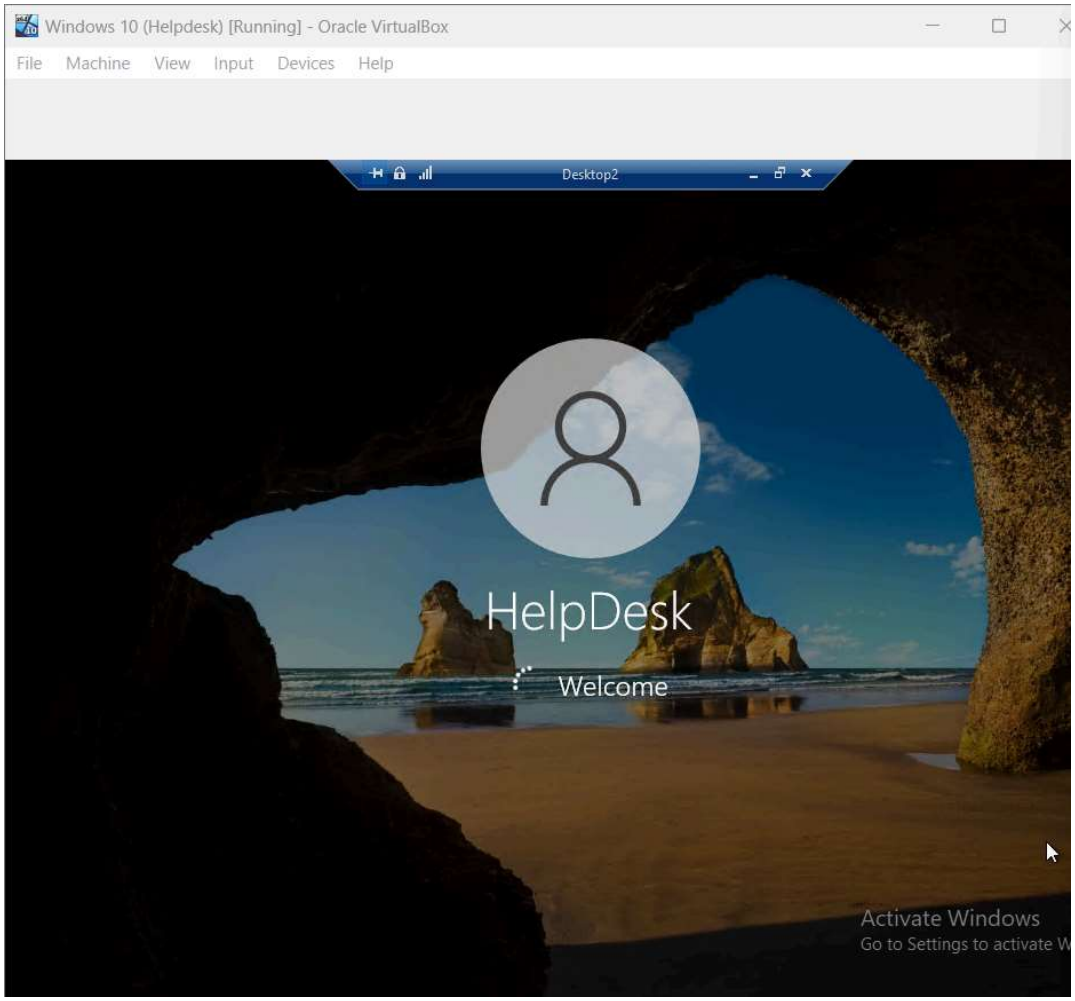


Since Remote Desktop is enabled go to Windows 10 (Helpdesk) and we will remotely connect to Windows 10 (Employee) on Naruto's account.

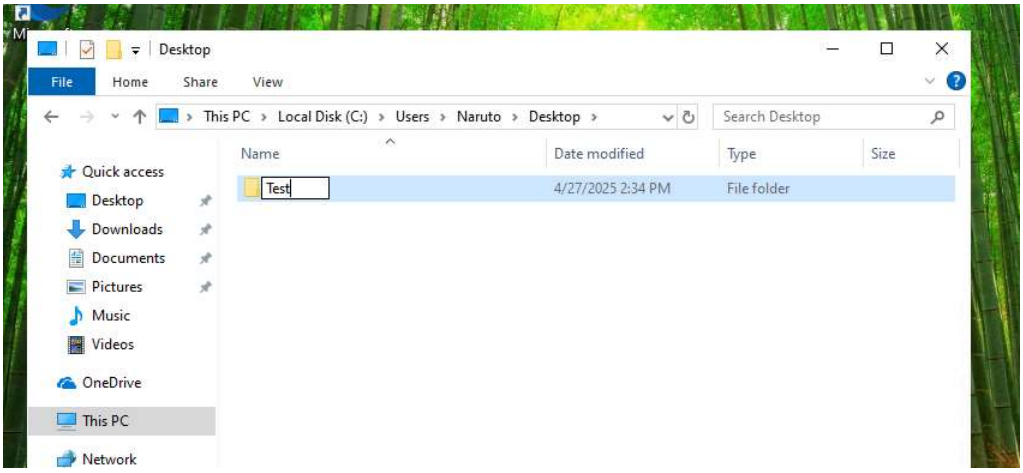

Windows 10 (Helpdesk) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Recycle Bin
All Apps Documents Web More
Best match
Remote Desktop Connection
App
Apps
Remote Desktop Licensing Manager
Remote Desktop Gateway Manager
Remote Desktop Connection
App
Open
Run as administrator


Remote Desktop Connection
Remote Desktop Connection
General Display Local Resources Experience Advanced
Logon settings
Enter the name of the remote computer.
Computer: Desktop2
User name: HelpDesk
You will be asked for credentials when you connect.
Allow me to save credentials
Connection settings
Save the current connection settings to an RDP file or open a saved connection.
Save Save As... Open...
Hide Options
Connect
Help

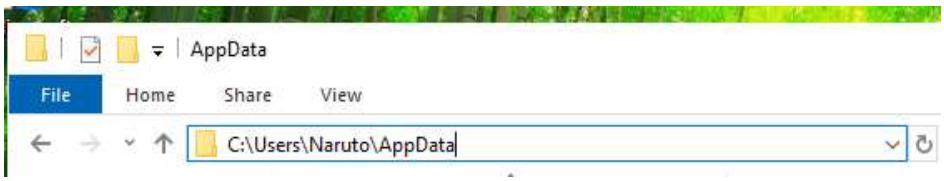

Windows Security
Enter your credentials
These credentials will be used to connect to Desktop2.
HelpDesk
SIMOTECH\HelpDesk
Remember me
More choices
OK
Cancel

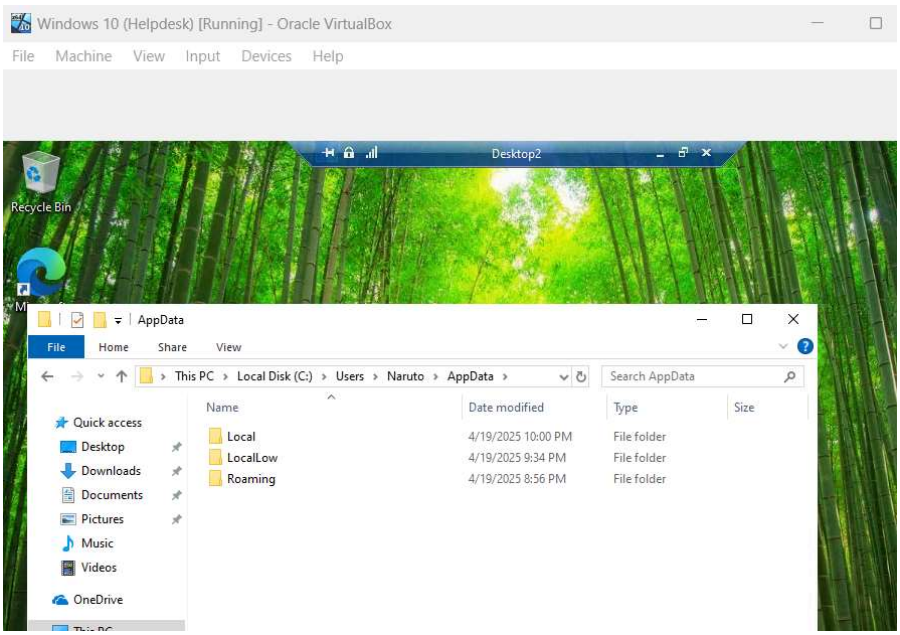

Windows 10 (Helpdesk) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Desktop2
HelpDesk
Welcome
Activate Windows
Go to Settings to activate W

As a help desk professional remotely connecting to Naruto's PC, we can create a new folder for him.

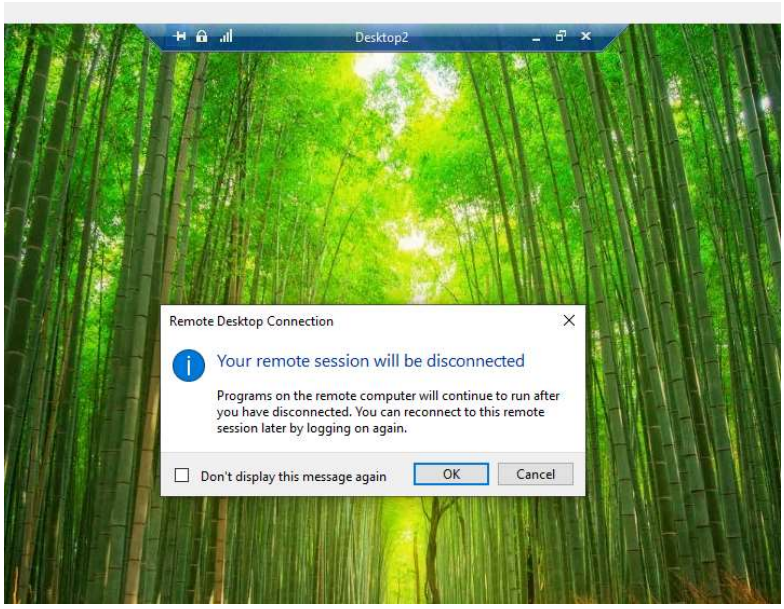


We can also manage the content of Naruto's AppData directory. To access the AppData type AppData in the file directory bar.

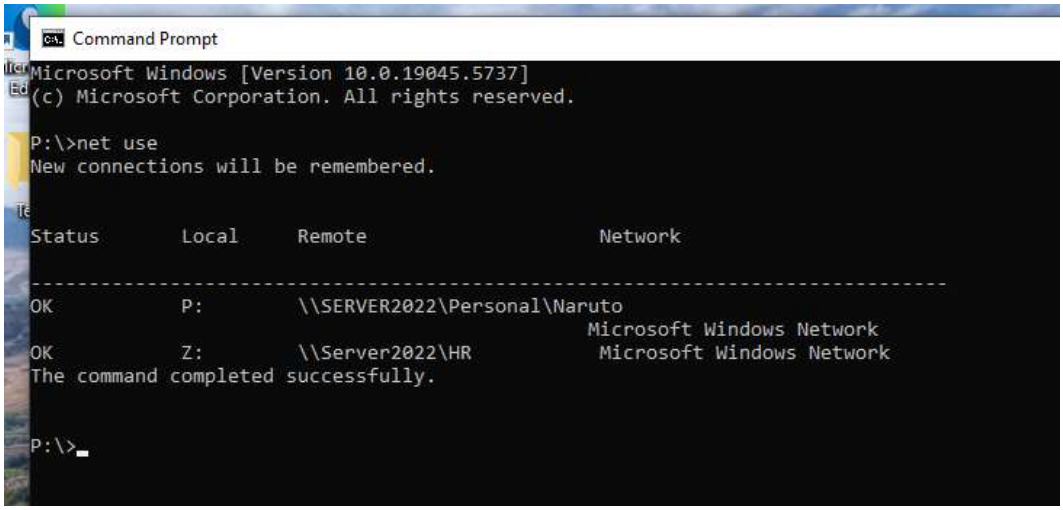




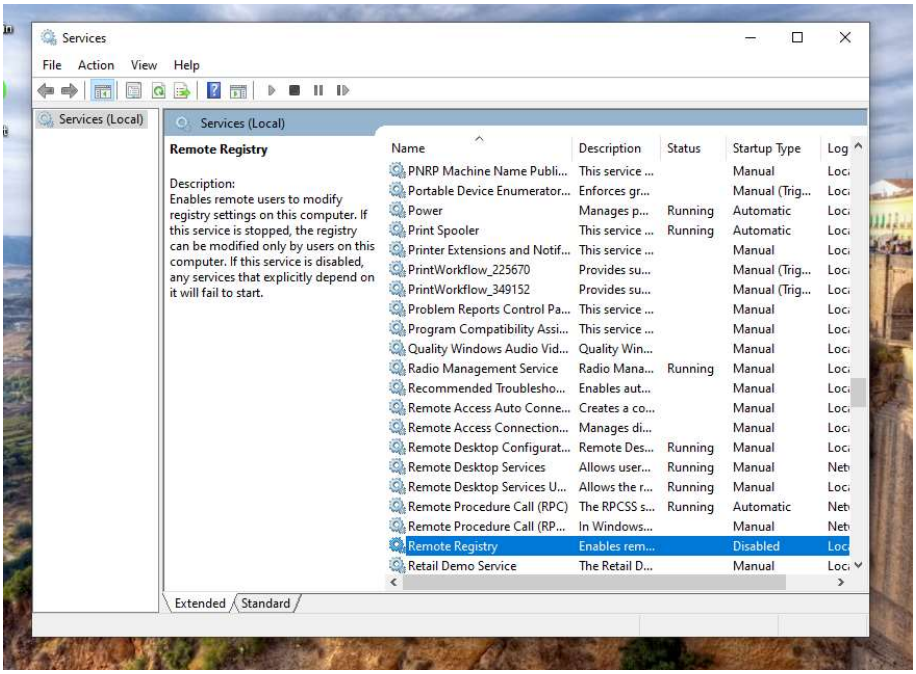
Next, we can disconnect from Remote Desktop and then log into Naruto's account on Windows 10 (Employee). We can see the new folder "Test" that we created from the Windows 10 (Helpdesk) while connected to Remote Desktop.

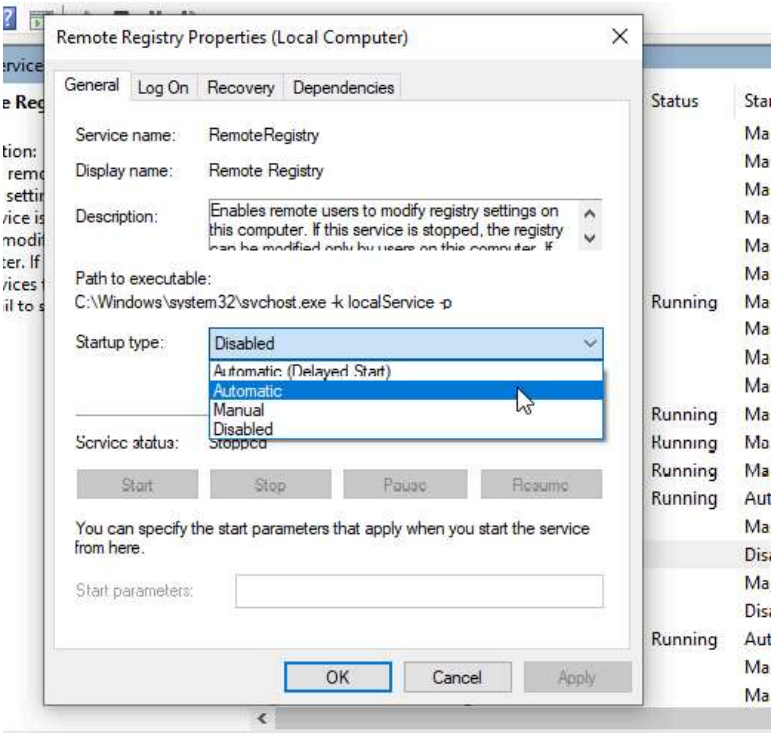


On Windows 10 (Employee) open CMD and type “net use” to see all the network drives mapped on the system.

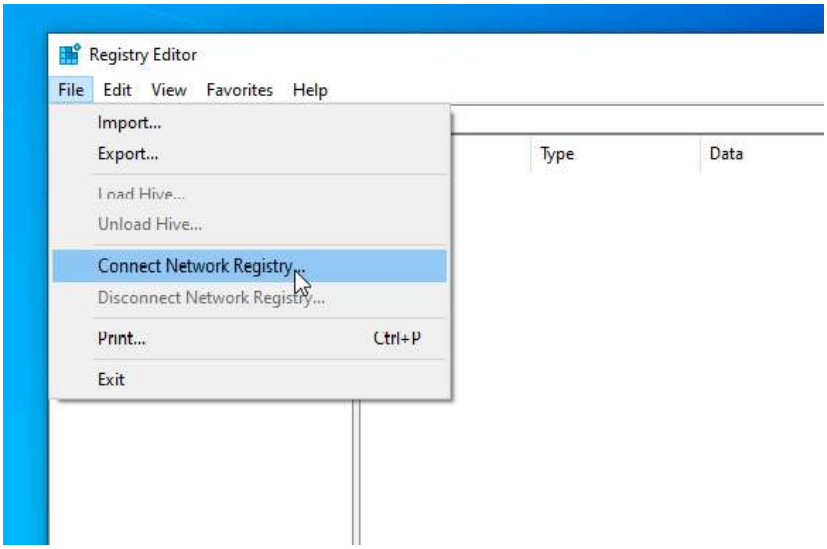


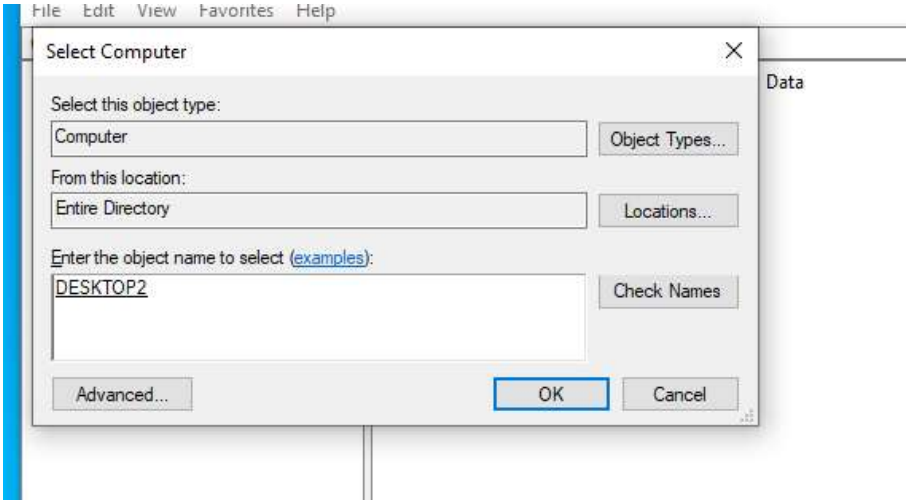
Another way to see the network drives is to go to “Services” and enable “Remote Registry”. For “Services” run it as administrator and login using HelpDesk credentials.

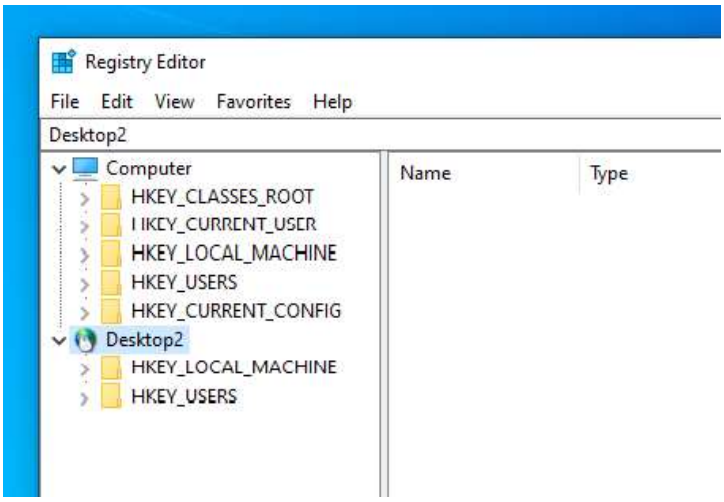




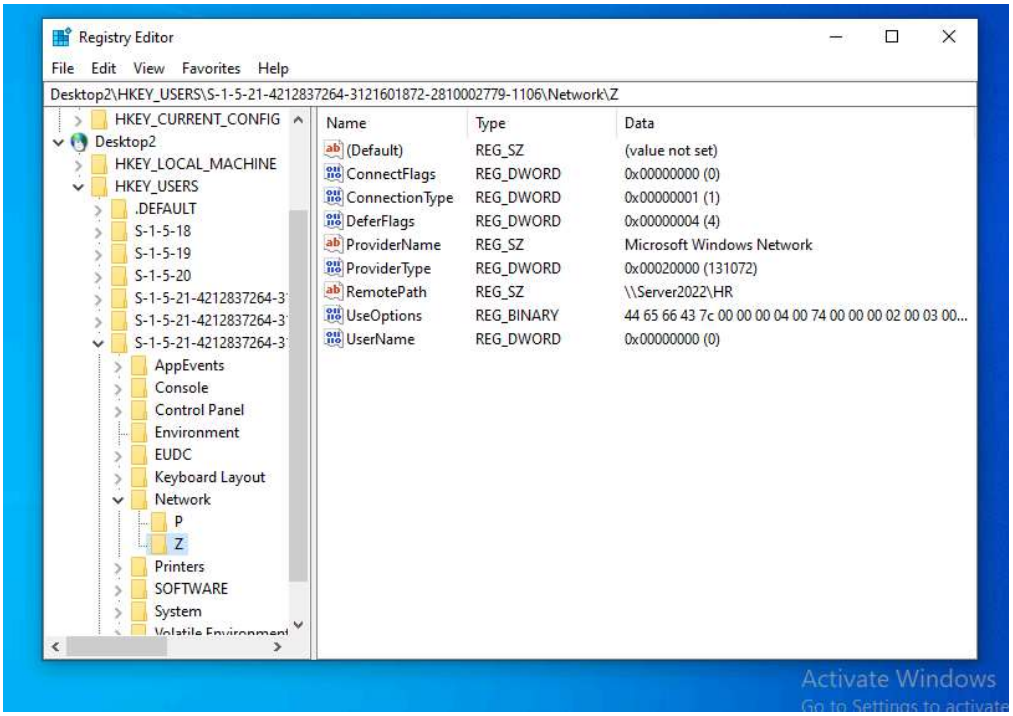
Now back on Window 10 (Helpdesk), open “Registry Editor” and follow these steps.



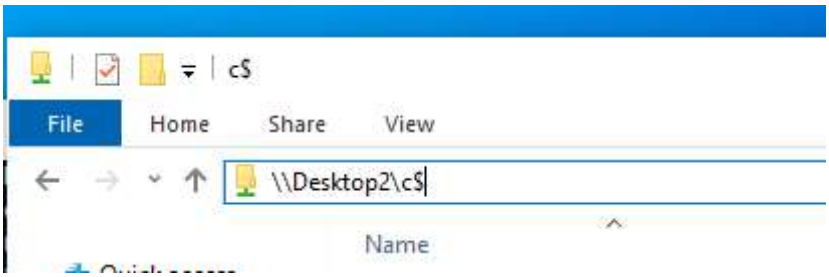


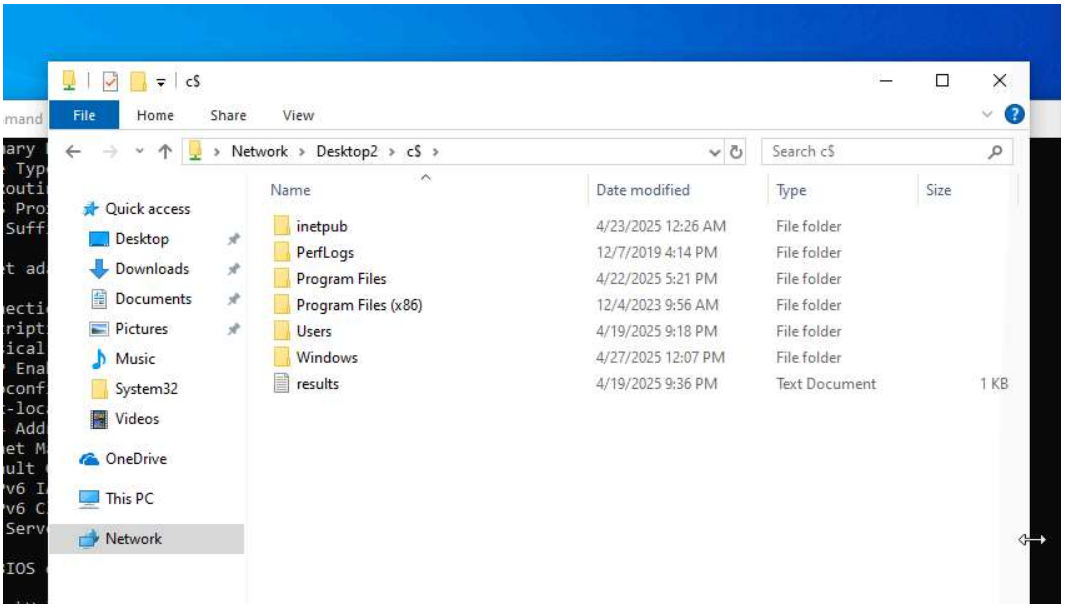


Under “HKEY_USERS” after browsing the directory we see that in the “Network” directory we can see the shared drives that are mapped to our system, “P” and “Z”.

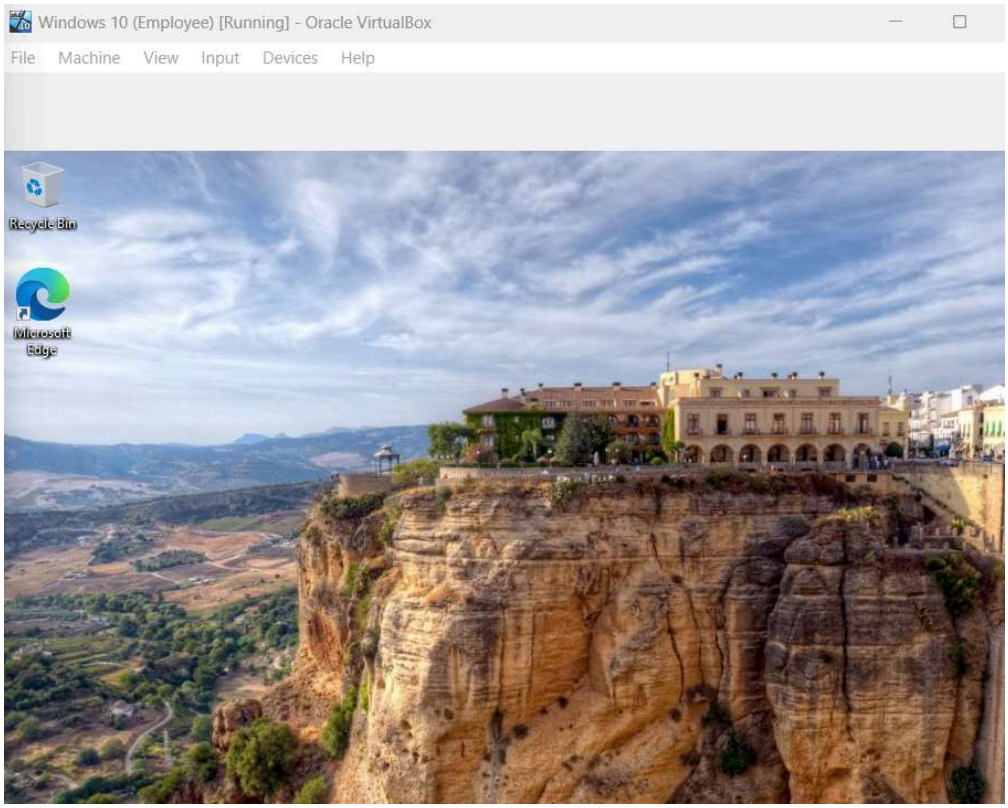


We can use the “C$” command to get remote access to the C drive on Windows 10 (Employee) / Desktop2. We do this from Windows 10 (Helpdesk).To do this type “\\Desktop2\c$” into the File Directory bar at the top left.





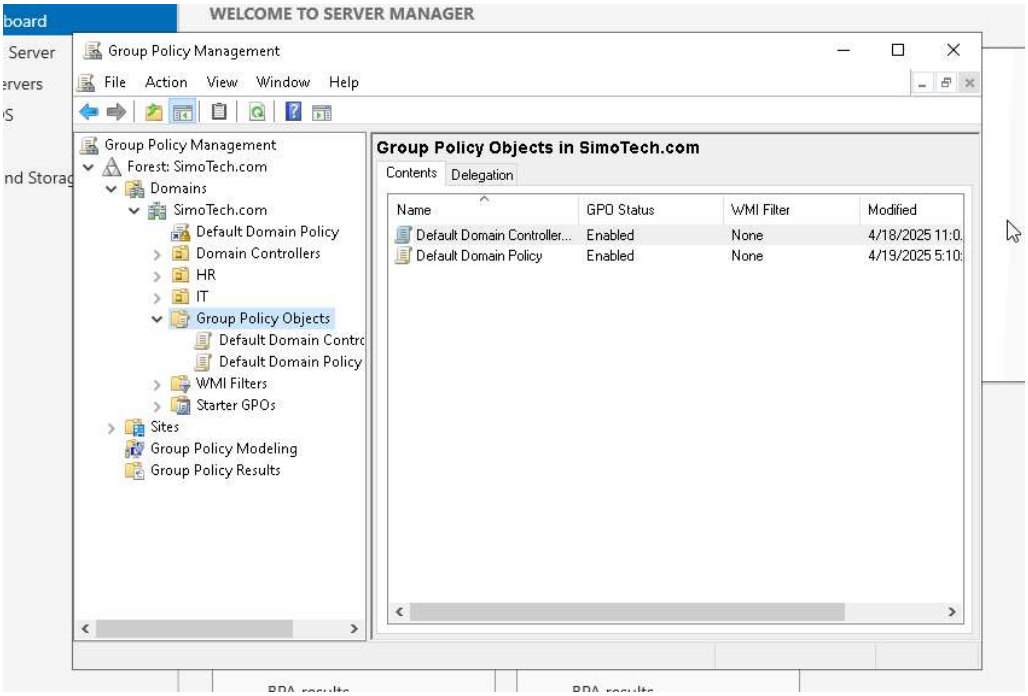
Delete the “Test” folder we created earlier on Naruto’s Desktop. Then go to Windows 10 (Employee) and login to Naruto’s account. The “Test” folder is not there anymore.



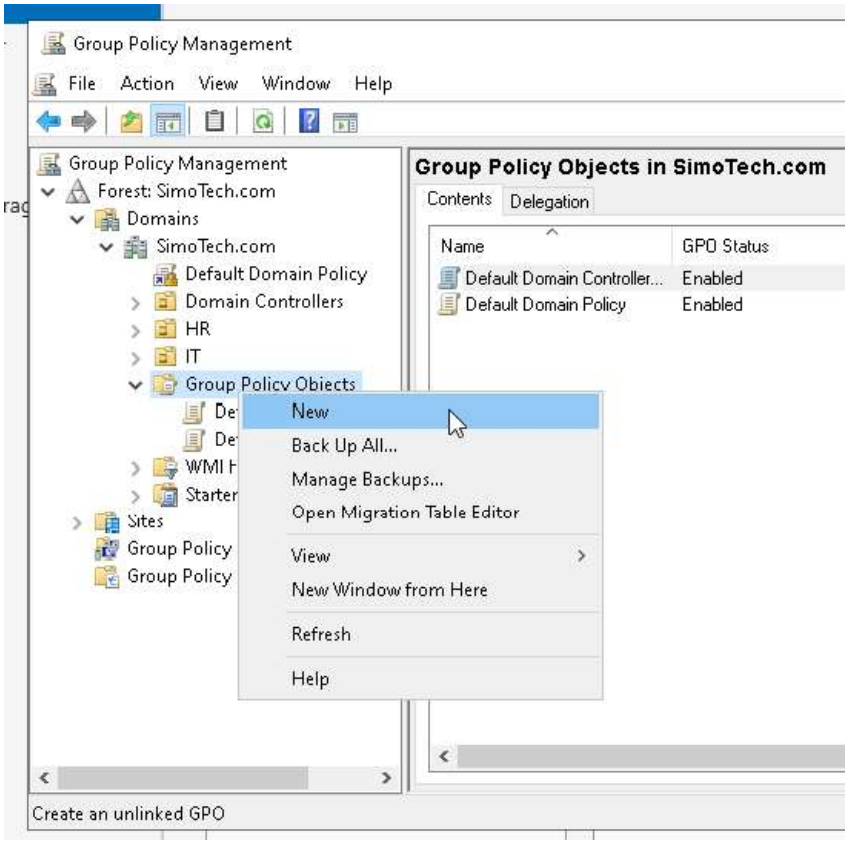
RSOP, Group Policy, Task Manager, and Disable Logoff

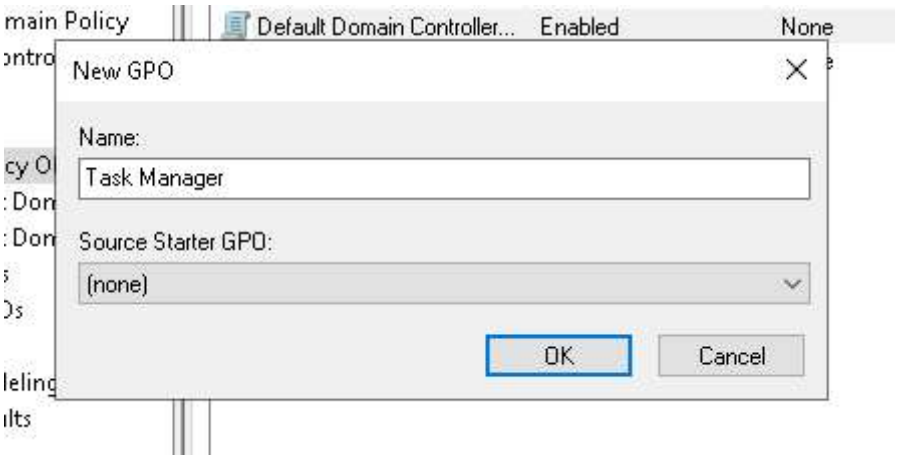
In Part 9, we will focus on RSOP (Resultant Set of Policy) to generate reports on the policies applied to computers and users in the domain. Then we will configure Group Policy to change logoff policies and Task Manager access. Troubleshoot policy application issues using RSOP and Group Policy tools.

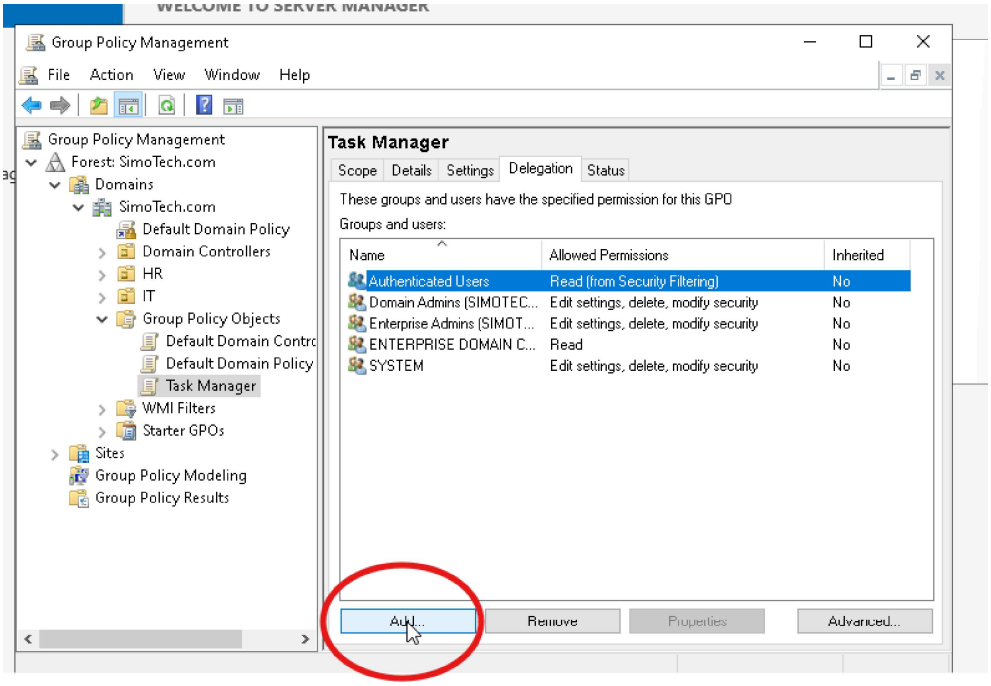
First, log into Windows Server 2022 and we will disable Task Manager. Go to the “Server Manager” then “Tools” then “Group Policy Management”.

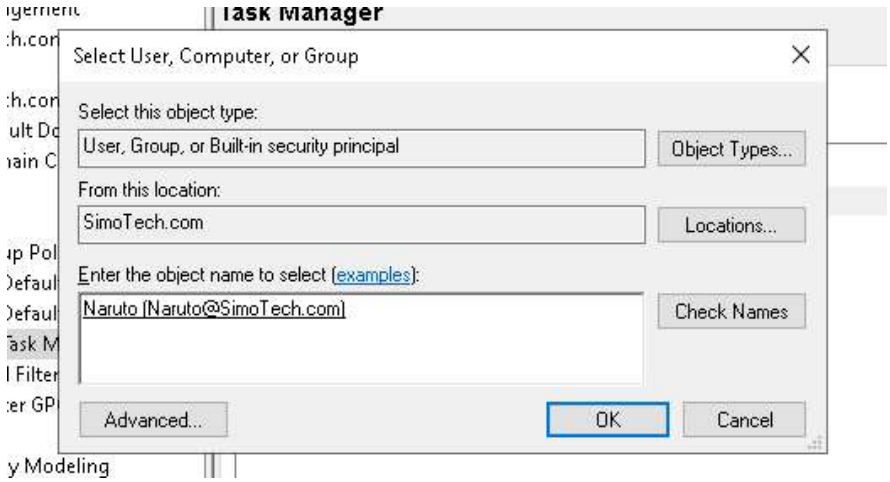


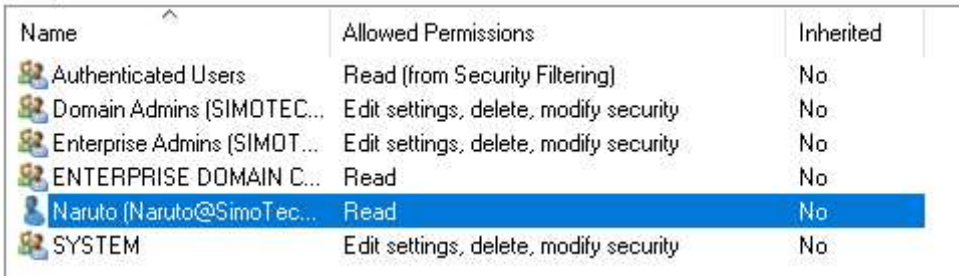
Under “Group Policy Objects” we can configure the Task Manager policy and disable it.

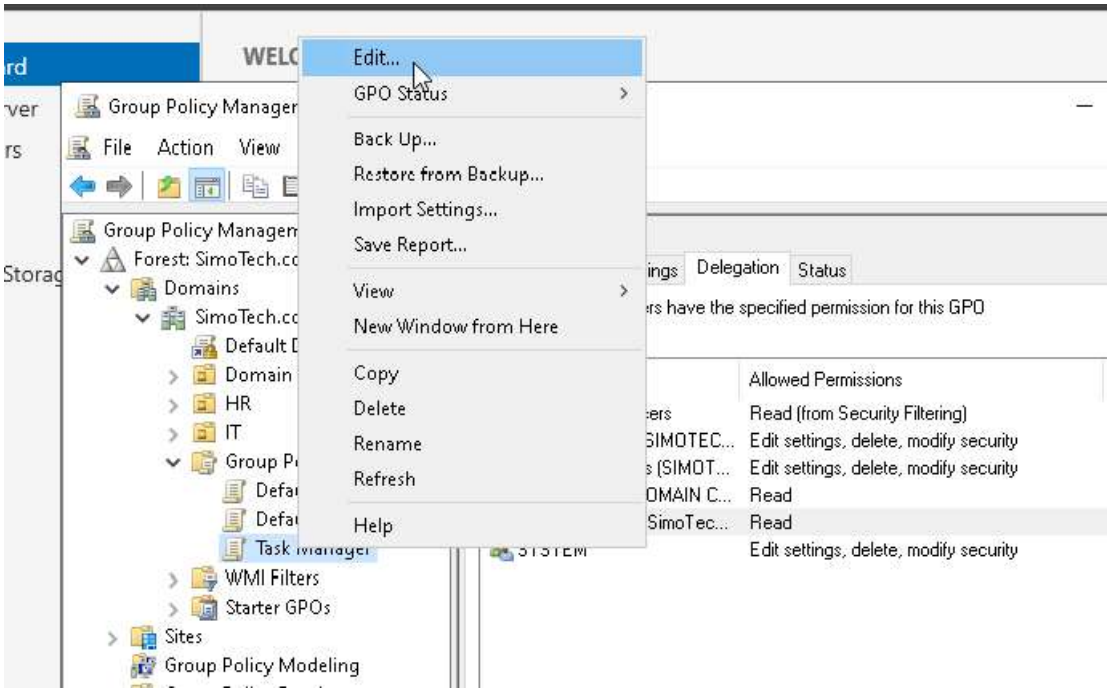

Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
SimoTech.com
Default Domain Policy
Domain Controllers
HR
IT
Group Policy Objects
WMI F
Starter
Sites
Group Policy
Group Policy
Group Policy Objects in SimoTech.com
Contents Delegation
Name
GPO Status
Default Domain Controller...
Enabled
Default Domain Policy
Enabled
New
Back Up All...
Manage Backups...
Open Migration Table Editor
View
New Window from Here
Refresh
Help
Create an unlinked GPO

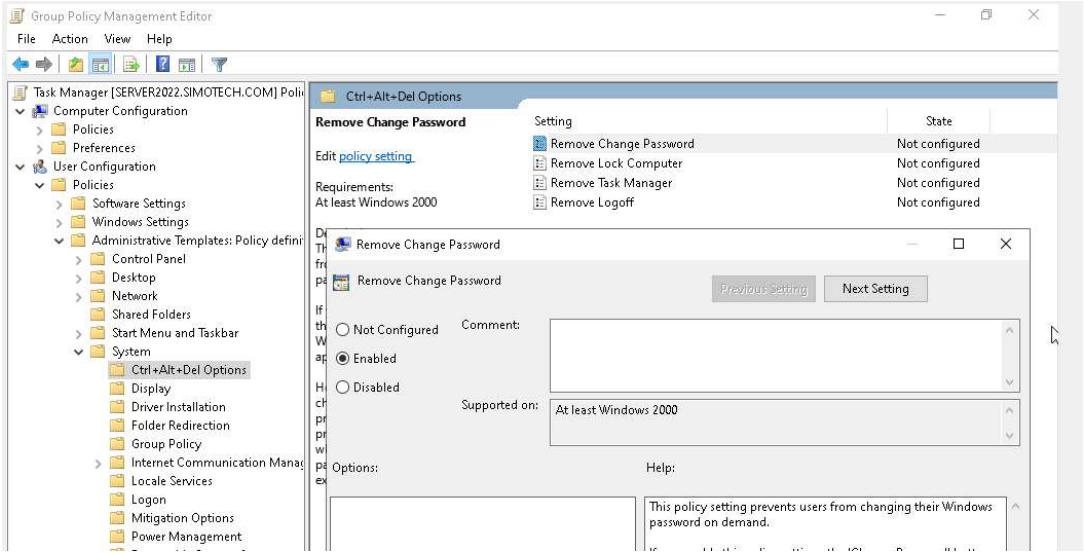

Default Domain Controller...
Enabled
None
New GPO
Name:
Task Manager
Source Starter GPO:
(none)
OK
Cancel

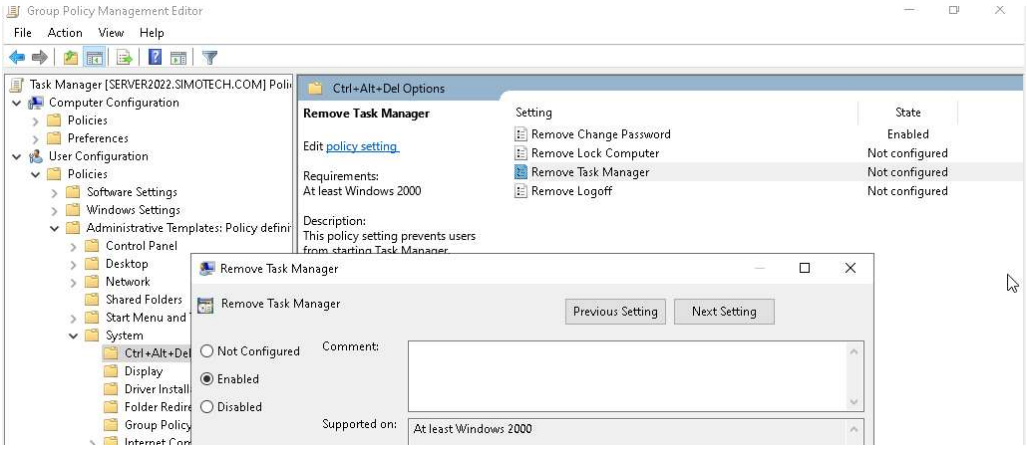

Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
SimoTech.com
Default Domain Policy
Domain Controllers
HR
IT
Group Policy Objects
Default Domain Contrc
Default Domain Policy
Task Manager
WMI Filters
Starter GPOs
Sites
Group Policy Modeling
Group Policy Results
Task Manager
Scope Details Settings Delegation Status
These groups and users have the specified permission for this GPO
Groups and users:
Name Allowed Permissions Inherited
Authenticated Users Read (from Security Filtering) No
Domain Admins (SIMOTEC... Edit settings, delete, modify security No
Enterprise Admins (SIMOT... Edit settings, delete, modify security No
ENTERPRISE DOMAIN C... Read No
SYSTEM Edit settings, delete, modify security No
Add...
Remove
Properties
Advanced...

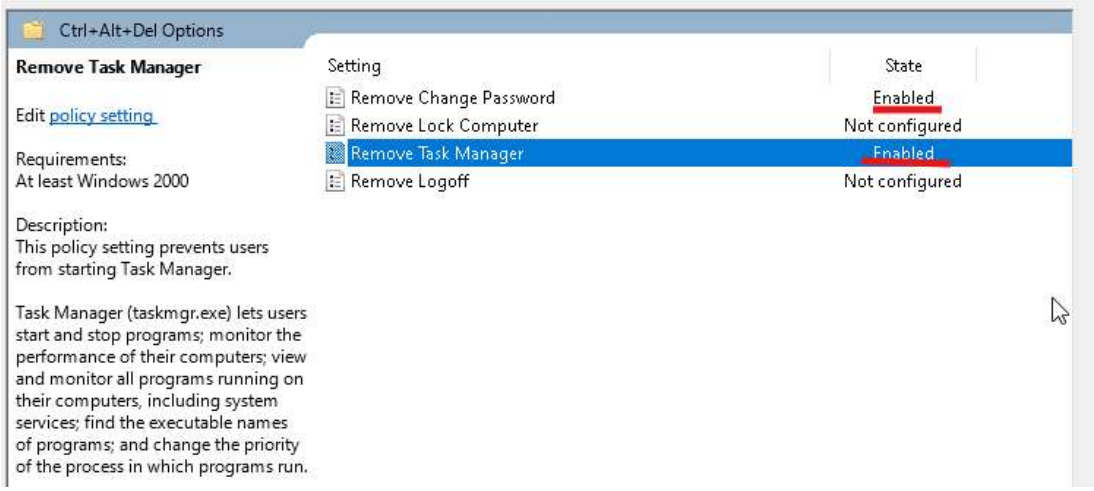

Task Manager
Select User, Computer, or Group
Select this object type:
User, Group, or Built-in security principal
Object Types...
From this location:
SimoTech.com
Locations...
Enter the object name to select (examples):
Naruto (Naruto@SimoTech.com)
Check Names
Advanced...
OK
Cancel
y Modeling


Name
Allowed Permissions
Inherited
Authenticated Users
Read (from Security Filtering)
No
Domain Admins (SIMOTEC...
Edit settings, delete, modify security
No
Enterprise Admins (SIMOT...
Edit settings, delete, modify security
No
ENTERPRISE DOMAIN C...
Read
No
Naruto (Naruto@SimoTec...
Read
No
SYSTEM
Edit settings, delete, modify security
No

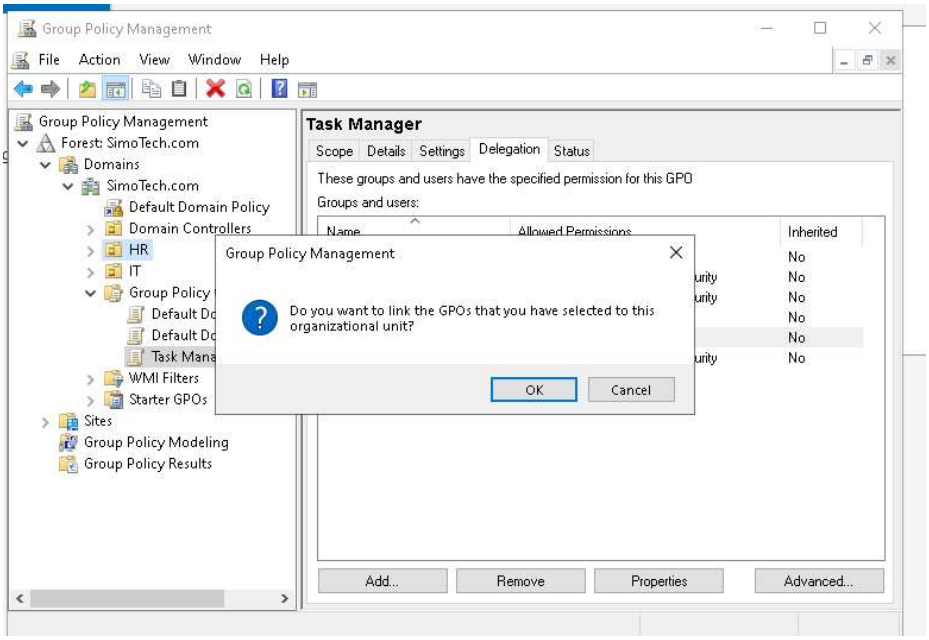

Edit...
GPO Status
Back Up...
Restore from Backup...
Import Settings...
Save Report...
View
New Window from Here
Copy
Delete
Rename
Refresh
Help
Group Policy Manager
File Action View
Forest: SimoTech.co
Domains
Domain
HR
IT
WMI Filters
Starter GPOs
Sites
Group Policy Modeling
Delegation
Status
Allowed Permissions
Read (from Security Filtering)
Edit settings, delete, modify security
Read
Edit settings, delete, modify security


Group Policy Management Editor
File Action View Help
Computer Configuration
Policies
Preferences
User Configuration
Software Settings
Windows Settings
Administrative Templates: Policy defini
Control Panel
Desktop
Network
Shared Folders
Start Menu and Taskbar
System
Ctrl+Alt+Del Options
Display
Driver Installation
Folder Redirection
Group Policy
Locale Services
Logon
Mitigation Options
Power Management
Ctrl+Alt+Del Options
Remove Change Password
Edit policy setting
Requirements:
At least Windows 2000
Setting
State
Remove Change Password
Not configured
Remove Lock Computer
Not configured
Remove Task Manager
Not configured
Remove Logoff
Not configured
Remove Change Password
Previous Setting
Next Setting
Not Configured
Enabled
Disabled
Comment:
Supported on:
At least Windows 2000
Options:
Help:
This policy setting prevents users from changing their Windows password on demand.

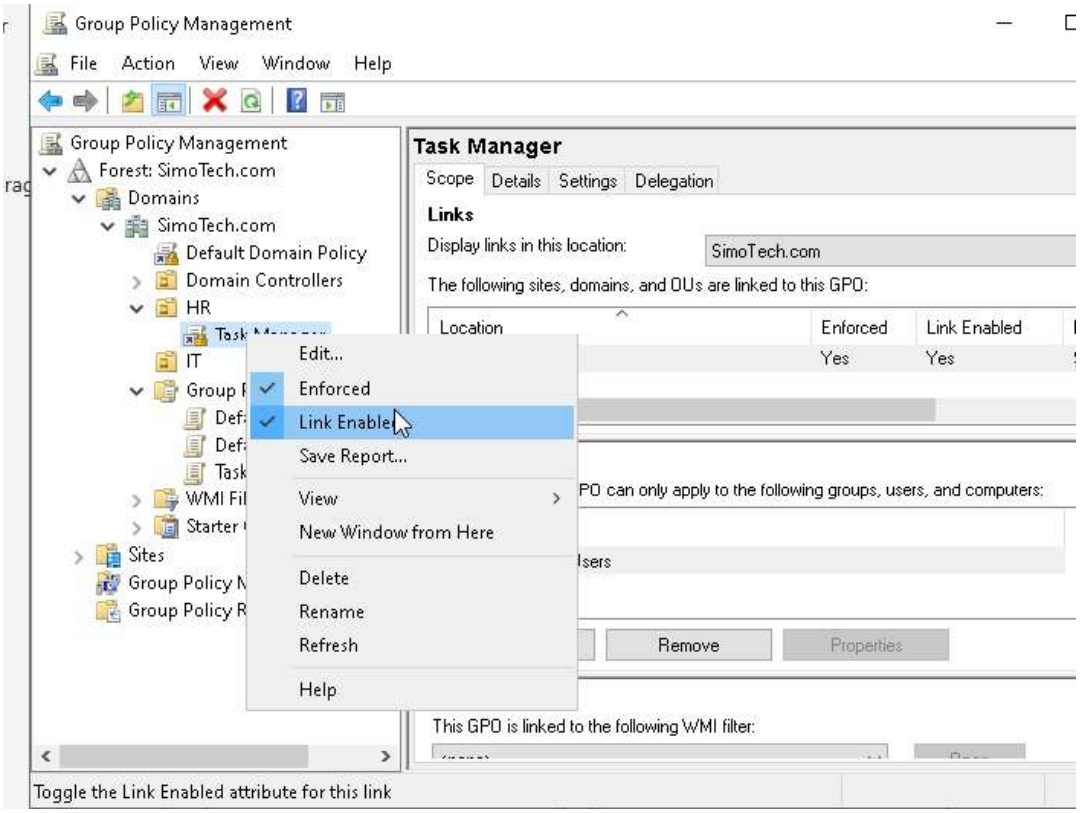




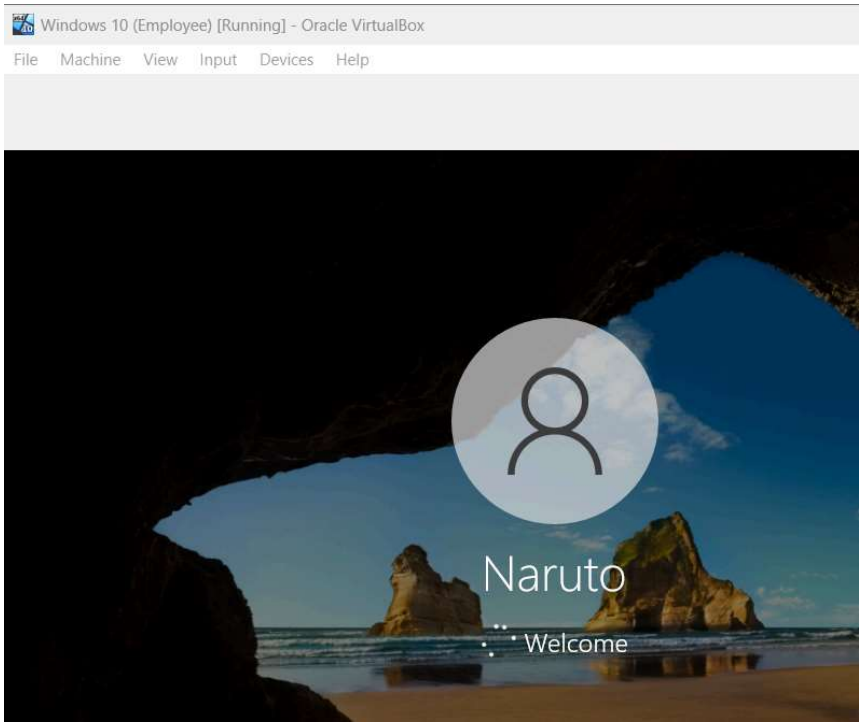
After enabling “Remove Task Manager” and “Remove Change Password” go back to “Group Policy Management” and drag and drop “Task Manager” into “HR”.

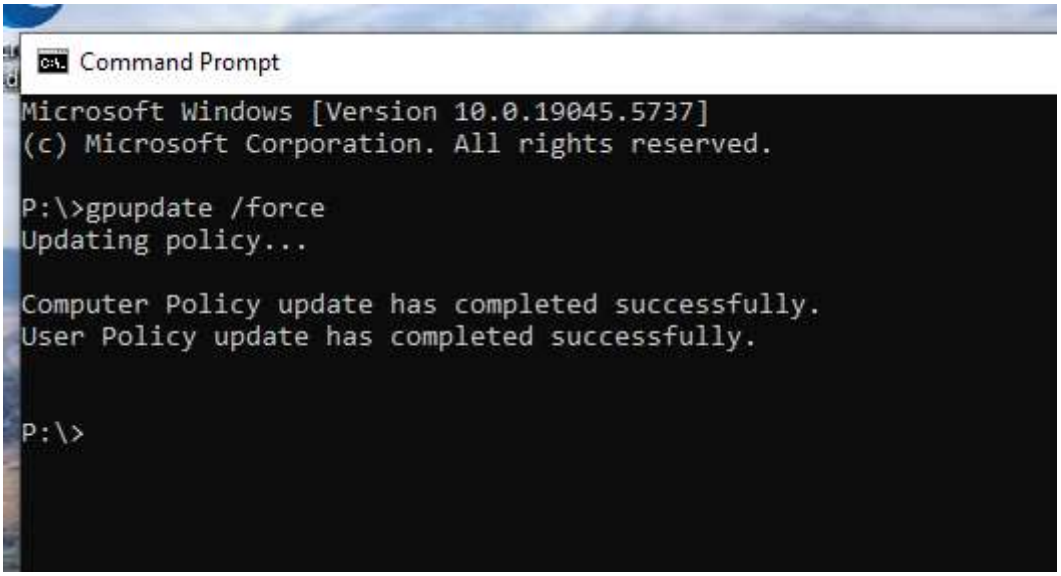


Right click on “Task Manager” in “HR” and then right click on “Enforced” to enact enforcement of the policy.

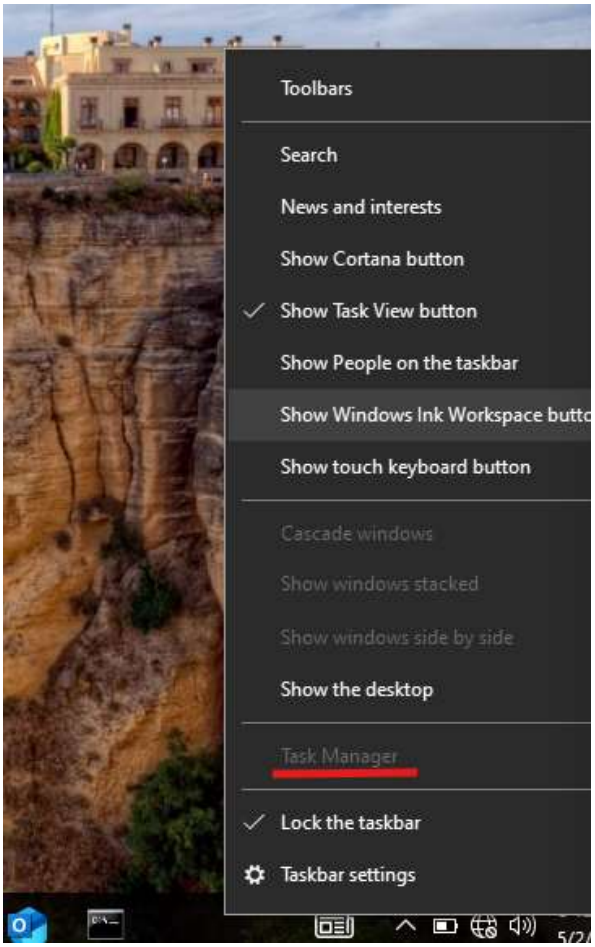


Now, login to Naruto’s account on Windows 10 (Employee) and open CMD and type this command “gpupdate /force” to refresh the Group Policy settings for this computer and user.

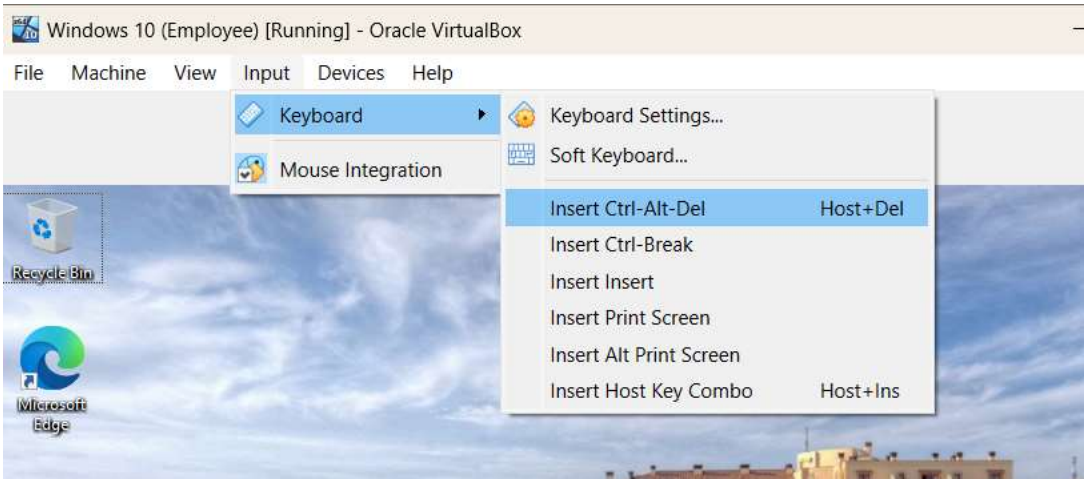


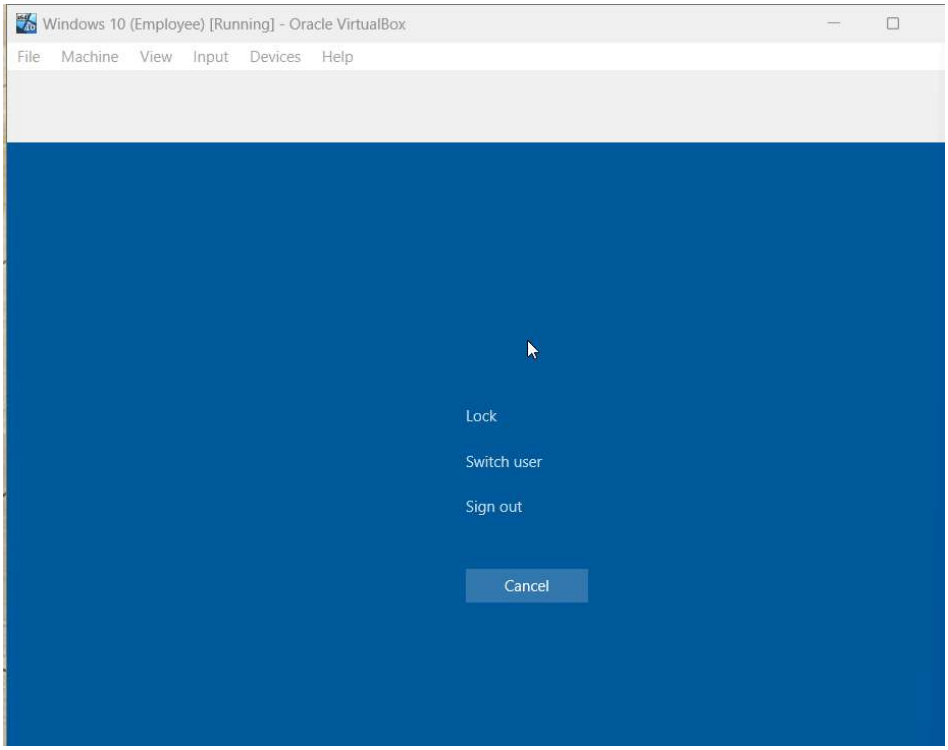


Now you can see by right clicking on the task bar that “Task Manager” is greyed out.

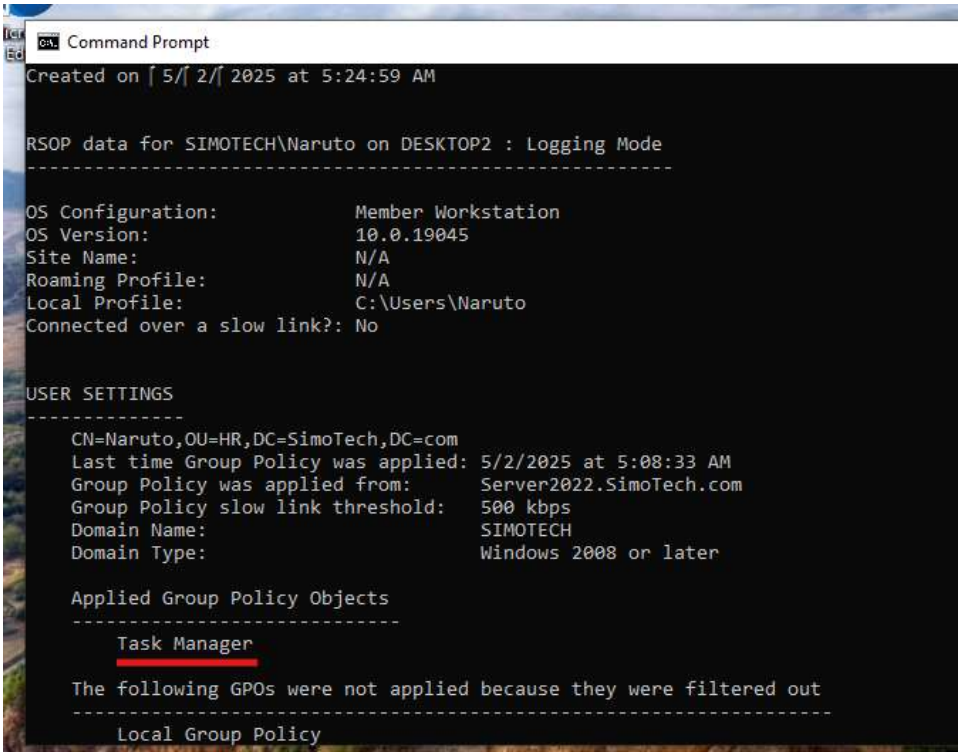


Press “ctrl+alt+del” and you can see “Change Password” is no longer there either, which means the Group Policy was changed successfully.

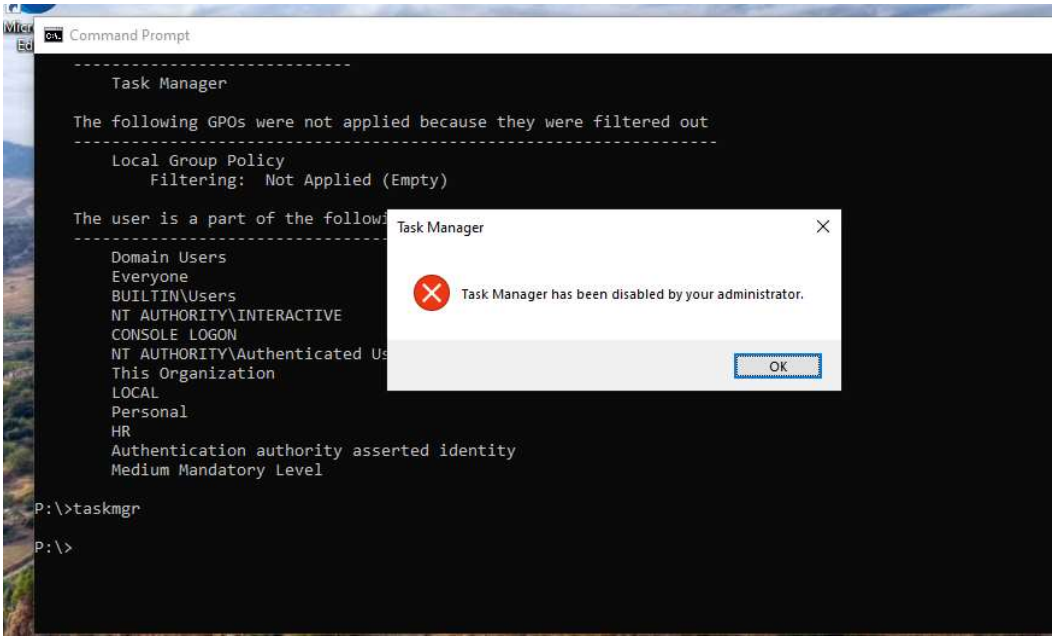




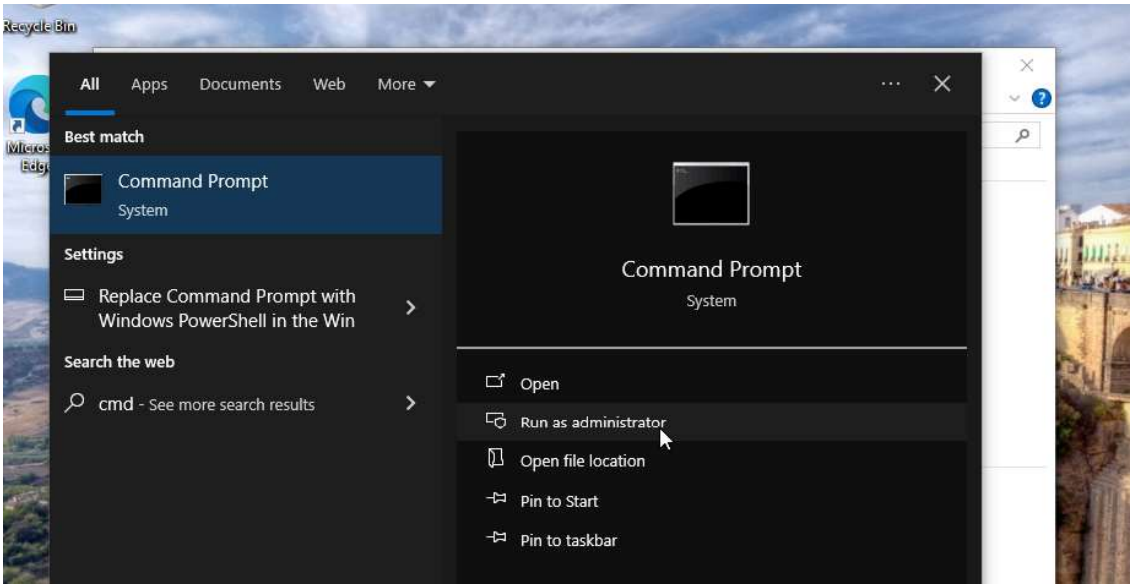
Check which policies have been applied to Naruto's computer by going to CMD and inputting the command "gpresult /r". For example, we can see the Task Manager policy we created under "Applied Group Policy Objects".

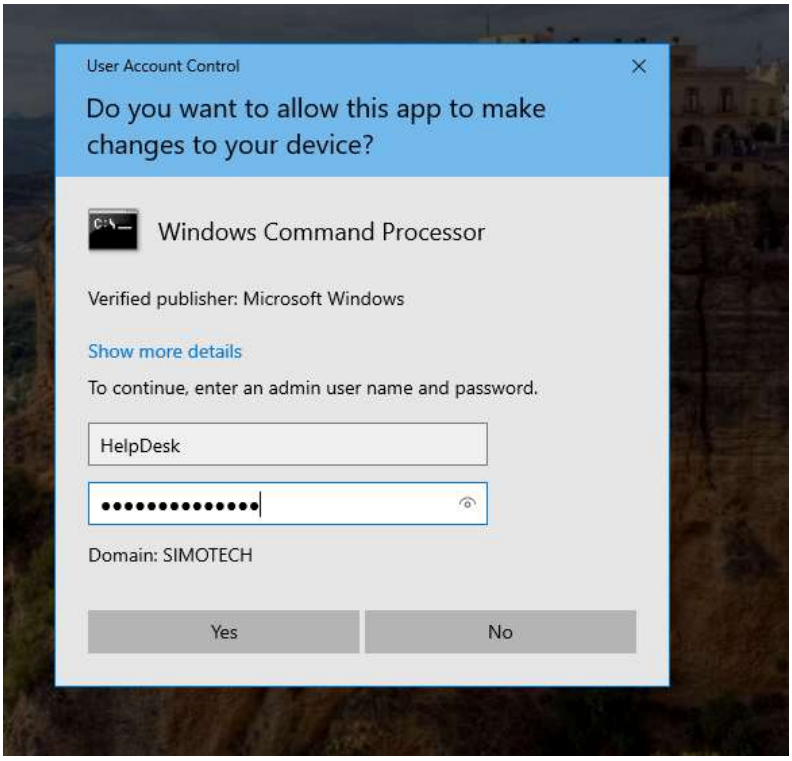


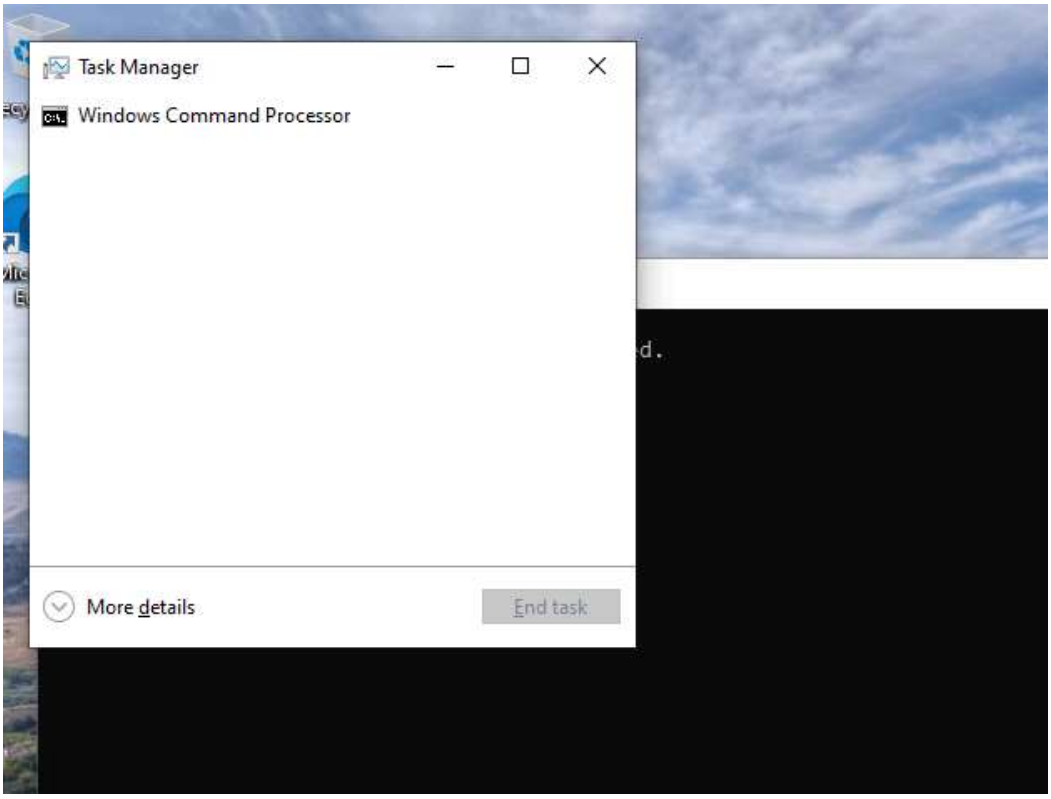
If you type the command “taskmgr” a notification about Task Manger’s being disabled pops up.



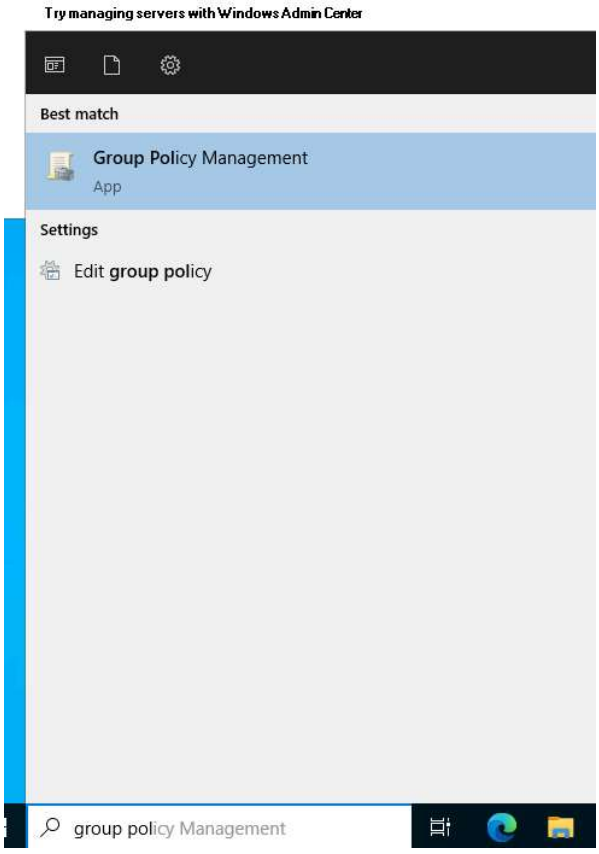
Now open CMD as an administrator and run the command “taskmgr”. Task Manager should open because you bypass the disable Task Manager policy as an admin.

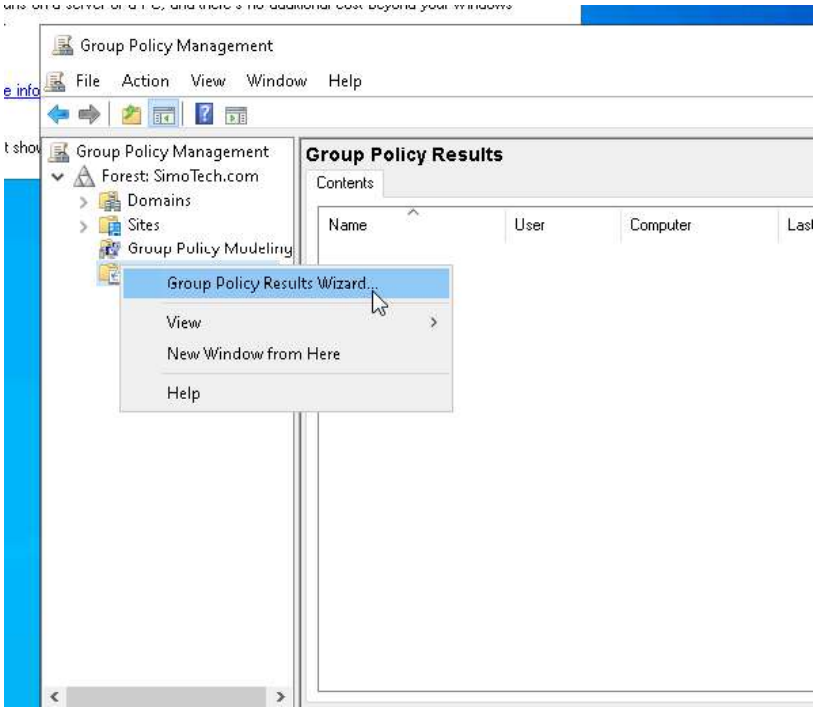


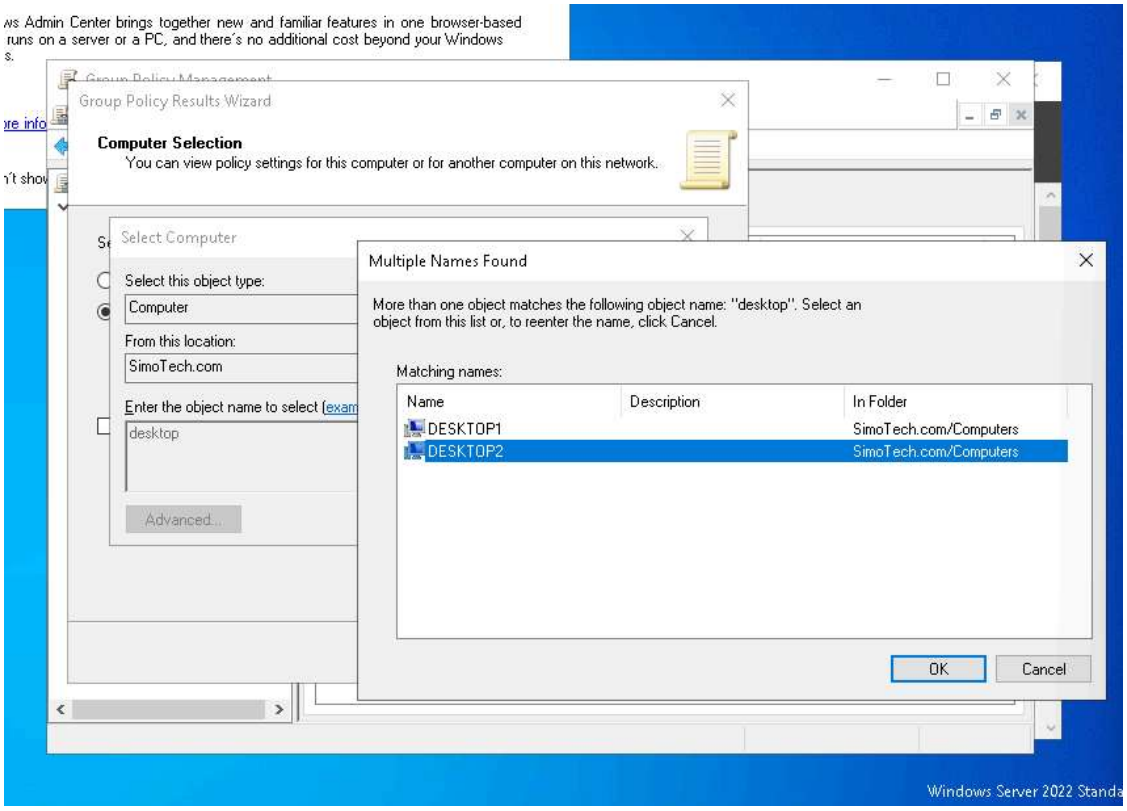


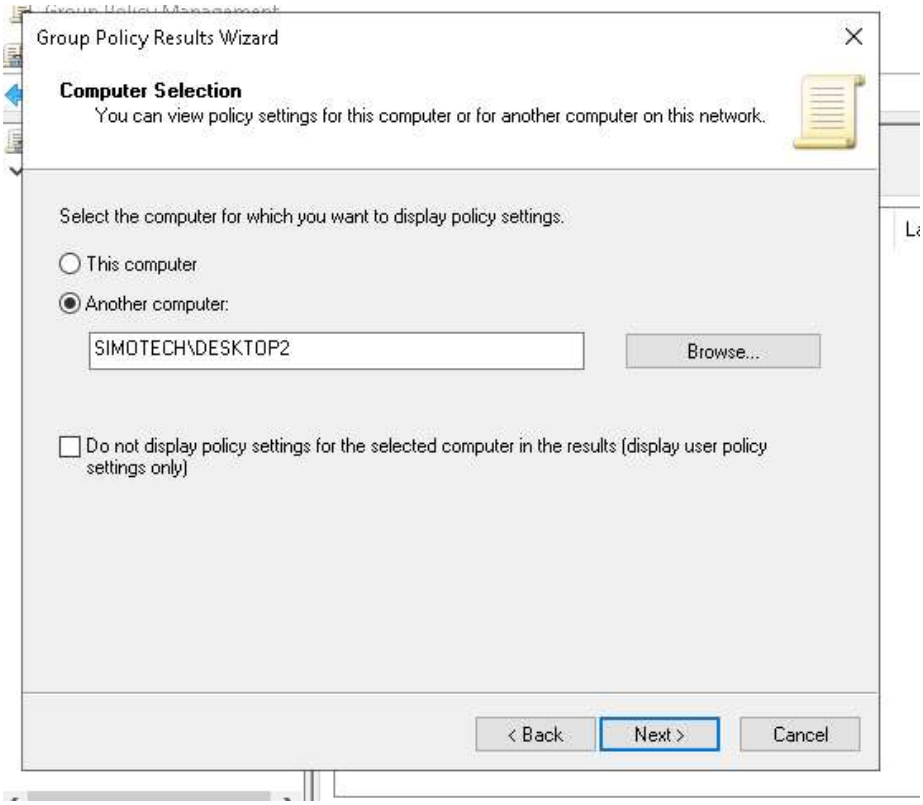


Now go onto the Windows Server 2022 computer and open “Group Policy Management”. We will create a Group Policy report.

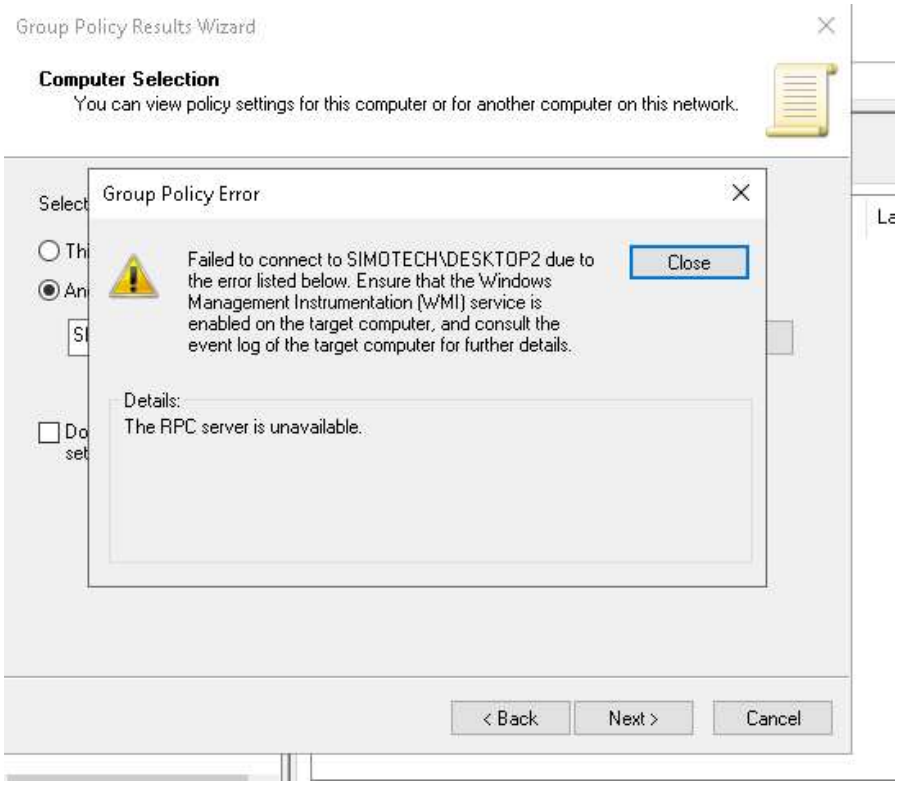

Try managing servers with Windows Admin Center
Best match
Group Policy Management
App
Settings
Edit group policy
group policy Management


Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
Sites
Group Policy Modeling
Group Policy Results Wizard...
View
New Window from Here
Help
Group Policy Results
Contents
Name
User
Computer

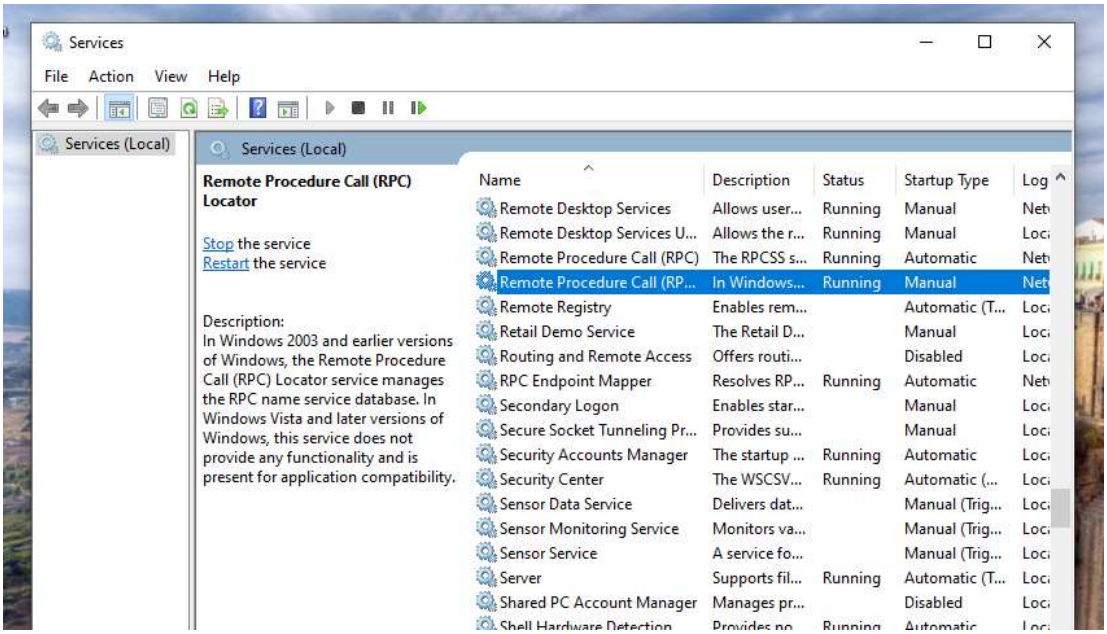

ws Admin Center brings together new and familiar features in one browser-based
runs on a server or a PC, and there's no additional cost beyond your Windows
s.
Group Policy Results Wizard
Computer Selection
You can view policy settings for this computer or for another computer on this network.
Select Computer
Select this object type:
Computer
From this location:
SimoTech.com
Enter the object name to select (exam
desktop
Advanced...
Multiple Names Found
More than one object matches the following object name: "desktop". Select an object from this list or, to reenter the name, click Cancel.
Matching names:
Name
Description
In Folder
DESKTOP1
SimoTech.com/Computers
DESKTOP2
SimoTech.com/Computers
OK
Cancel
Windows Server 2022 Standa

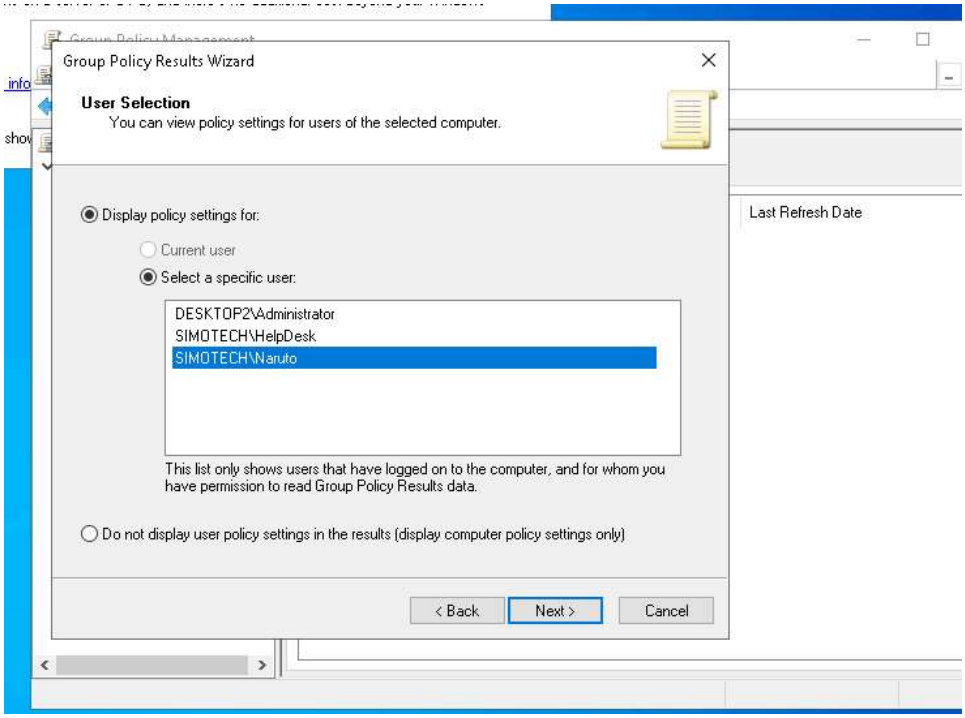

Group Policy Results Wizard
Computer Selection
You can view policy settings for this computer or for another computer on this network.
Select the computer for which you want to display policy settings.
This computer
Another computer:
SIMOTECH\DESKTOP2
Browse...
Do not display policy settings for the selected computer in the results (display user policy settings only)
< Back
Next >
Cancel

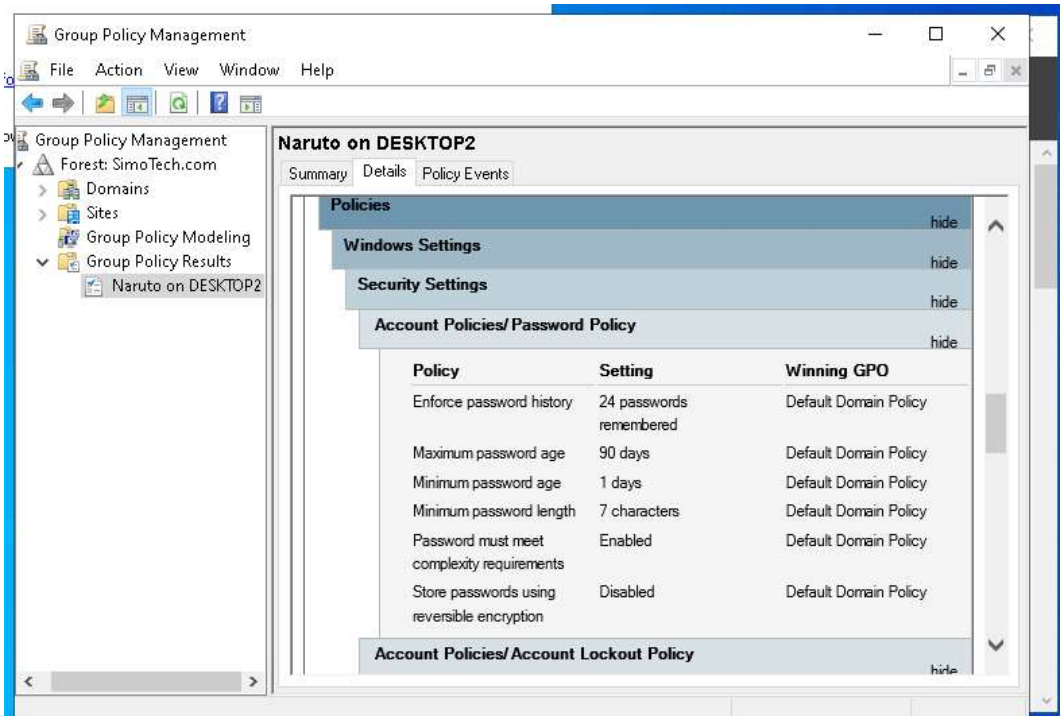
After clicking “Next” I received this error message.



To fix it I logged into Naruto’s account on Windows 10 (Employee) and ran “Services” as administrator. Then I started running the service RPC Locator. Both RPC and RPC Locator must be running.


Services
File Action View Help
Services (Local)
Services (Local)
Remote Procedure Call (RPC) Locator
Stop the service
Restart the service
Description:
In Windows 2003 and earlier versions of Windows, the Remote Procedure Call (RPC) Locator service manages the RPC name service database. In Windows Vista and later versions of Windows, this service does not provide any functionality and is present for application compatibility.
Name
Description
Status
Startup Type
Log
Remote Desktop Services
Allows user...
Running
Manual
Remote Desktop Services U...
Allows the r...
Running
Manual
Remote Procedure Call (RPC)
The RPCSS s...
Running
Automatic
Remote Procedure Call (RP...
In Windows...
Running
Manual
Remote Registry
Enables rem...
Automatic (T...
Retail Demo Service
The Retail D...
Manual
Routing and Remote Access
Offers routi...
Disabled
RPC Endpoint Mapper
Resolves RP...
Running
Automatic
Secondary Logon
Enables star...
Manual
Secure Socket Tunneling Pr...
Provides su...
Manual
Security Accounts Manager
The startup ...
Running
Automatic
Security Center
The WSCSV...
Running
Automatic (...
Sensor Data Service
Delivers dat...
Manual (Trig...
Sensor Monitoring Service
Monitors va...
Manual (Trig...
Sensor Service
A service fo...
Manual (Trig...
Server
Supports fil...
Running
Automatic (T...
Shared PC Account Manager
Manages pr...
Disabled


Group Policy Results Wizard
User Selection
You can view policy settings for users of the selected computer.
Display policy settings for:
Current user
Select a specific user:
DESKTOP2\Administrator
SIMOTECH\HelpDesk
SIMOTECH\Naruto
This list only shows users that have logged on to the computer, and for whom you have permission to read Group Policy Results data.
Do not display user policy settings in the results (display computer policy settings only)
< Back
Next >
Cancel
Last Refresh Date


Group Policy Management
File Action View Window Help
Group Policy Management
Forest: SimoTech.com
Domains
Sites
Group Policy Modeling
Group Policy Results
Naruto on DESKTOP2
Naruto on DESKTOP2
Summary Details Policy Events
Policies hide
Windows Settings hide
Security Settings hide
Account Policies/ Password Policy hide
Policy Setting Winning GPO
Enforce password history 24 passwords remembered Default Domain Policy
Maximum password age 90 days Default Domain Policy
Minimum password age 1 days Default Domain Policy
Minimum password length 7 characters Default Domain Policy
Password must meet complexity requirements Enabled Default Domain Policy
Store passwords using reversible encryption Disabled Default Domain Policy
Account Policies/ Account Lockout Policy