
Exchange Server Installation

PART1: CONFIGURING AD SERVER

• DOING PRE-INSTALLATION TASKS FOR ACTIVE DIRECTORY

1. In This Part Firstly we will configure basic settings for installing Active Directory and DNS Server on SrvAD as follows:

IP Address – 192.168.100.1 (NIC connected to LOCAL network)

Subnet Mask – 255.255.255.0

DNS – 192.168.100.1

Server Name – SrvAD

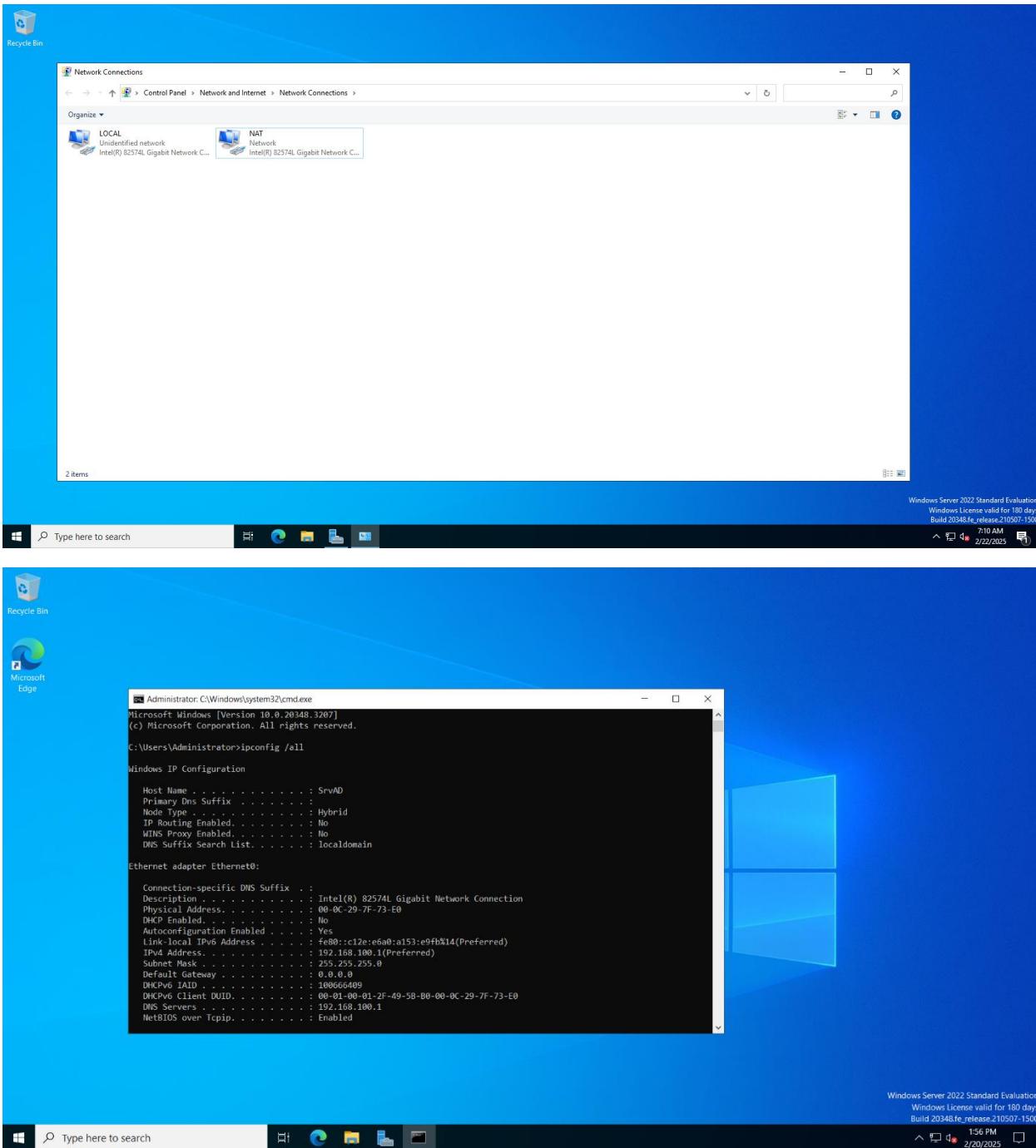
Note: Here we are using two NICs, one connected to LOCAL network and another running on NAT.

2. After that, we need to check for updates. Our server must be up to date to ensure services run smoothly.
3. We can disable all firewall profiles to avoid any issues with local connections. (Not recommended for Production environment).

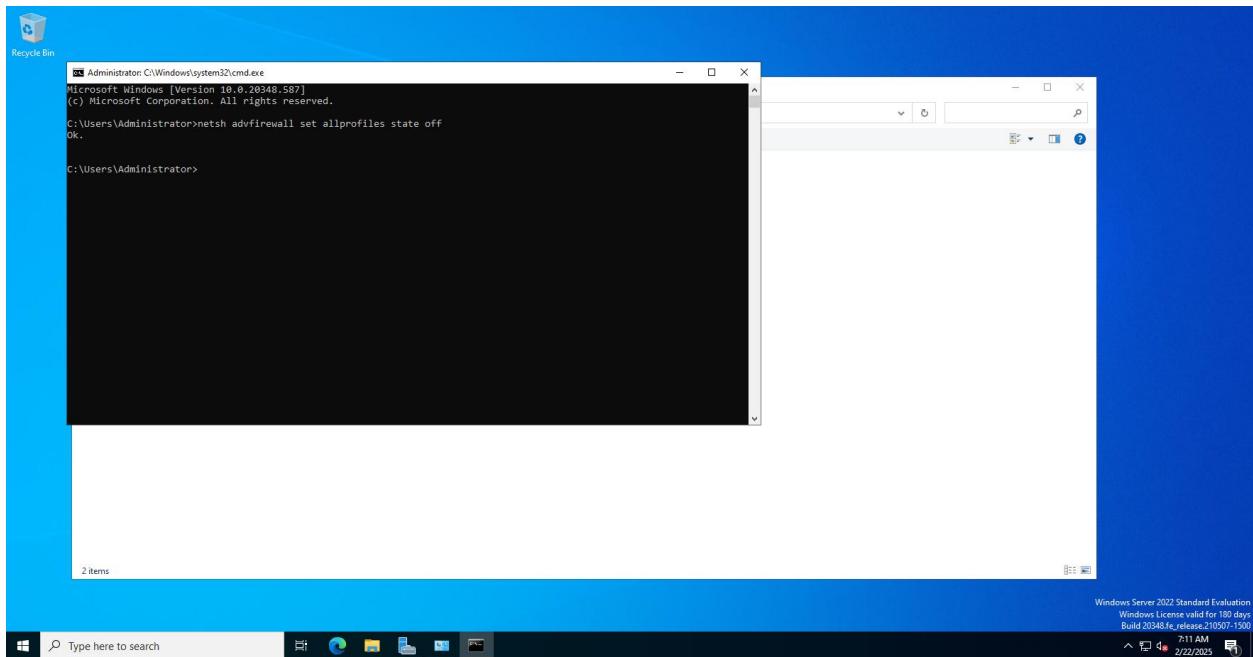
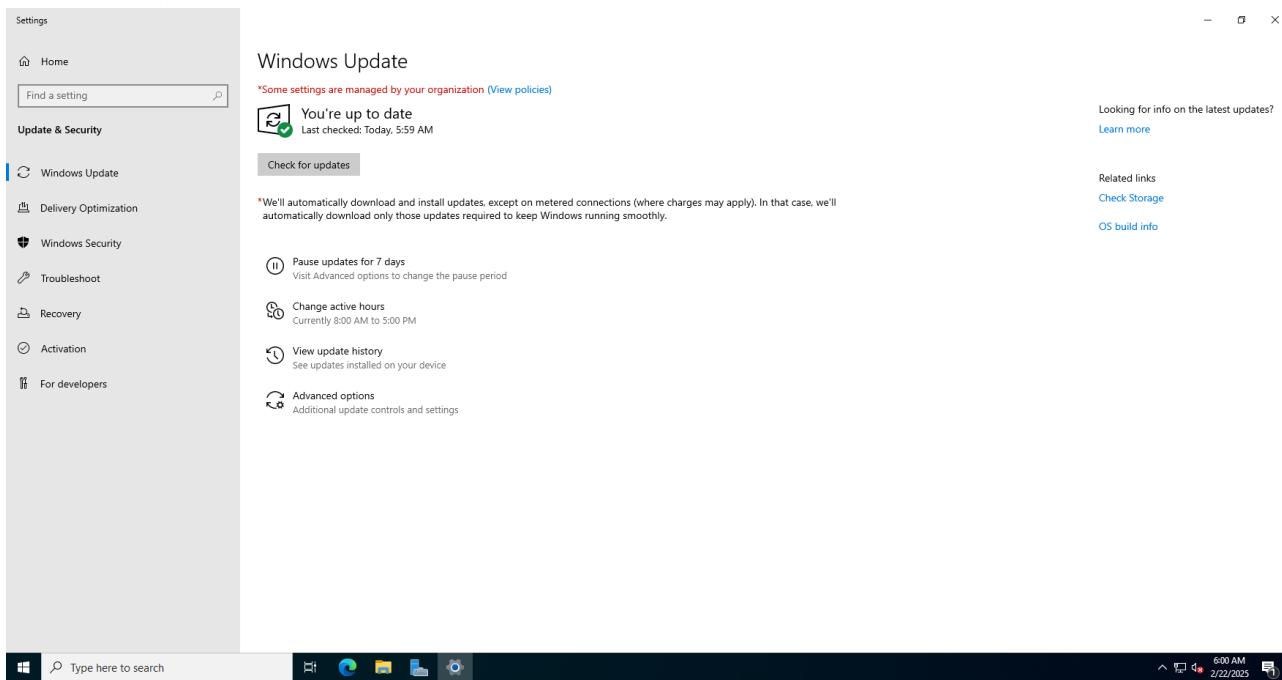
Command for disabling Firewall: **netsh advfirewall set allprofiles state off**



Exchange Installation

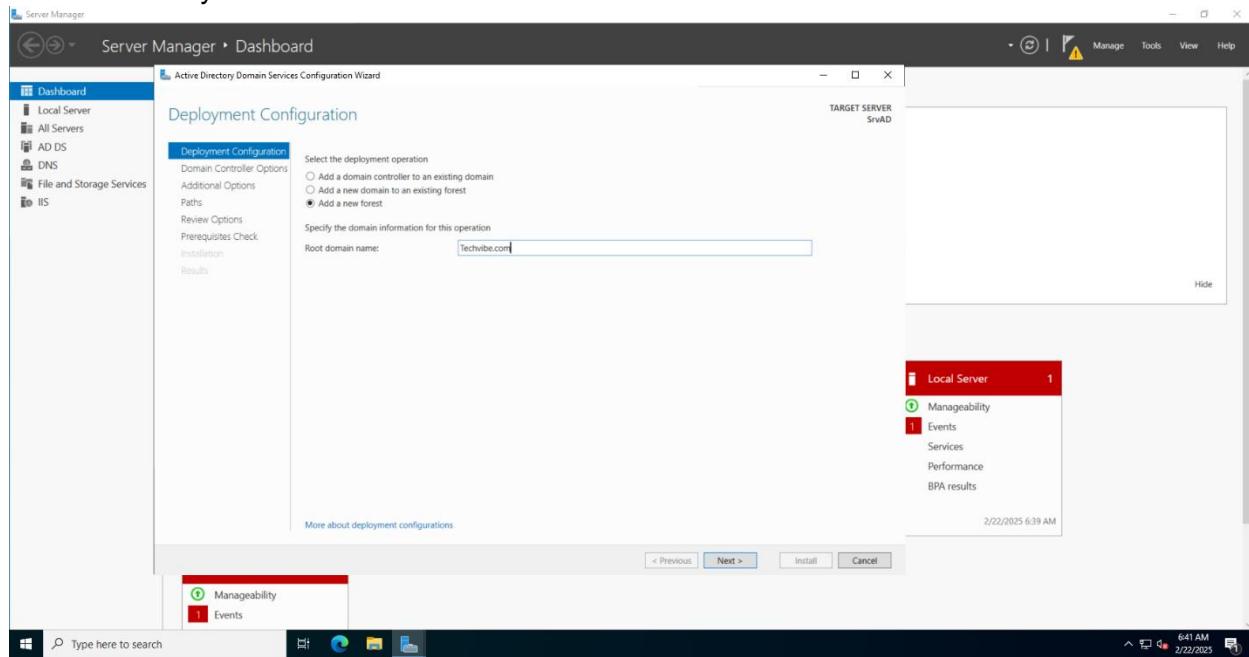


Exchange Installation



• INSTALLING DNS SERVER AND ACTIVE DIRECTORY IN SRVAD.

1. After Completing Above steps, we can proceed with the installation of DNS server and Active Directory.



Exchange Installation

Add Roles and Features Wizard

Select server roles

Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
DNS Server
Confirmation
Results

DESTINATION SERVER
SrvAD

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
- Home Group
- Network Policy and Access Services
- Print and Document Services
- Remote Access
- Remote Desktop Services
- Volume Activation Services
- Web Server (IIS) (22 of 43 installed)
- Windows Deployment Services
- Windows Server Update Services

Description

Domain Name System (DNS) Server provides name resolution for TCP/IP networks. DNS Server is easier to manage when it is installed on the same server as Active Directory Domain Services. If you select the Active Directory Domain Services role, you can install and configure DNS Server and Active Directory Domain Services to work together.

BPA results

2/20/2025 1:56 PM

All Servers 1

Manageability
Events
Services
Performance
BPA results

2/20/2025 1:56 PM

Install

Next >

< Previous

Cancel

Installation progress

Before You Begin
Installation Type
Server Selection
Server Roles
Features
AD DS
DNS Server
Confirmation
Results

DESTINATION SERVER
SrvAD

View installation progress

Feature installation

Installation started on SrvAD

Active Directory Domain Services

- DNS Server
- Group Policy Management
- Remote Server Administration Tools
- Role Administration Tools
- DNS Server 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

BPA results

2/20/2025 1:56 PM

All Servers 1

Manageability
Events
Services
Performance
BPA results

2/20/2025 1:56 PM

Install

Next >

< Previous

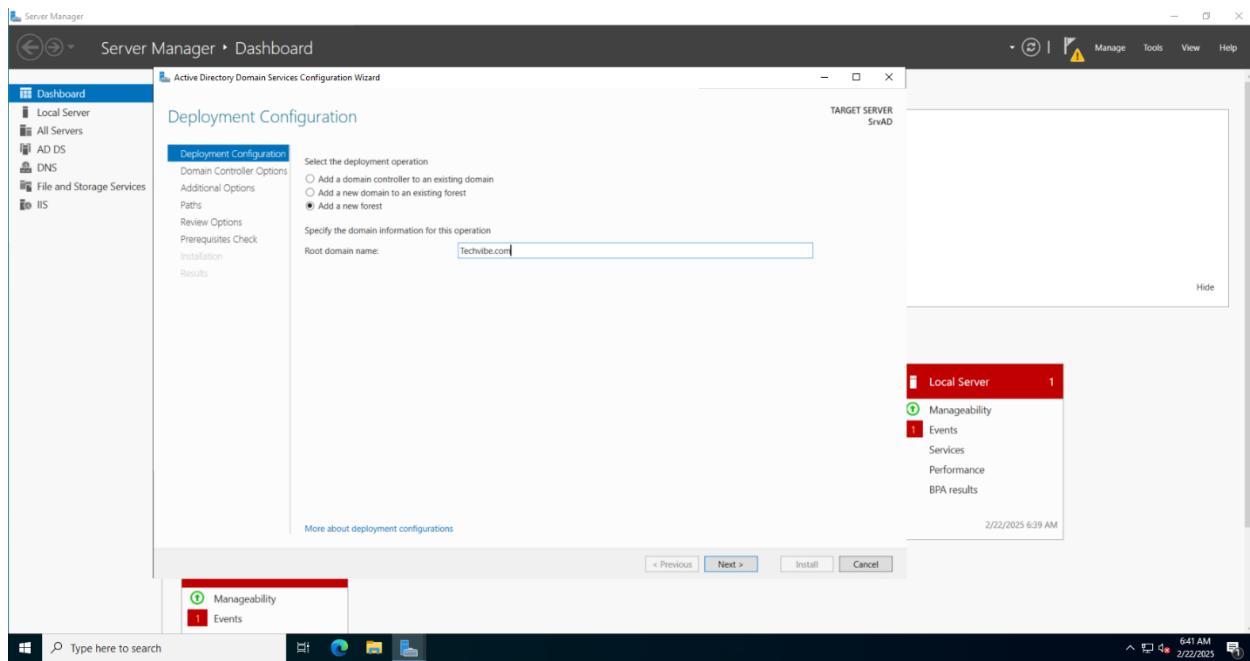
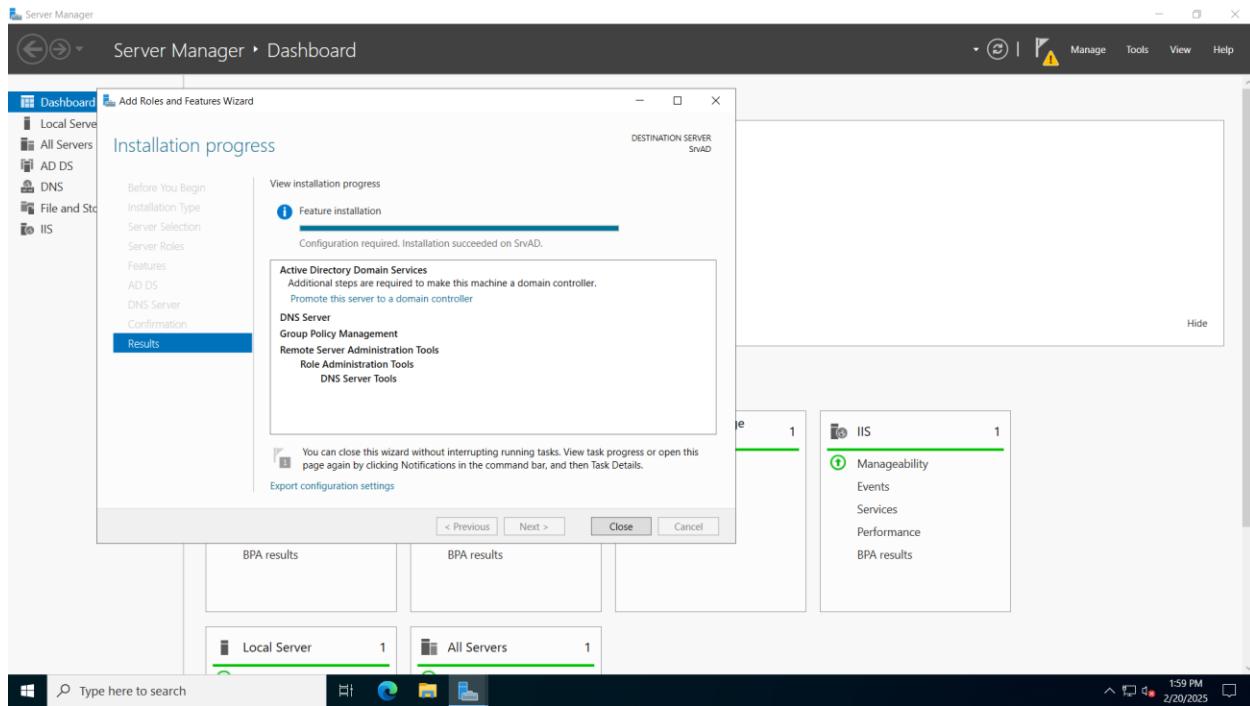
Cancel

Type here to search

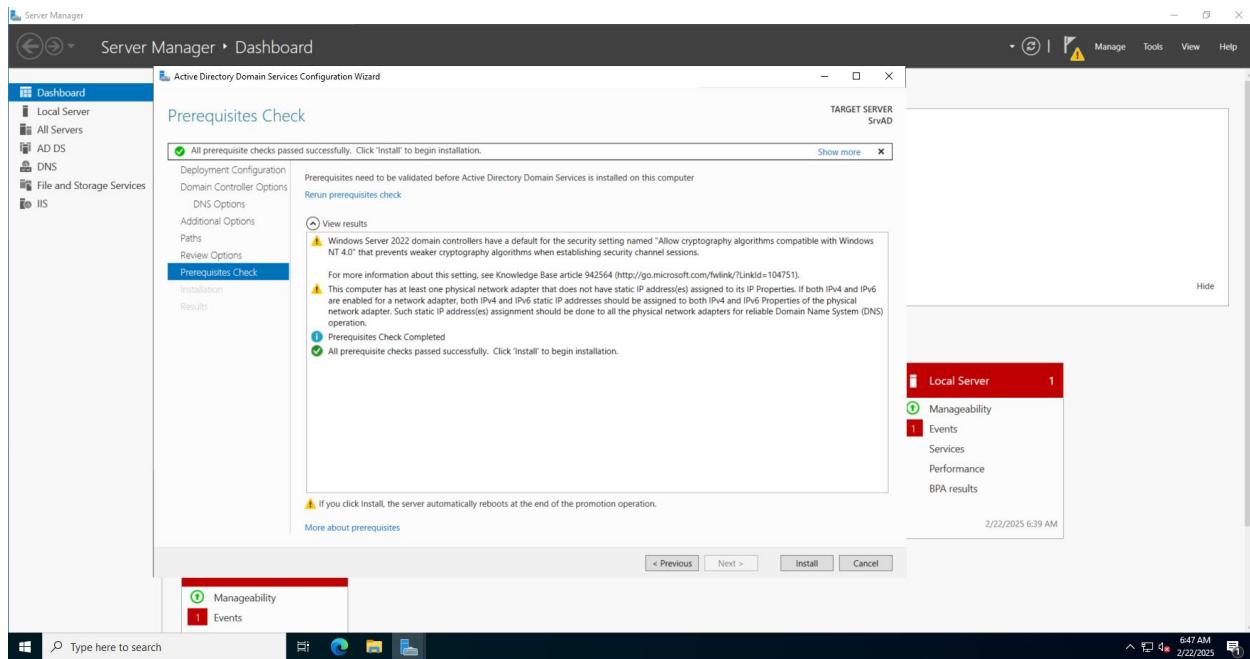
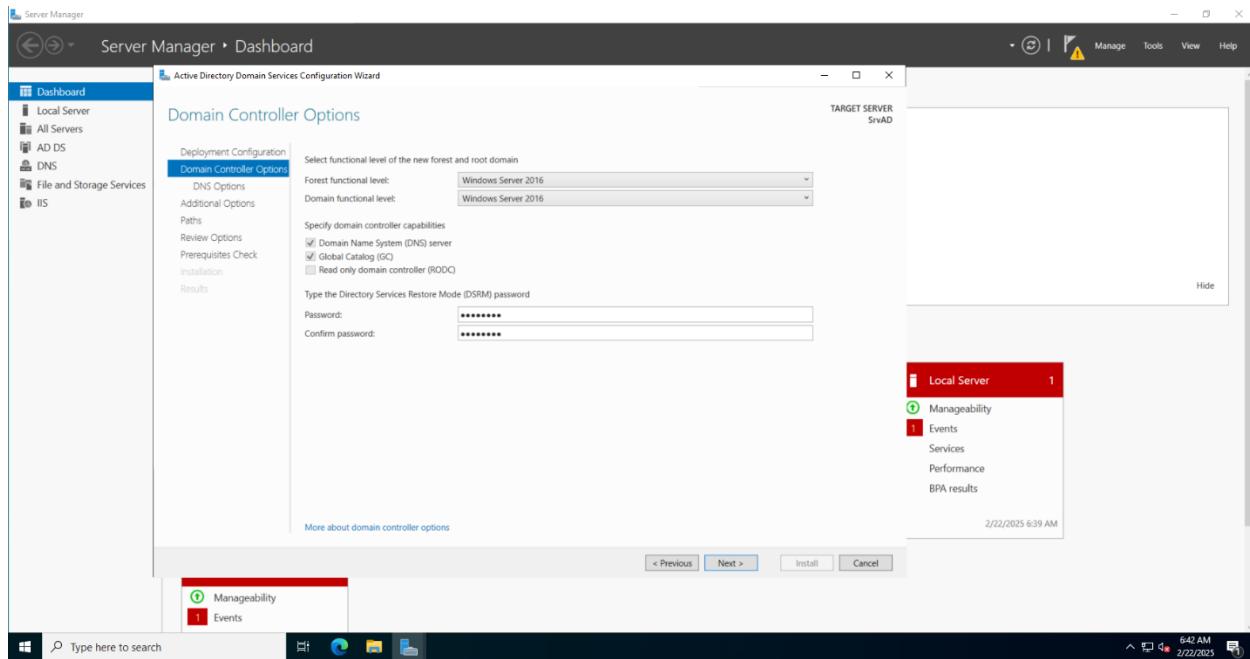
157 PM
2/20/2025



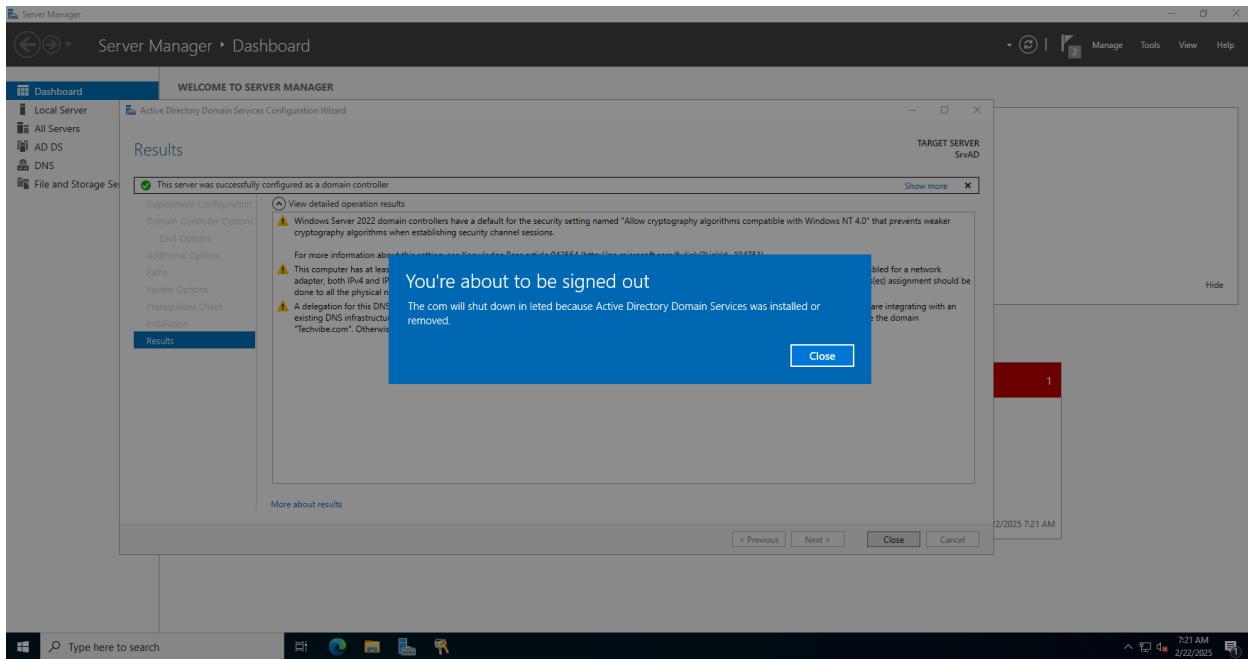
Exchange Installation



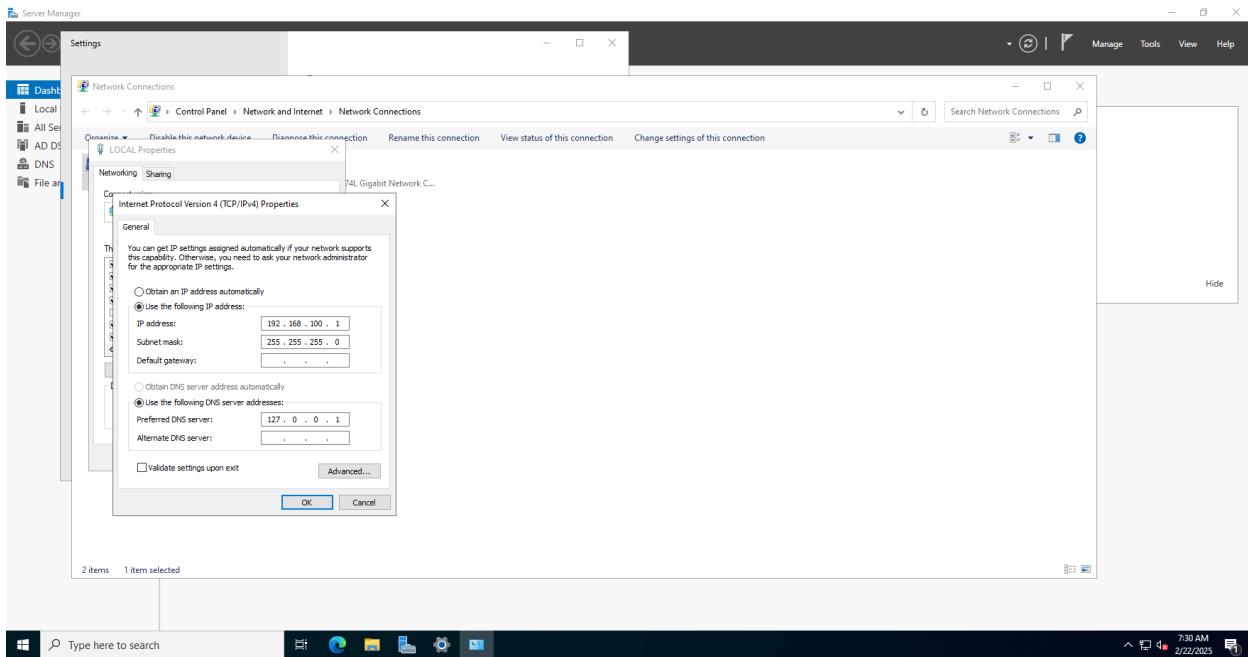
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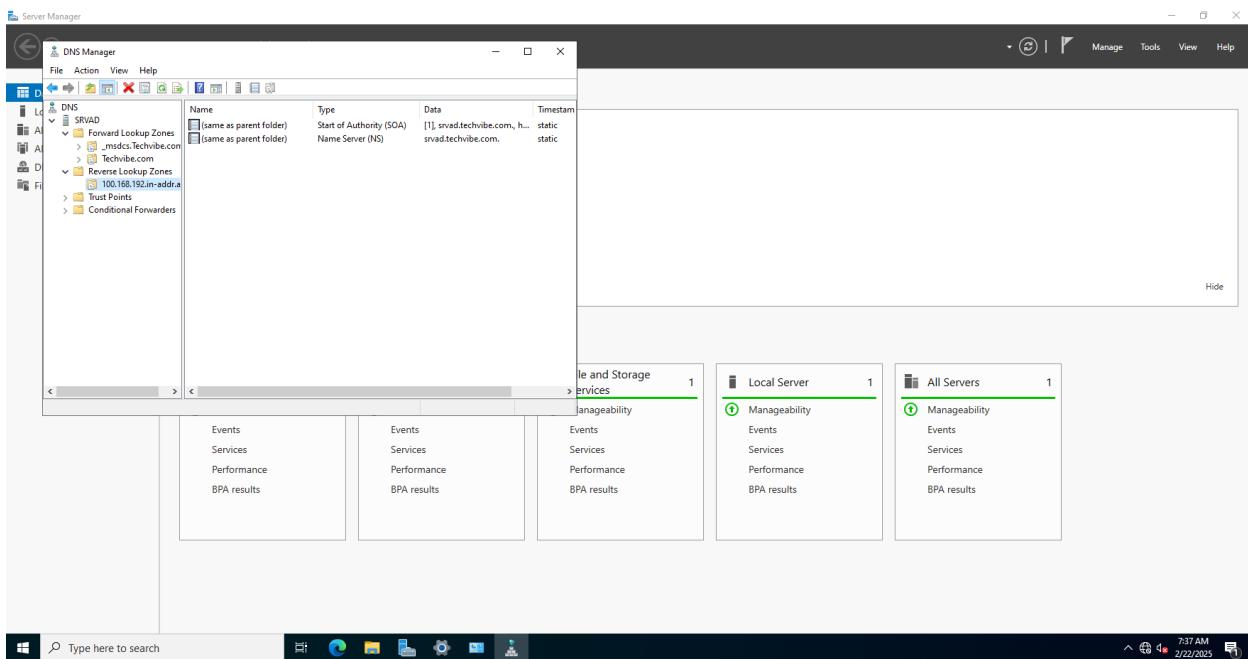
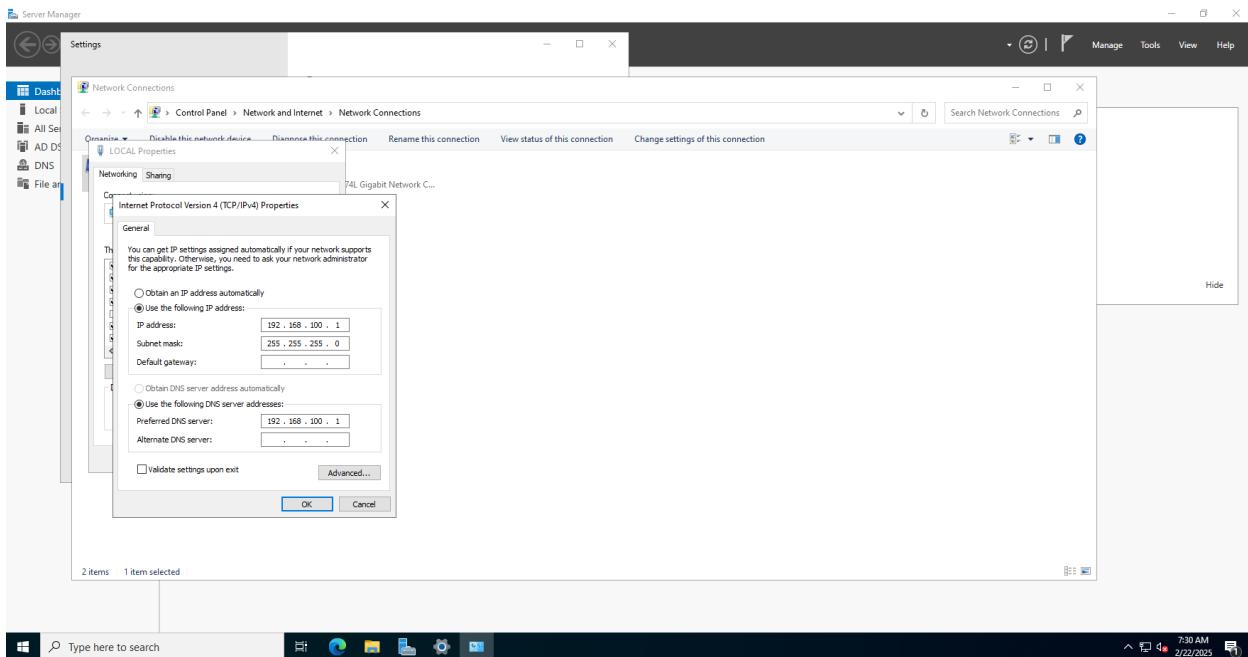
Exchange Installation



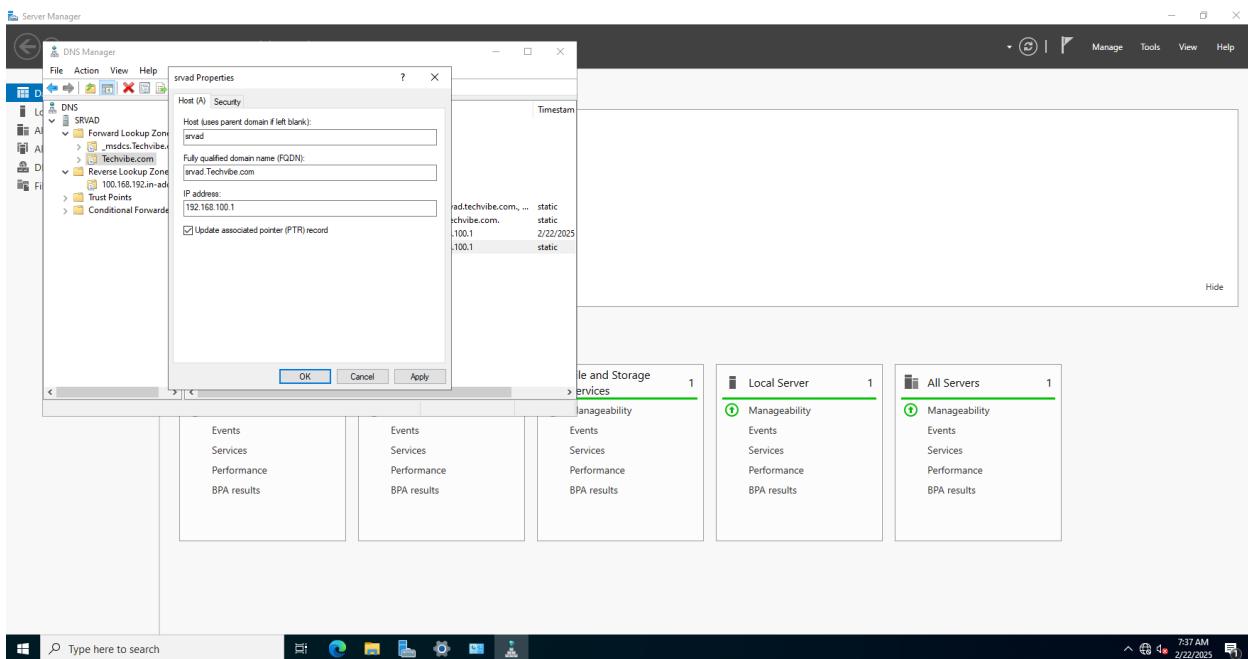
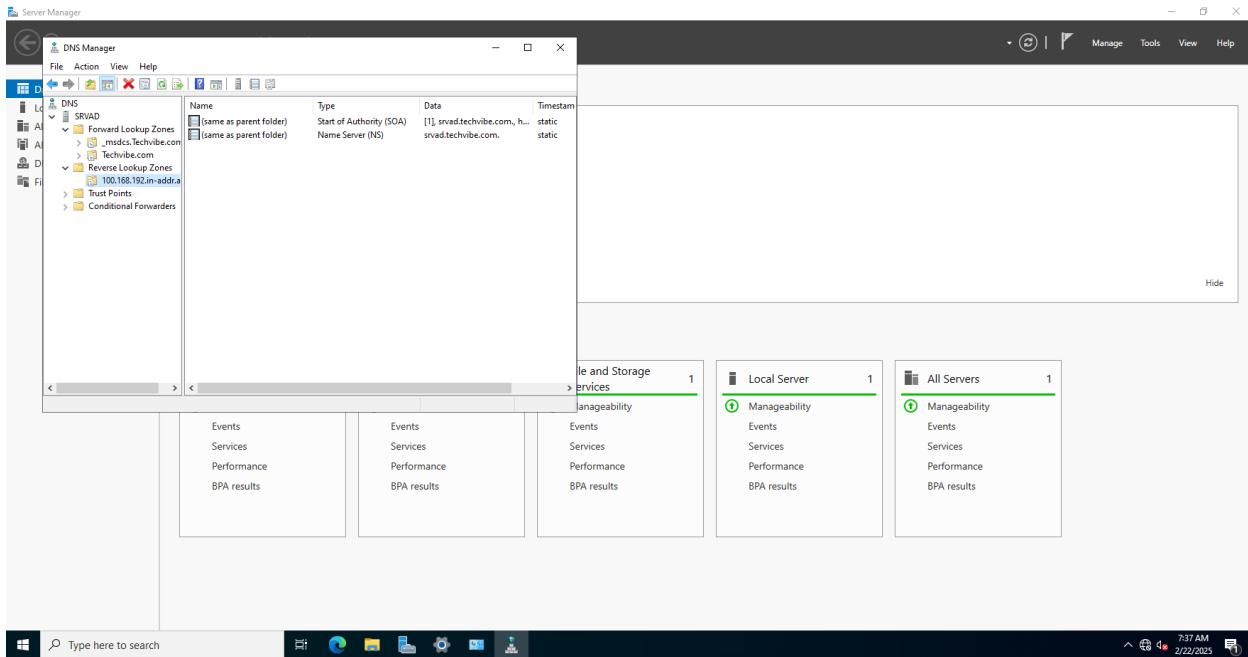
- After the successful installation of Active Directory, we must change DNS address because it is automatically set to localhost during installation. Additionally, we must create a [Reverse Lookup Zone](#) in DNS.



Exchange Installation



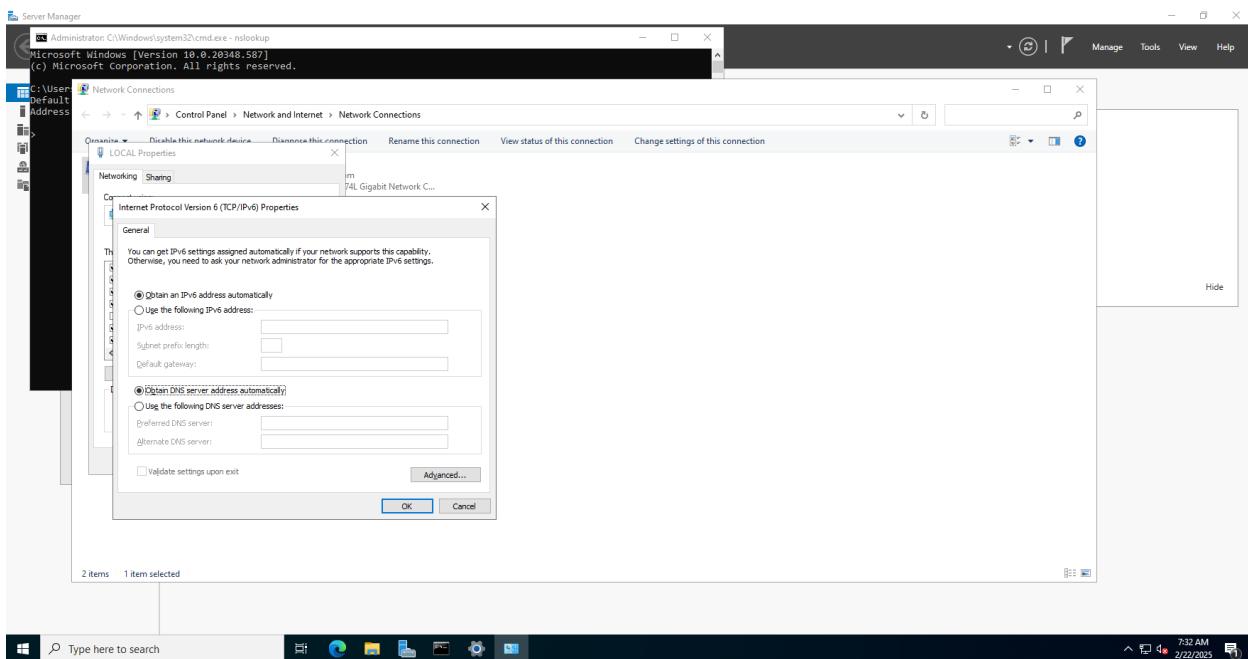
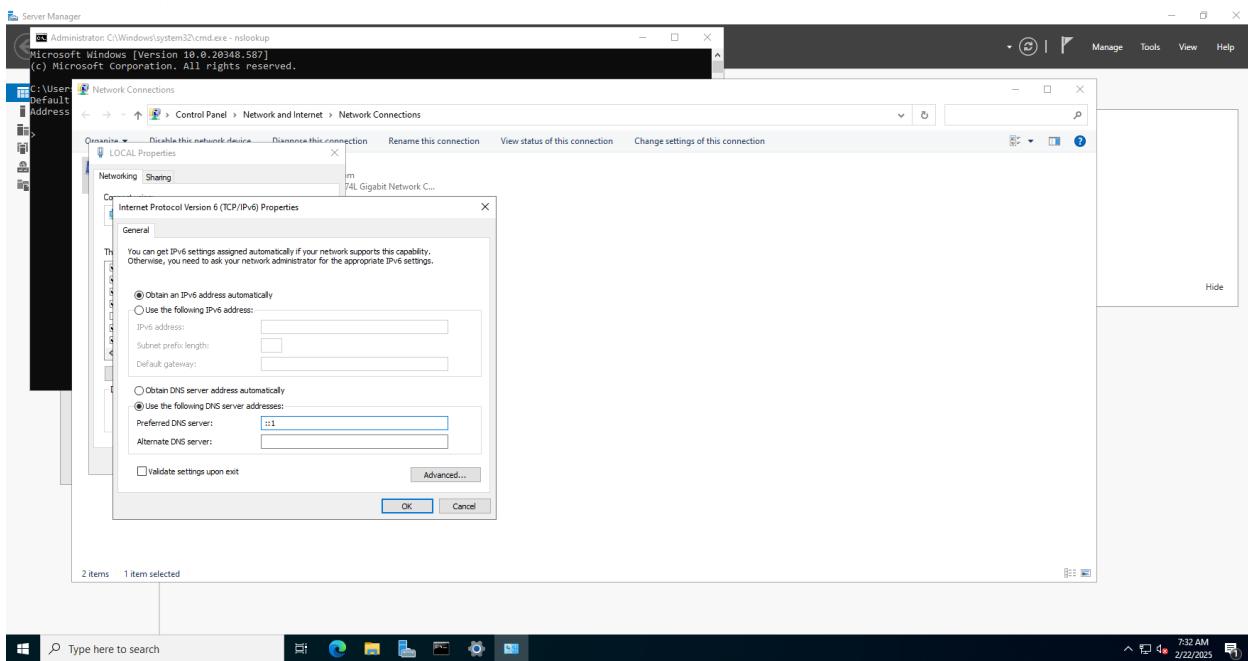
Exchange Installation

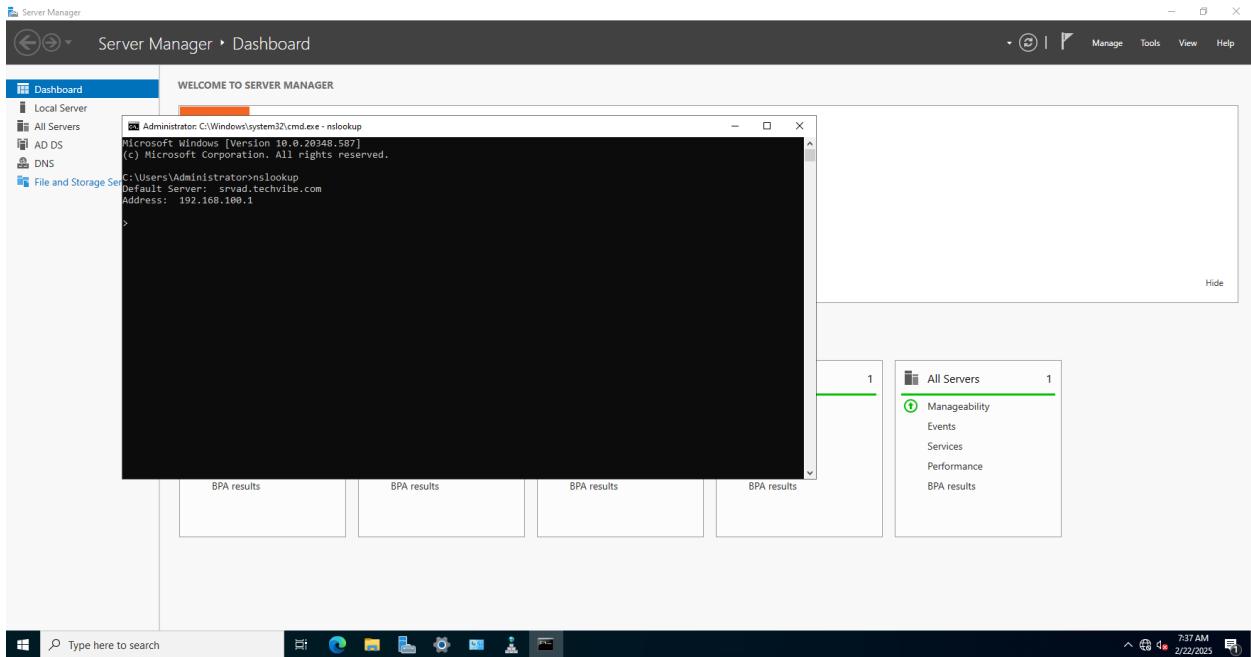


3. Use **nslookup** to verify the DNS Address, if it still shows the localhost as the default server change IPv6 DNS server to obtain address automatically.



Exchange Installation



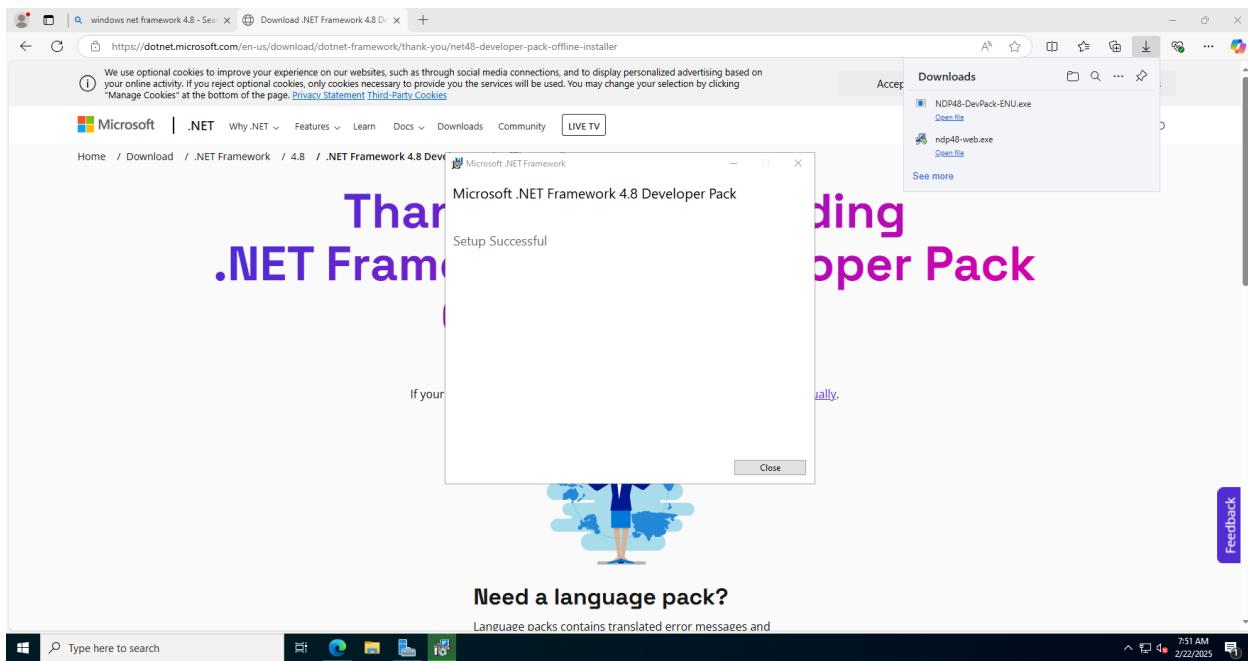
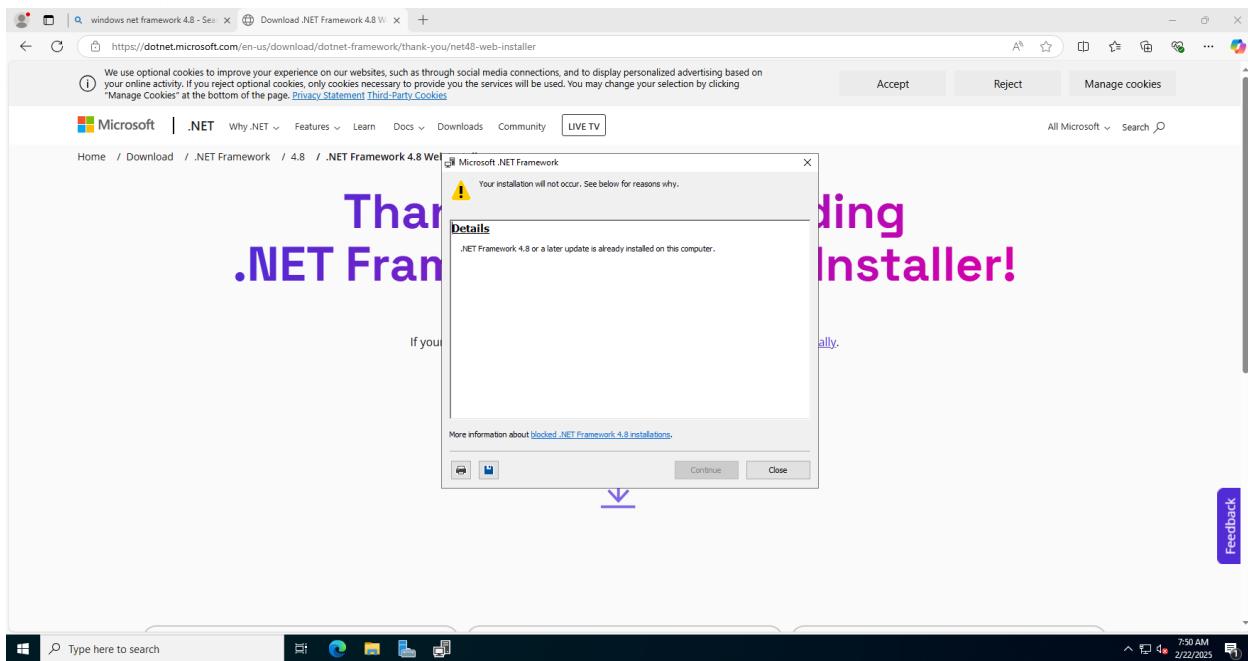


• INSTALLING REQUIRED SOFTWARE FOR EXCHANGE 2016 PREREQUISITES FOR PREPARING ACTIVE DIRECTORY:

1. The computer requires the following software:
 - .NET Framework 4.8
 - Visual C++ redistributable package for Visual Studio 2012 (Additionally install latest version of C++ also)
 - Install the remote tools administration pack by running the following command in Windows PowerShell: **Install-WindowsFeature RSAT-ADDS**



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Exchange Installation

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Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.61030
Setup Successful

Visual C++ Redistributable Packages for Visual Studio 2012 Update 4
The Visual C++ Redistributable Packages install runtime components that are required to run C++ applications built with Visual Studio 2012.

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Universal CRT deployment
Redistribute Visual C++ Files
Redistribute Visual C++ Files By Using Merge Modules
Redistribute Visual C++ ActiveX Controls
Redistribute the MFC Library
Redistribute an ATL application
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Run a C++-CR application on a previous runtime version
C++ Attributes for COM and .NET
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Attributes by group
Attributes by usage
Attributes alphabetical reference
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Architecture	Link	Notes
ARM64	https://aka.ms/vs/17/release/vc_redist.arm64.exe	Permalink for latest supported ARM64 version
X86	https://aka.ms/vs/17/release/vc_redist.x86.exe	Permalink for latest supported x86 version
X64	https://aka.ms/vs/17/release/vc_redist.x64.exe	Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required

Microsoft Visual C++ 2015-2022 Redistributable (x64) - 14.42.34438
Setup Successful

Notes

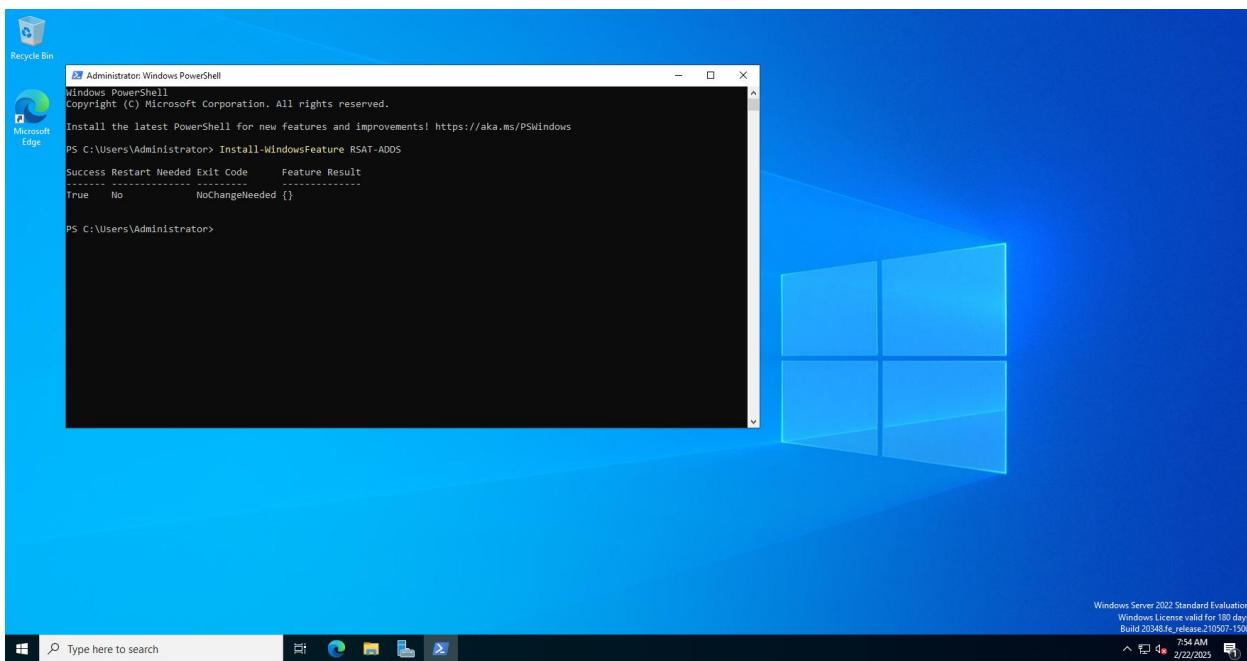
- The Visual C++ Redistributable packages are available for different architectures and operating systems. You can choose the appropriate package based on your needs.
- Some of the download links require a Microsoft account. If you don't have one, you can create a free account by choosing the [Create one!](#) link.
- Visual Studio versions since Visual Studio 2015 share the same Redistributable files. For example, any apps built by the Visual Studio 2015, 2017, 2019, or 2022 toolsets can use the latest Microsoft Visual C++ Redistributable. However, the version of the Microsoft Visual C++ Redistributable installed on the machine must be the same or higher than the version of the Visual C++ toolset used to create your application. For more information about which version of the Redistributable to install, see [Determining which DLLs to redistribute](#). For more information about binary compatibility, see [C++ binary compatibility between Visual Studio versions](#).
- Windows XP Support: Microsoft ended support for Windows XP on April 8, 2014. Current versions of the

Downloads
VC_redist.x64.exe
vcredist.x64.exe
NDP48-DevPack-ENU.exe
ndp48-web.exe

See more Documentation
Redistributing Visual C++ Files
Installing VC Runtime fails - Visual C+++
Microsoft Visual Studio 2005 - Microsoft Lifecycle
Show 2 more

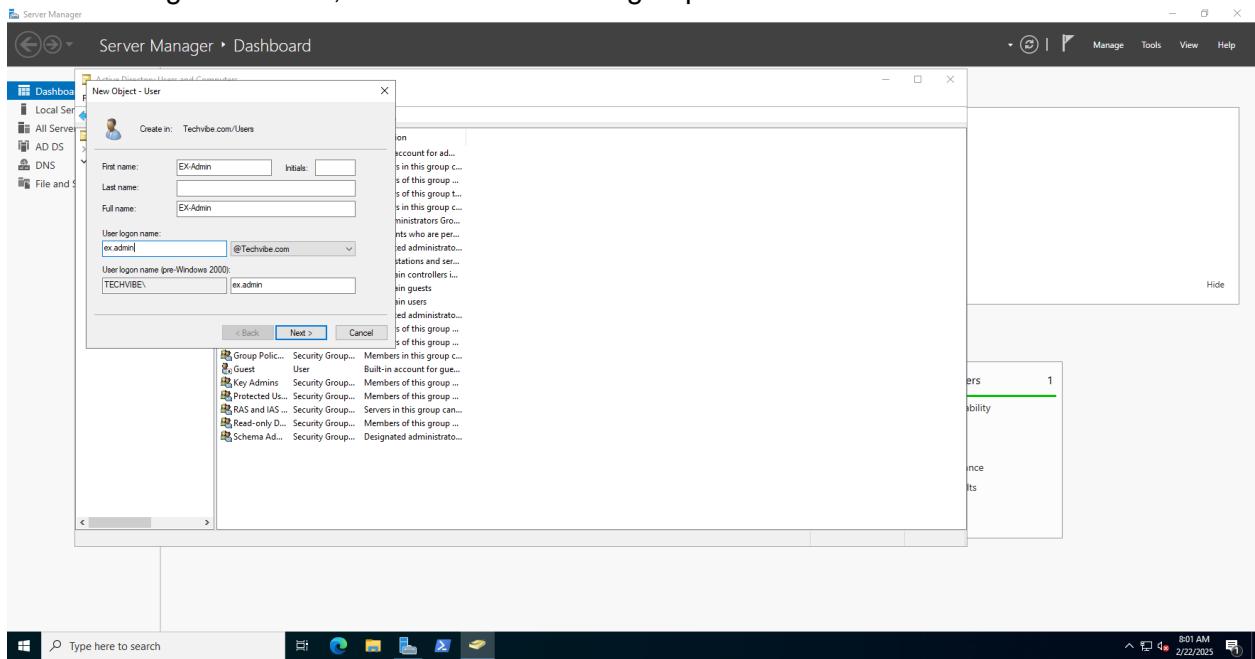


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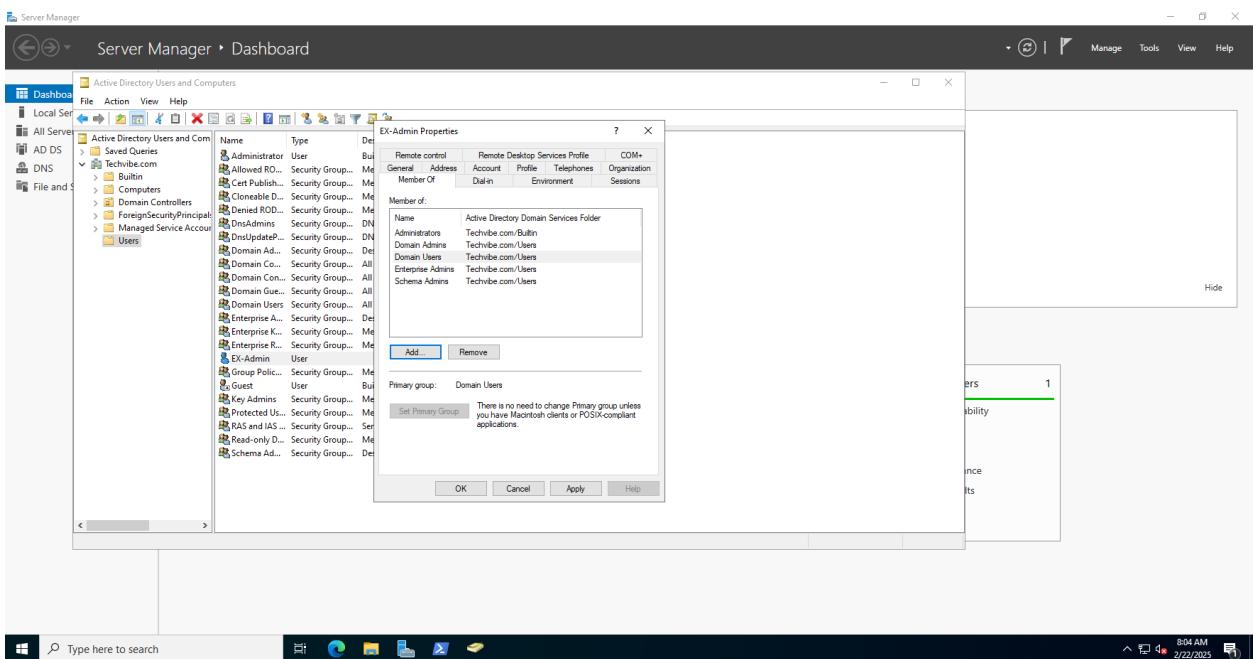
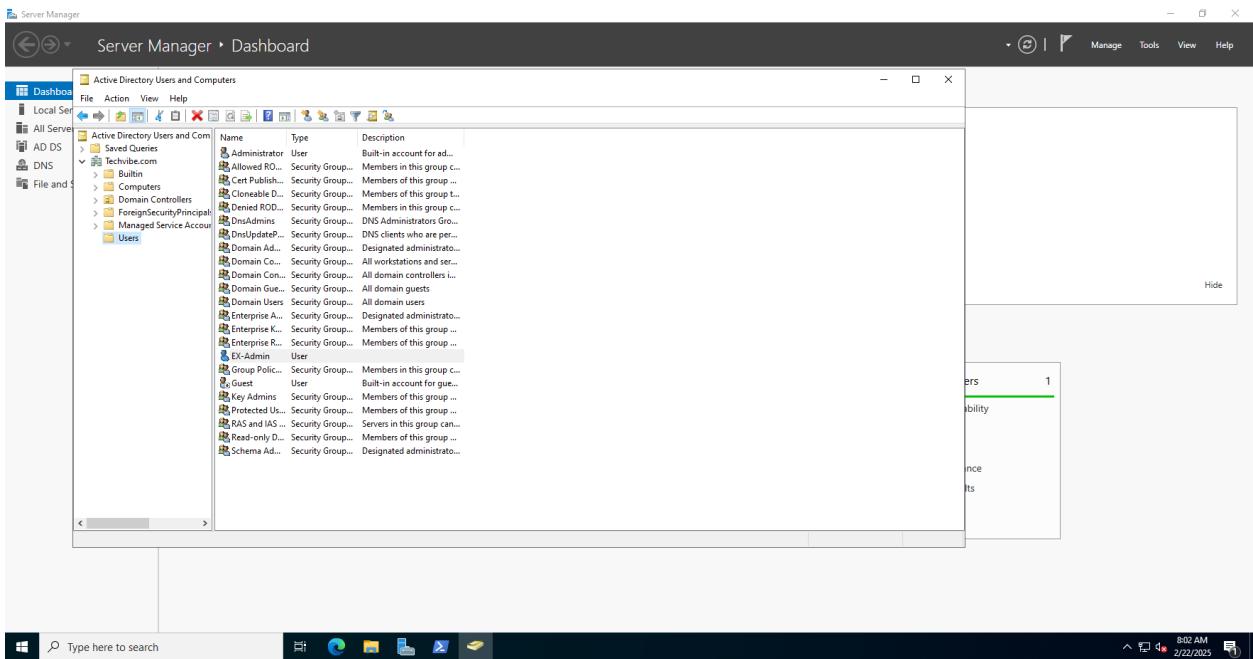


• CREATING A DEDICATED EXCHANGE ADMIN ACCOUNT FOR ADMINISTRATION OF EXCHANGE.

- After creating an account, we must add it in the groups as shown in the screenshot.



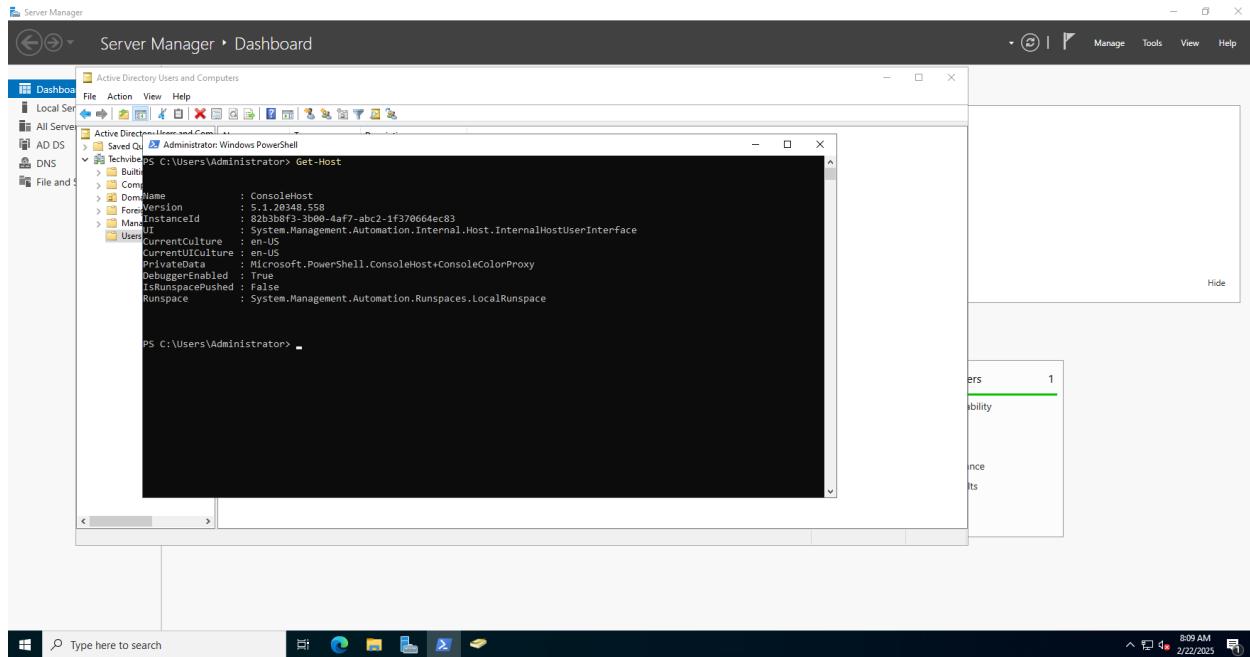
Exchange Installation



• CHECKING POWERSHELL VERSION



Exchange Installation



PART 2: PREPARING EXCHANGE SERVER

• CONFIGURING BASIC NETWORK SETTINGS

- Initially, we will configure IP address on SrvEX.

IP Address – 192.168.100.2 (NIC connected to LOCAL network)

Subnet Mask – 255.255.255.0

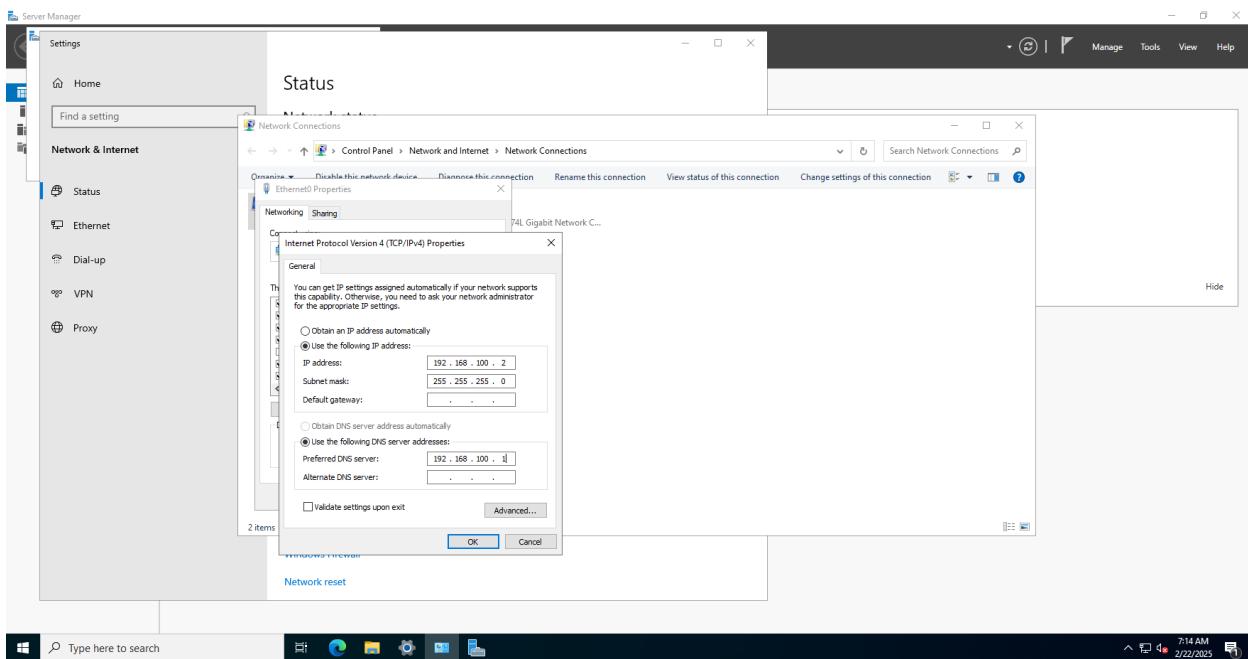
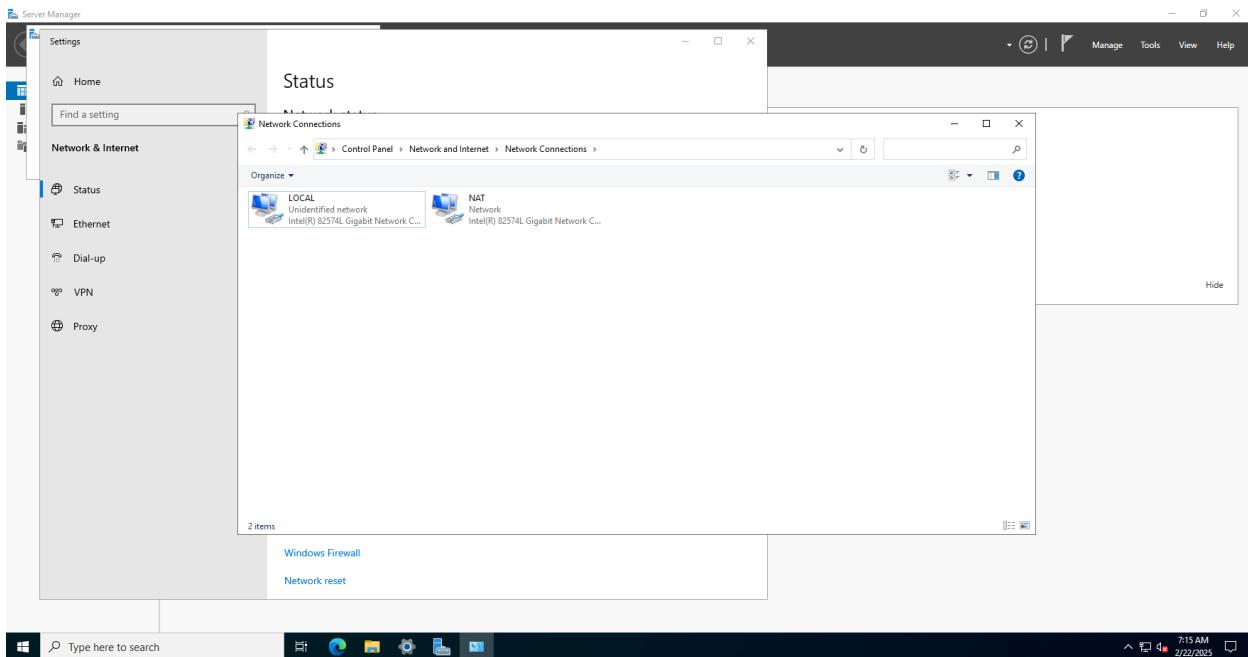
DNS – 192.168.100.1

Server Name – SrvEX

Note: Here we are using two NICs, one connected to LOCAL network and another running on NAT.



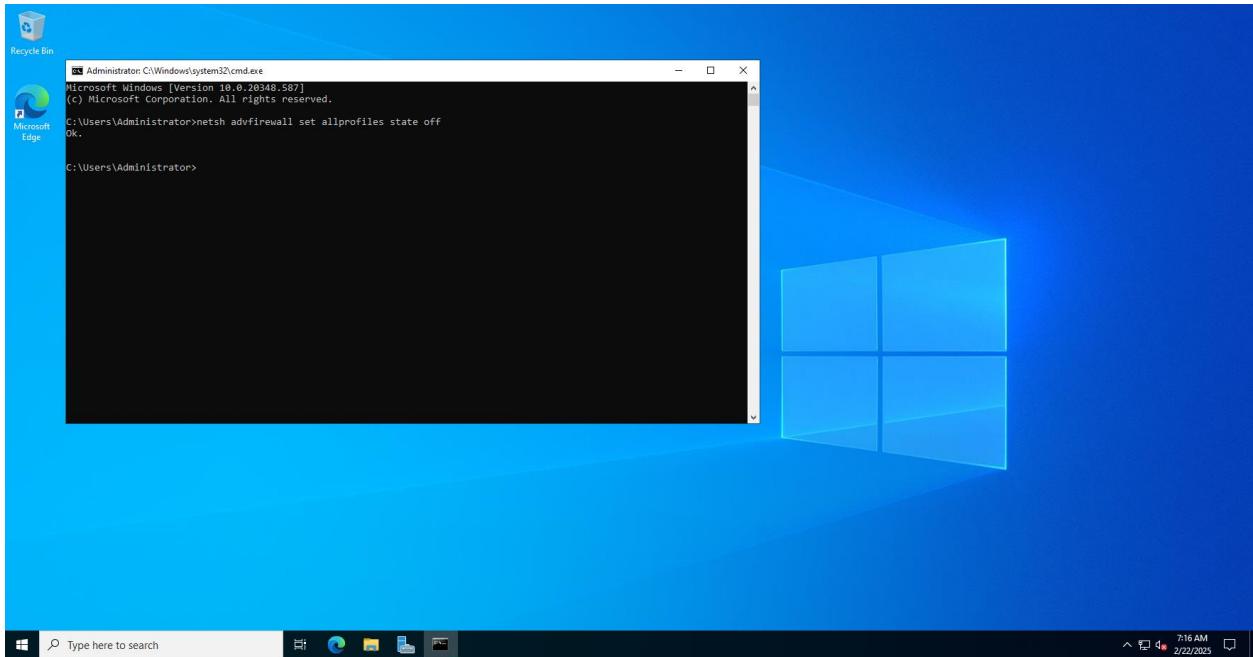
Exchange Installation



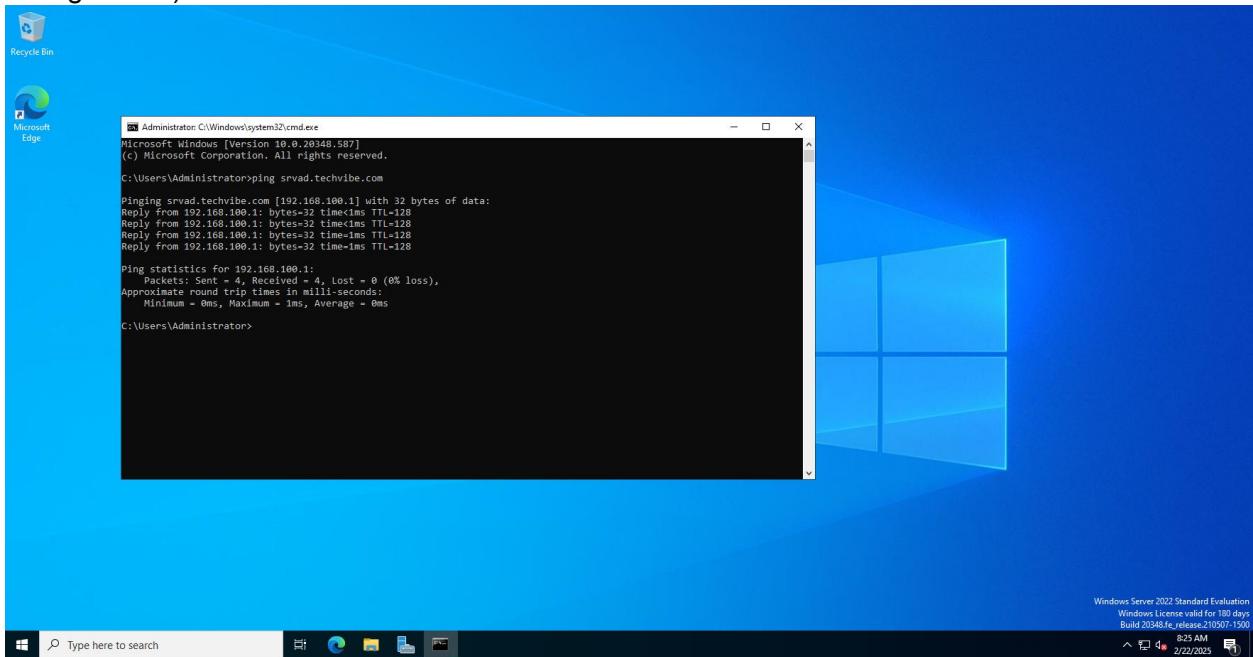
2. We will disable the firewall, the same as we did in SrvAD.



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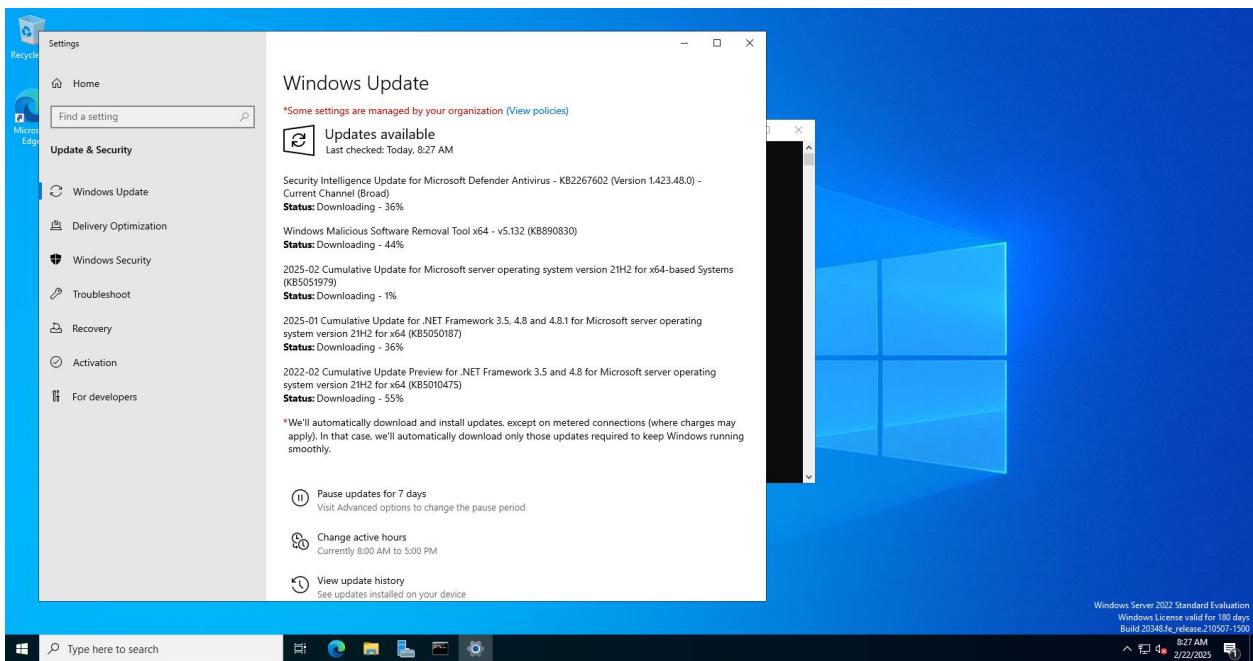
- Once the above steps are done, we will test the connection by pinging SrvEX with SrvAD
Replace your AD server FQDN. (This verifies both connection and correct DNS configuration)



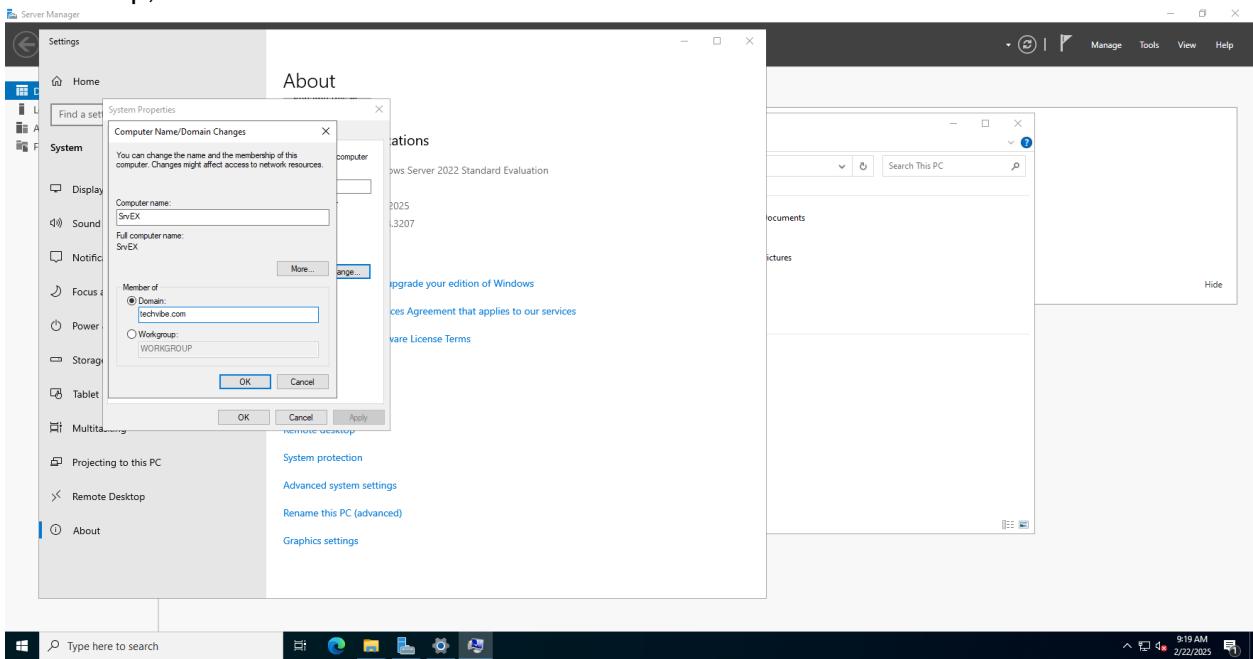
- Check for the updates, Download if any.



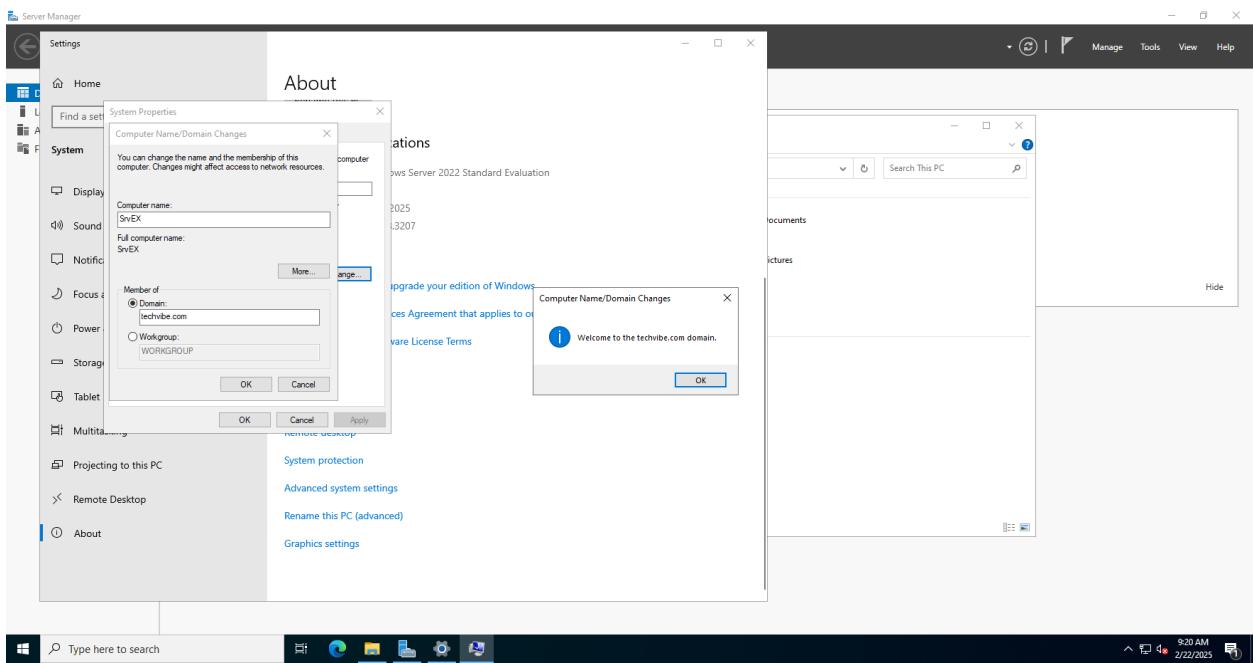
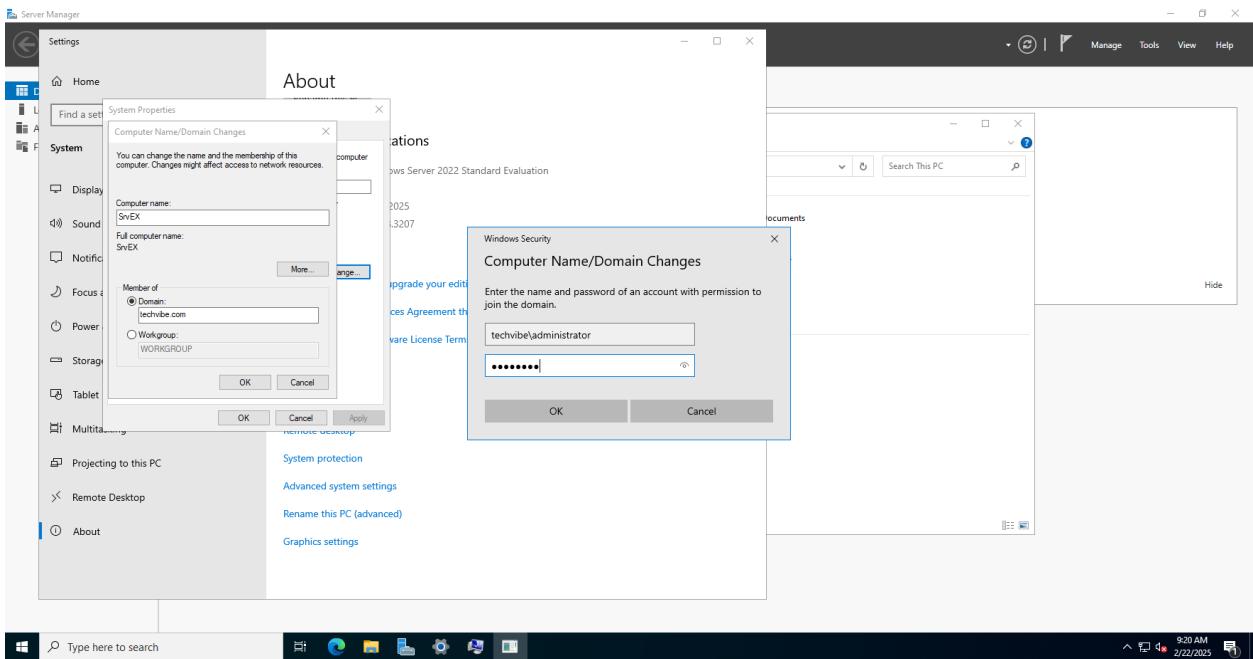
Exchange Installation



5. In this step, we will make SrvEX as member of domain Techvibe.com.



Exchange Installation



• INSTALLING REQUIRED ROLES ON SRVEX

1. Install Required Software:

- .NET Framework 4.8
- Visual C++ Redistributable Package for Visual Studio 2012
- Visual C++ Redistributable Package for Visual Studio 2013
- Microsoft Unified Communications Managed API 4.0, Core Runtime 64-bit.

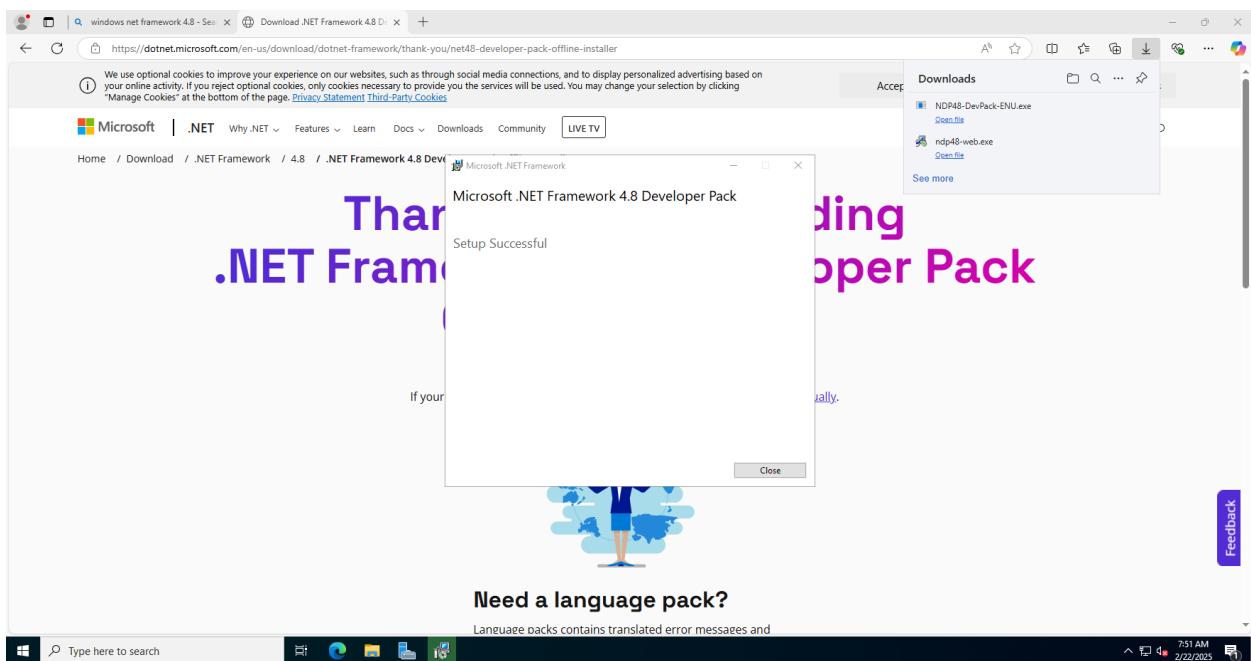
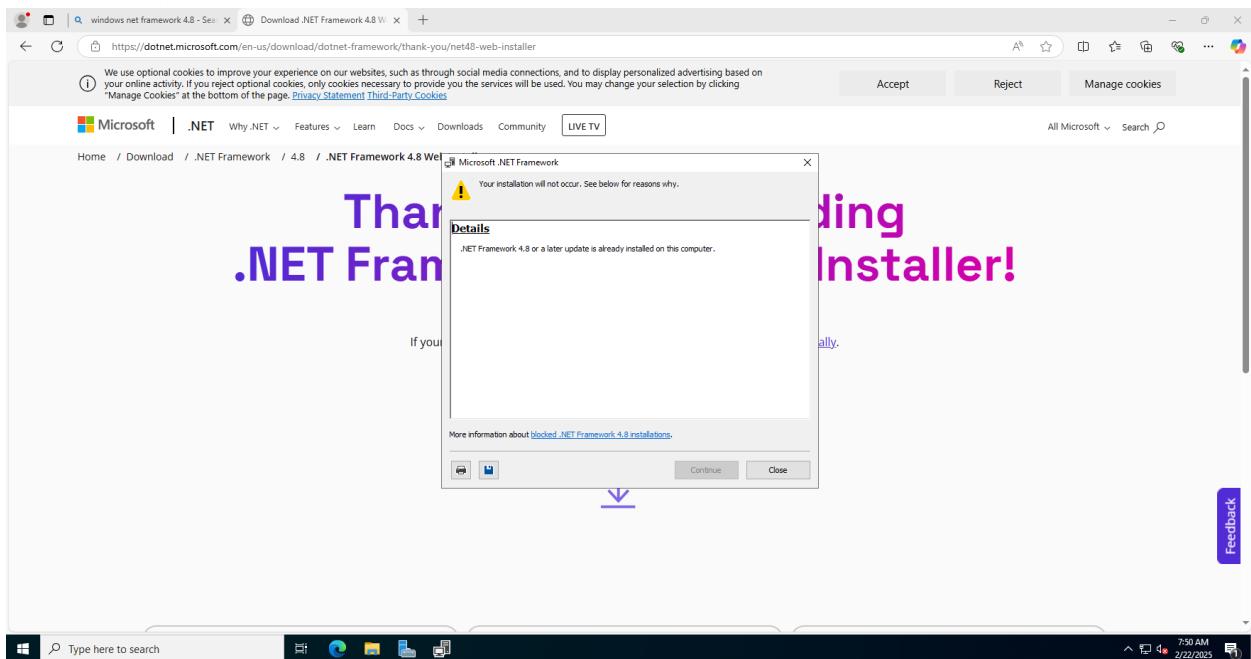
2. Install Windows Components:

Run the following command in Windows PowerShell to install the necessary Windows features:

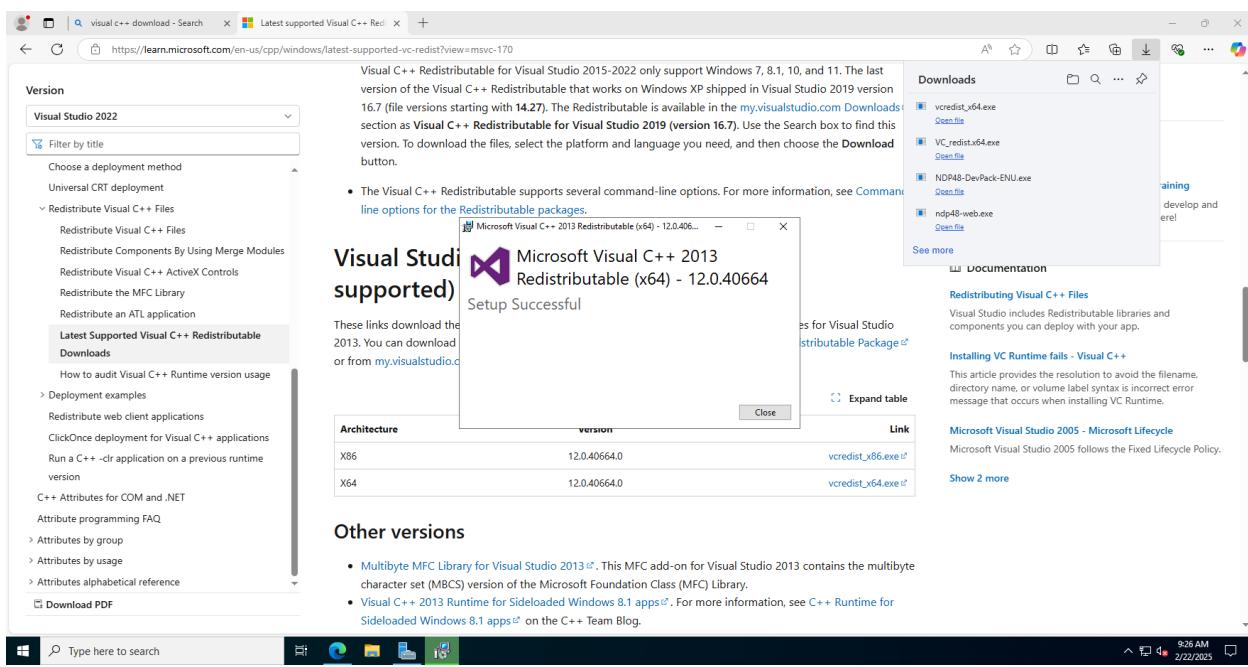
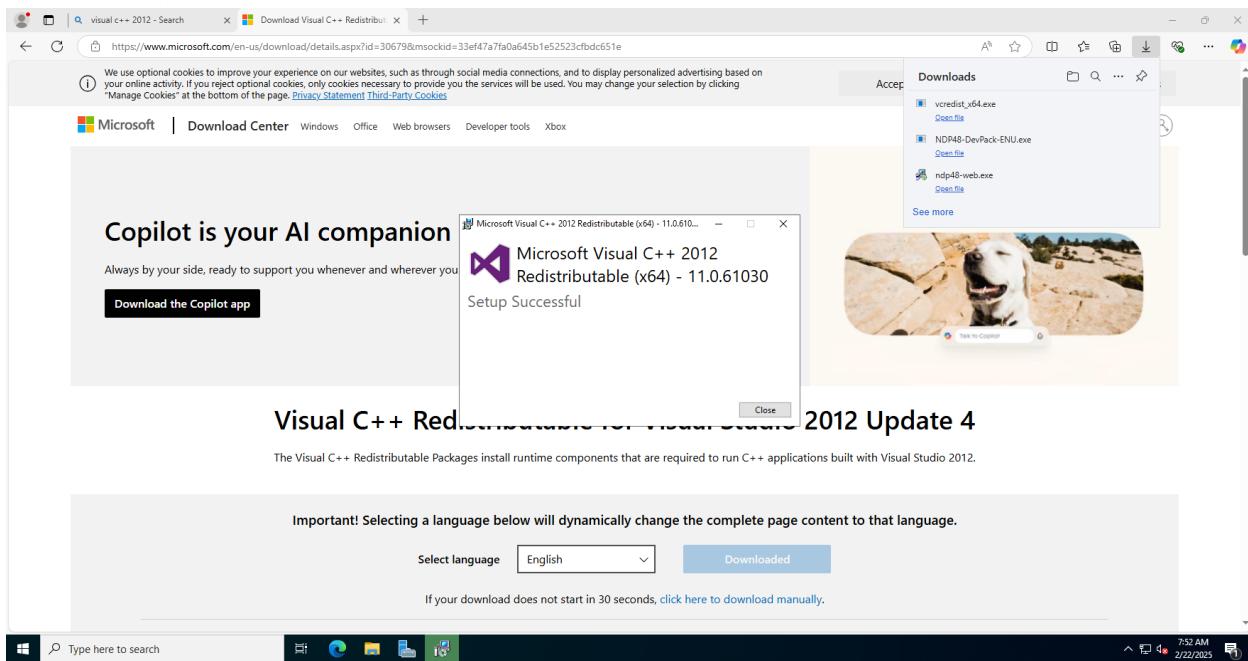
Install-WindowsFeature NET-Framework-45-Features,Server-Media-Foundation,RPC-over-HTTP-proxy,RSAT-Clustering,RSAT-Clustering-CmdInterface,RSAT-Clustering-Mgmt,RSAT-Clustering-PowerShell,WAS-Process-Model,Web-Asp-Net45,Web-Basic-Auth,Web-Client-Auth,Web-Digest-Auth,Web-Dir-Browsing,Web-Dyn-Compression,Web-Http-Errors,Web-Http-Logging,Web-Http-Redirect,Web-Http-Tracing,Web-ISAPI-Ext,Web-ISAPI-Filter,Web-Lgcy-Mgmt-Console,Web-Metabase,Web-Mgmt-Console,Web-Mgmt-Service,Web-Net-Ext45,Web-Request-Monitor,Web-Server,Web-Stat-Compression,Web-Static-Content,Web-Windows-Auth,Web-WMI,Windows-Identity-Foundation,RSAT-ADDS



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Choose a deployment method

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Architecture Link Notes

ARM64 https://aka.ms/vs/17/release/vc_redist.arm64.exe Permalink for latest supported ARM64 version

X86 https://aka.ms/vs/17/release/vc_redist.x86.exe Permalink for latest supported x86 version

X64 https://aka.ms/vs/17/release/vc_redist.x64.exe Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required files.

Download other versions...

Notes

- The Visual C++ Redistributable package contains files for different languages. It contains files for English, French, German, Italian, Spanish, and Portuguese.
- Some of the download links require a Microsoft account. If you're asked for credentials, use your existing Visual Studio subscription account. Or, create a free account by choosing the [Create one!](#) link.
- Visual Studio versions since Visual Studio 2015 share the same Redistributable files. For example, any apps built by the Visual Studio 2015, 2017, 2019, or 2022 toolsets can use the latest Microsoft Visual C++ Redistributable. However, the version of the Microsoft Visual C++ Redistributable installed on the machine must be the same or higher than the version of the Visual C++ toolset used to create your application. For more information about which version of the Redistributable to install, see [Determining which DLLs to redistribute](#). For more information about binary compatibility, see [C++ binary compatibility between Visual Studio versions](#).
- Windows XP Support:** Microsoft ended support for Windows XP on April 8, 2014. Current versions of the

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VC_redist_x64.exe

NDP48-DevPack-ENU.exe

ndp48-web.exe

See more

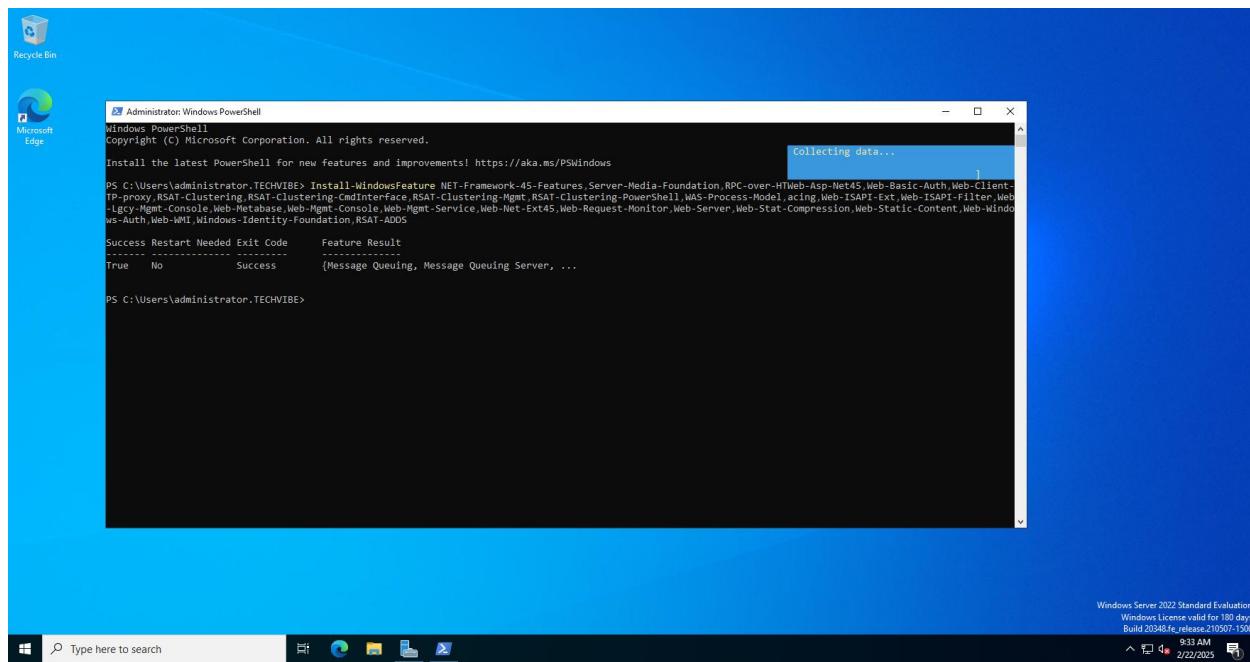
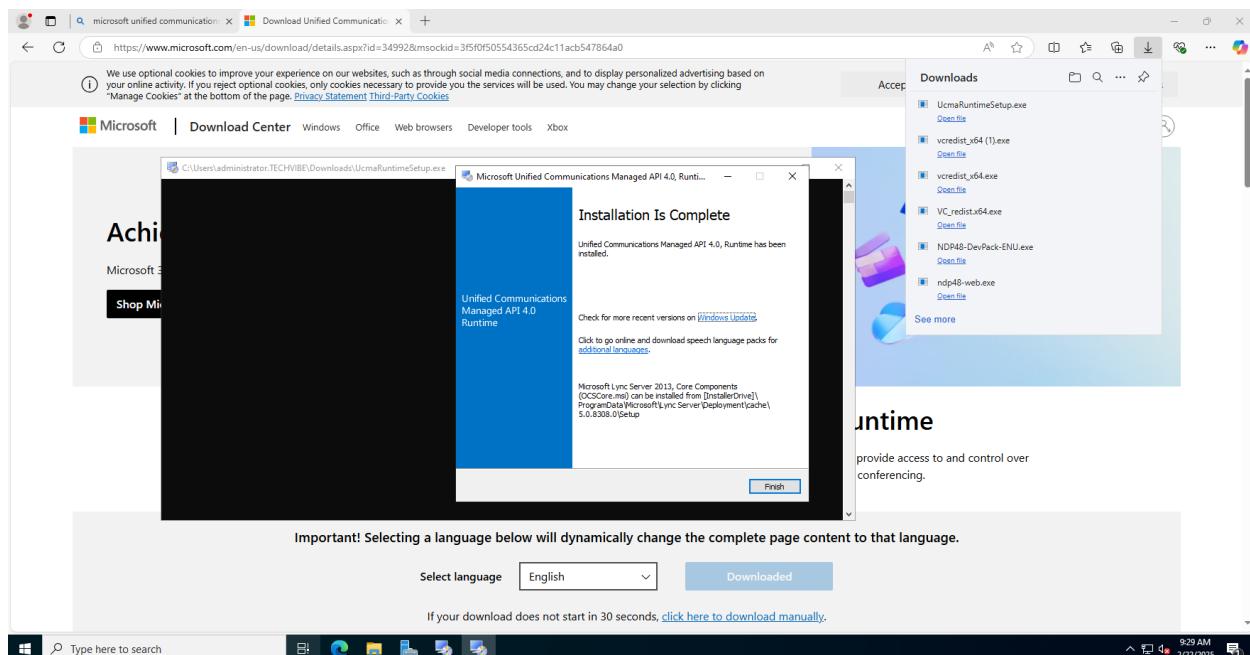
UcmaRuntime

provide access to and control over conferencing.

9:29 AM 2/22/2025



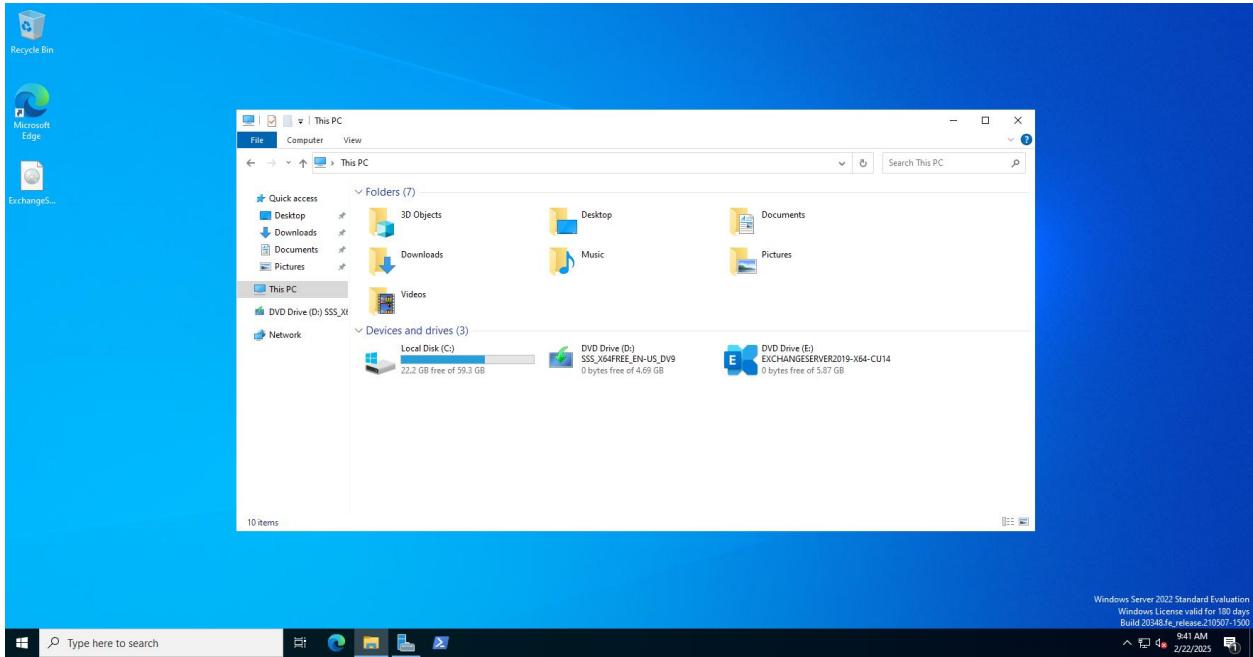
Exchange Installation



• PREPARING AD FOR EXCHANGE INSTALLATION

1. Install exchange server iso file on your SrvEX server.

<https://learn.microsoft.com/en-us/exchange/new-features/updates?view=exchserver-2019>



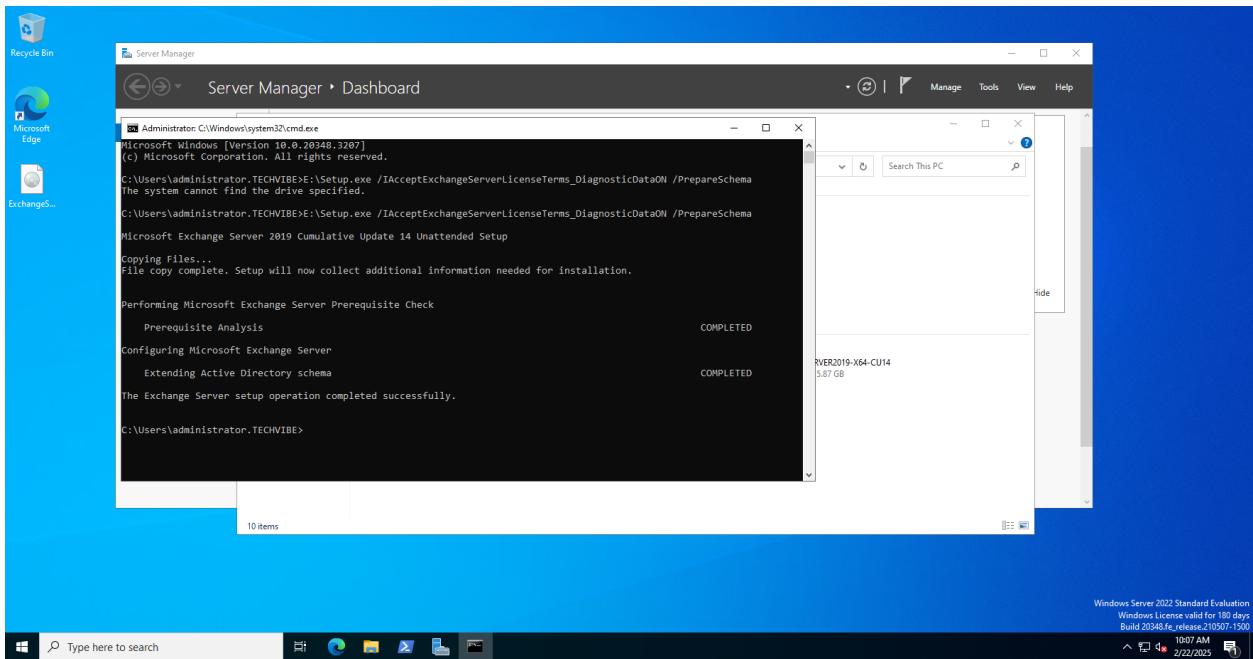
2. In File Explorer, right-click on the Exchange ISO image file that you downloaded, and then select **Mount**. Note the virtual DVD drive letter that is assigned.
3. Open a Windows Command Prompt window. For example:
 - Press the Windows key + 'R' to open the **Run** dialog, type cmd.exe, and then press **OK**.
 - Press **Start**. In the **Search** box, type **Command Prompt**, then in the list of results, select **Command Prompt**.

Step 1: Extend the Active Directory Schema

```
E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON
/PrepareSchema
```

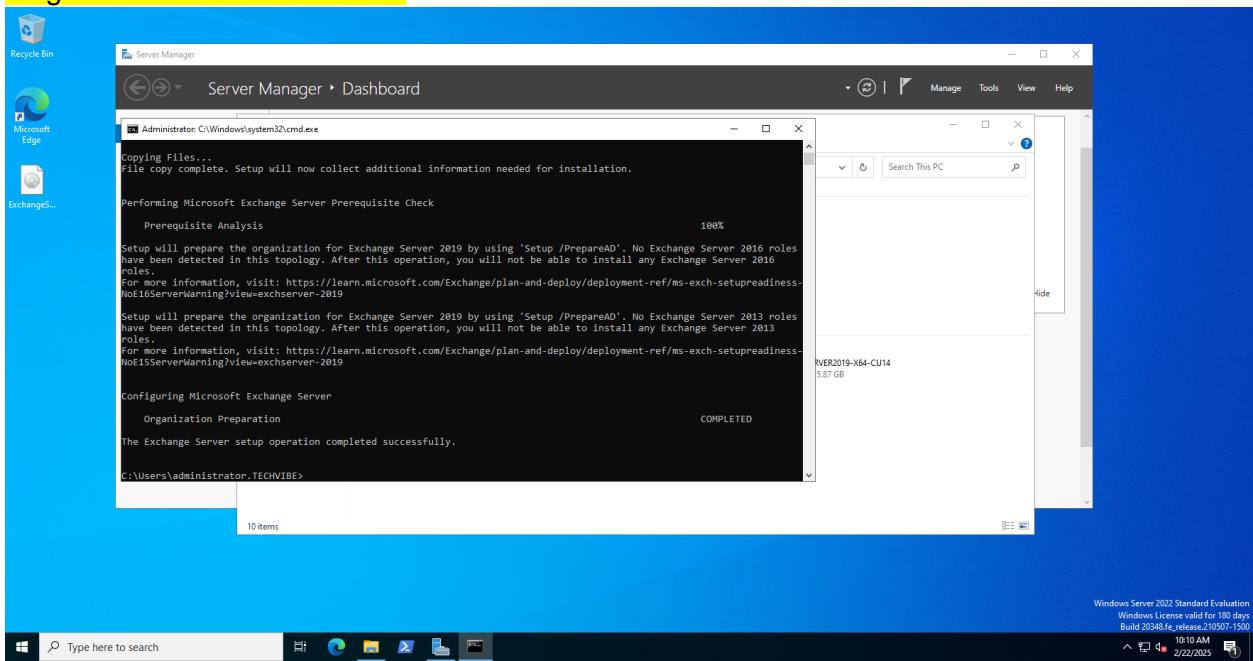


Exchange Installation

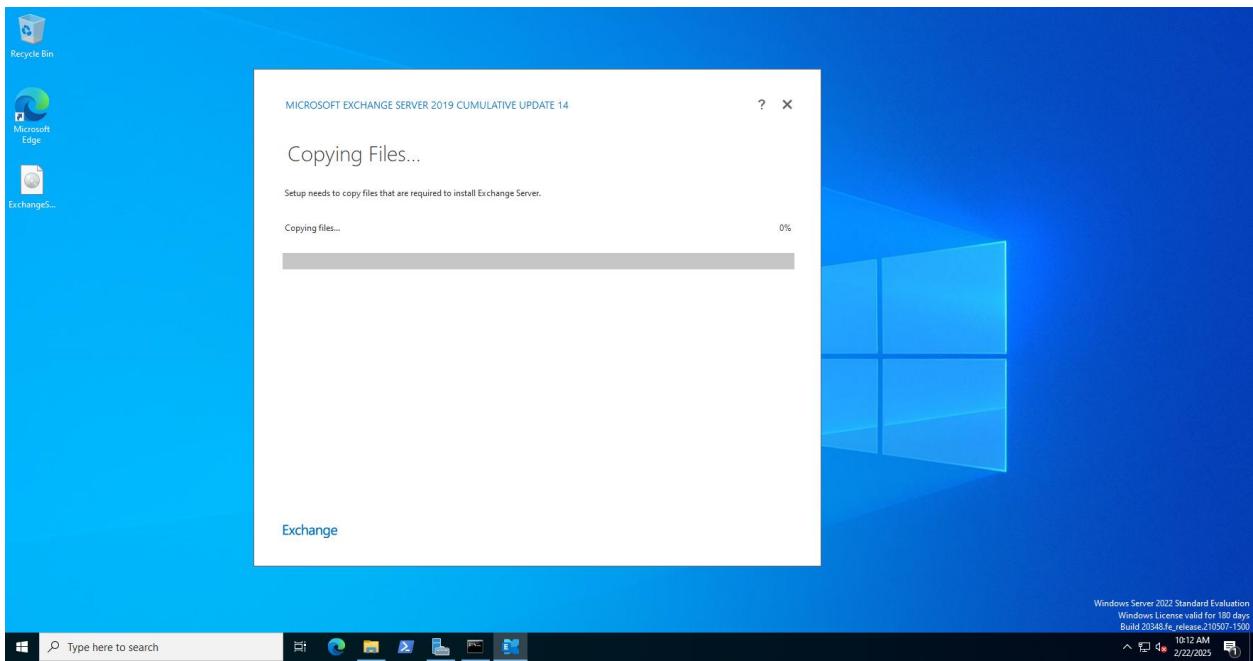
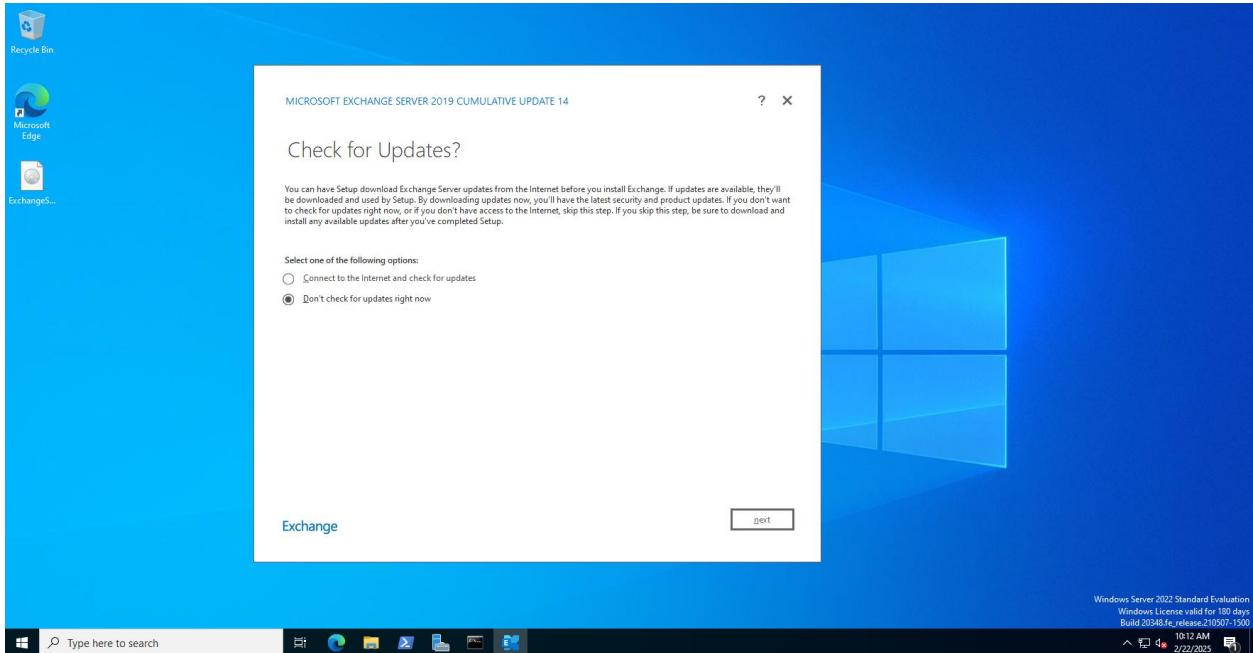


Step 2: Prepare Active Directory

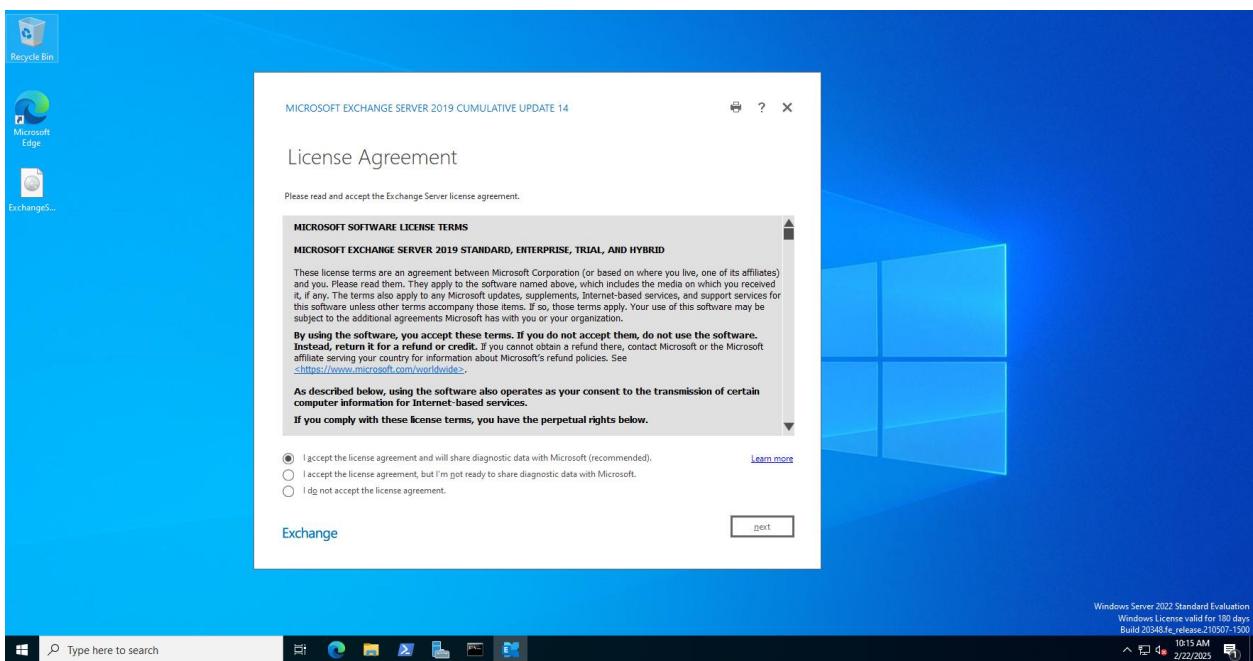
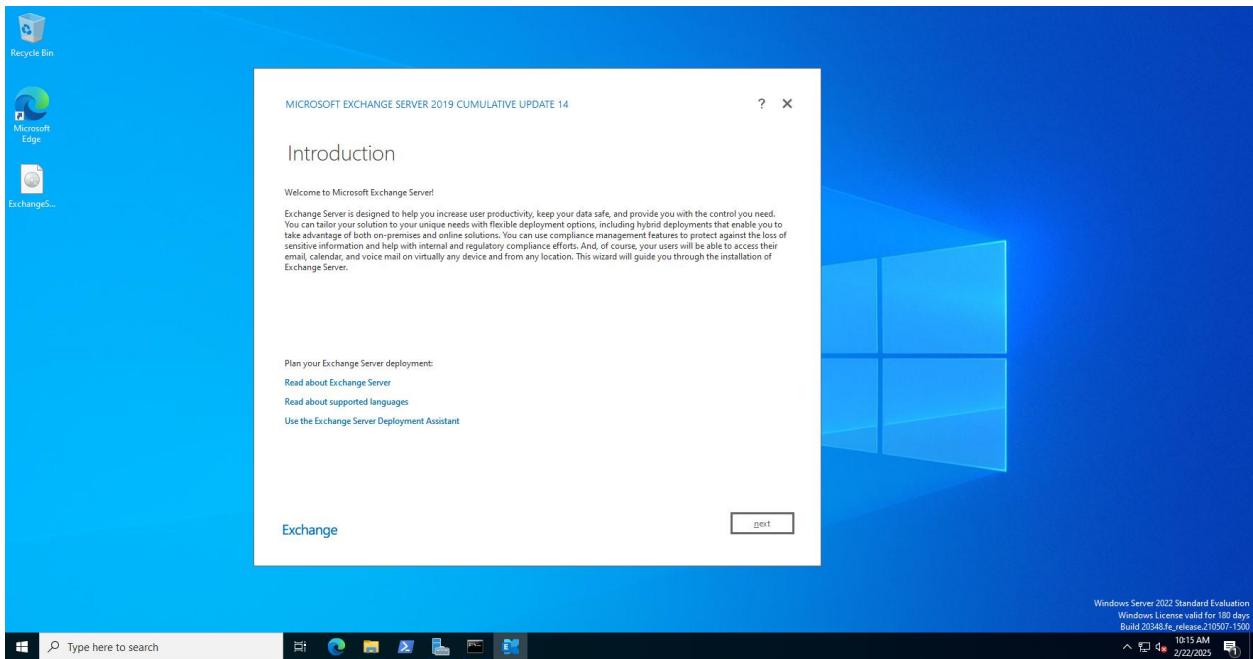
```
E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareAD
/OrganizationName:"Techvibe"
```



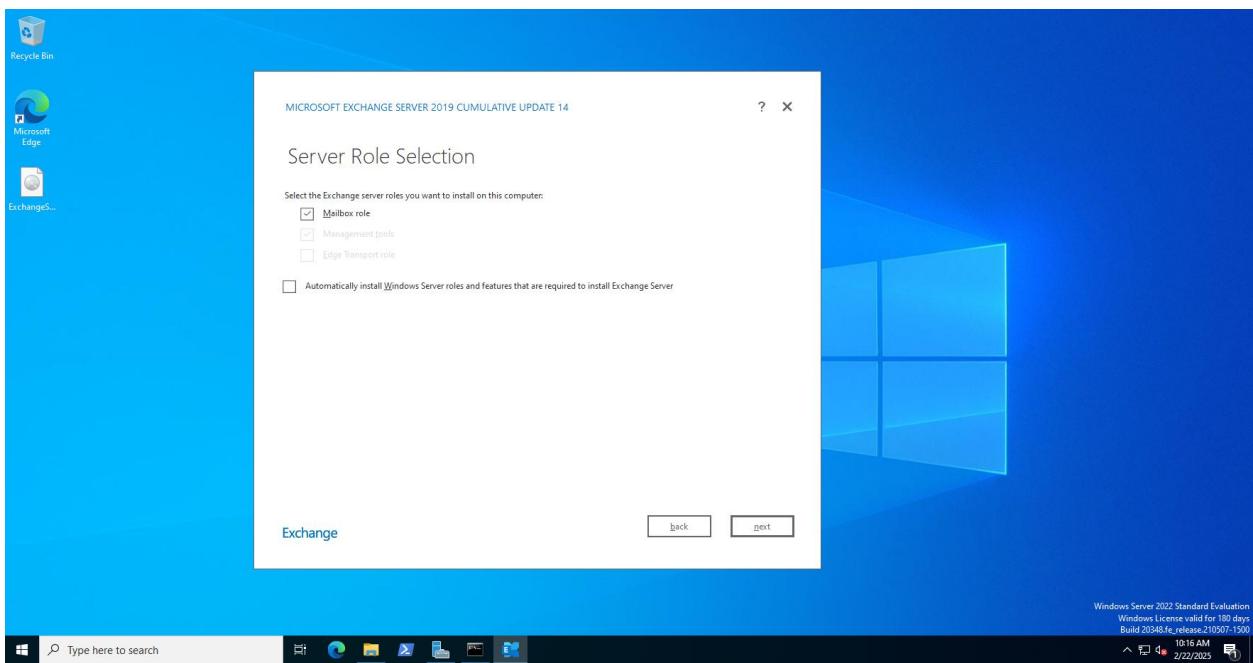
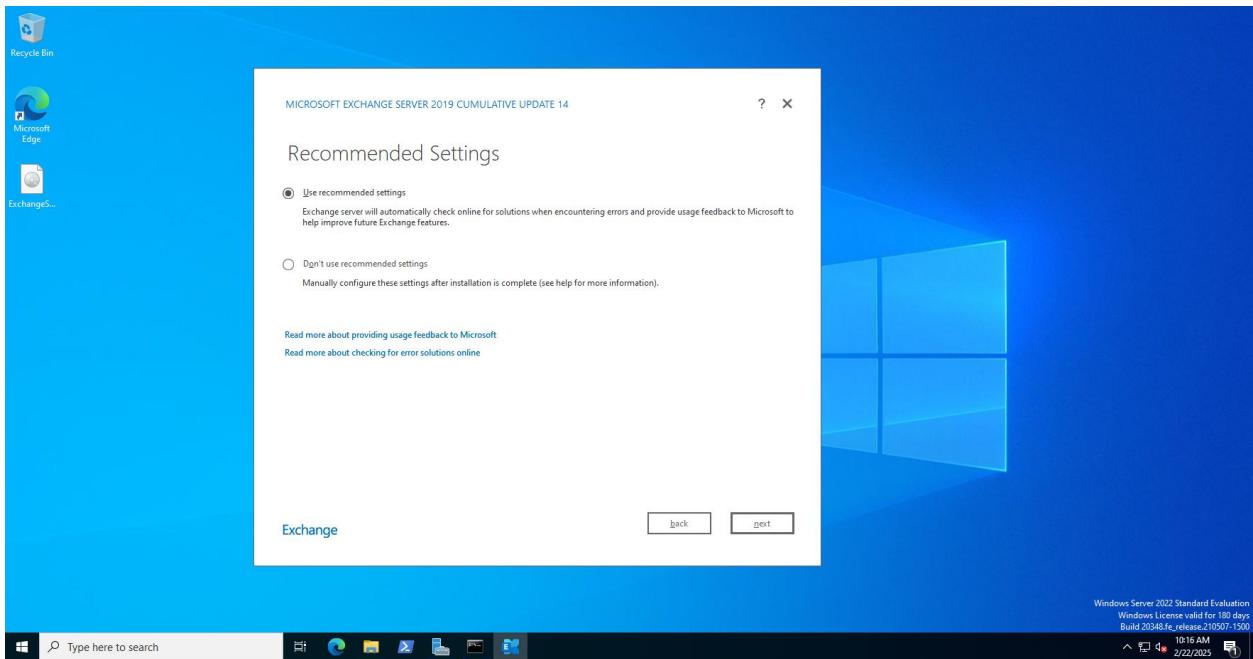
PART3: INSTALLING EXCHANGE MAILBOX SERVER ROLE



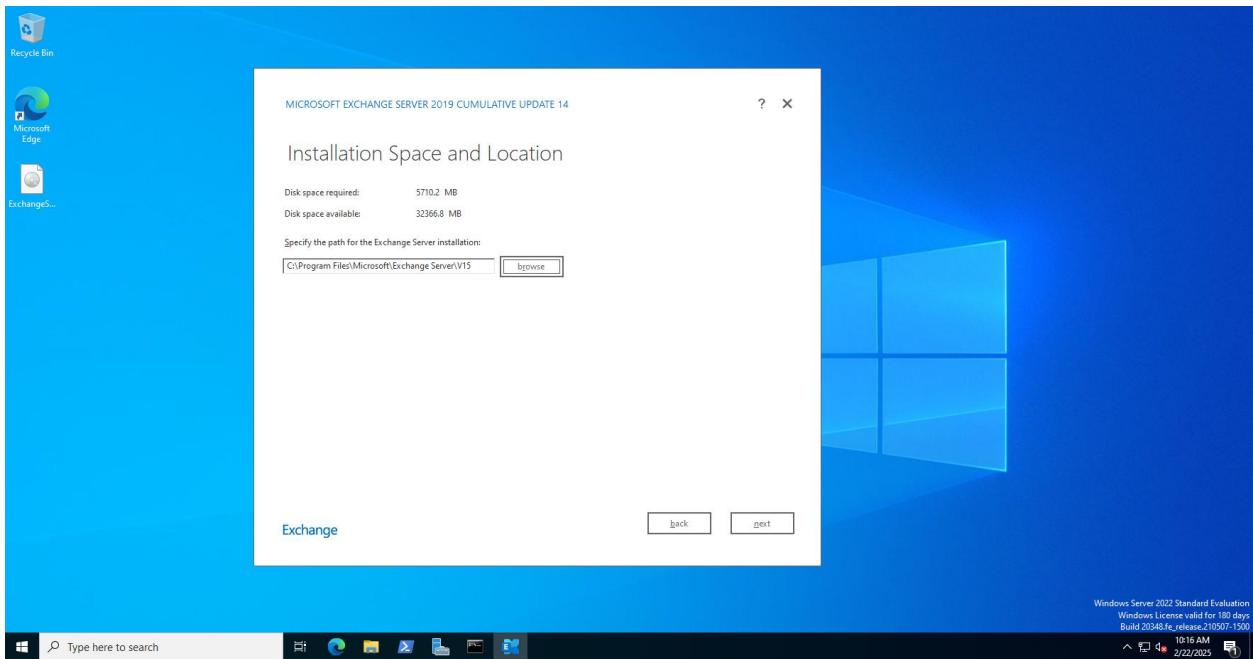
Exchange Installation



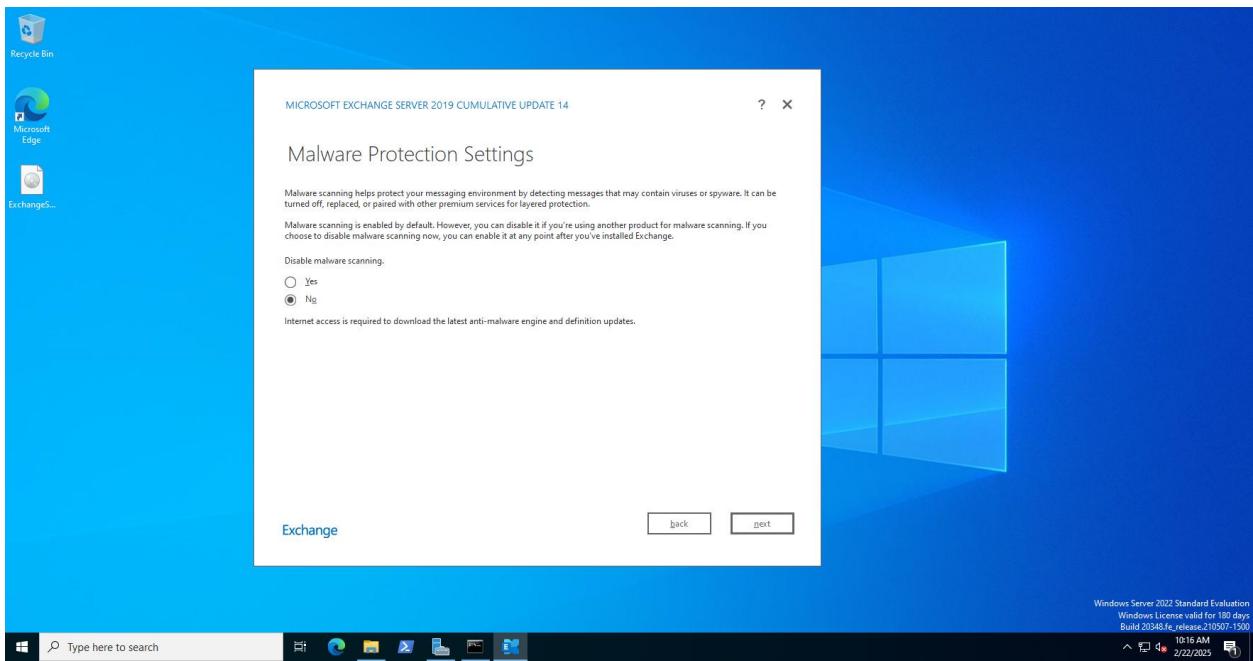
Exchange Installation



Exchange Installation



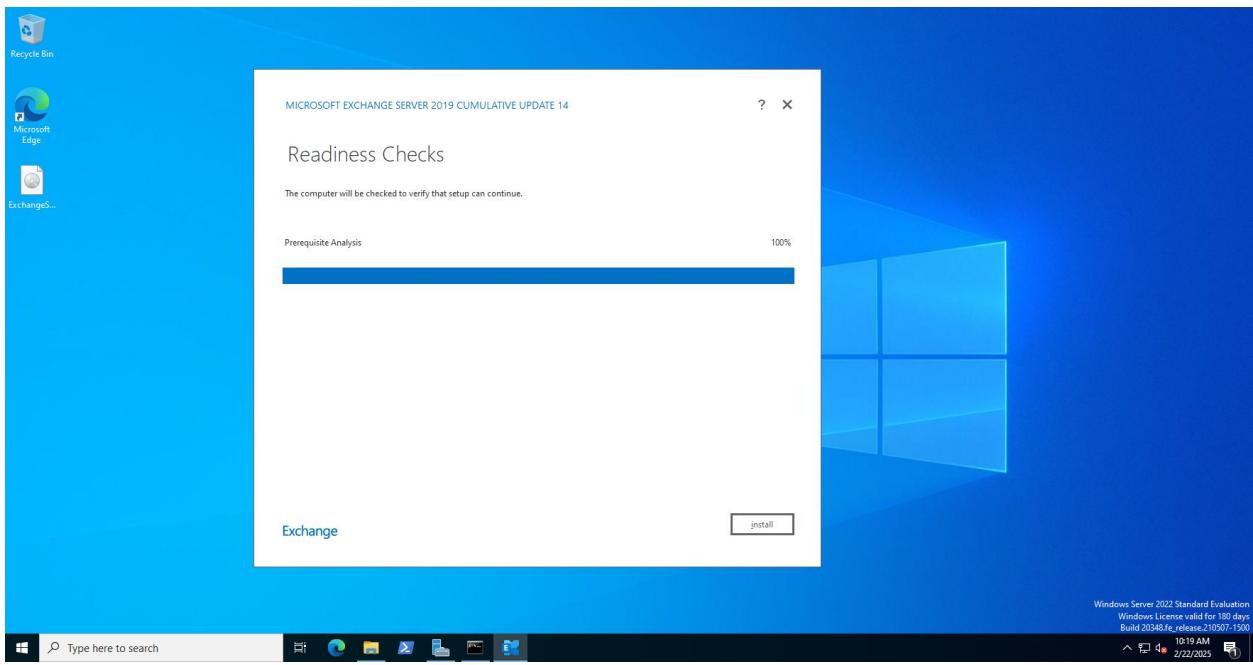
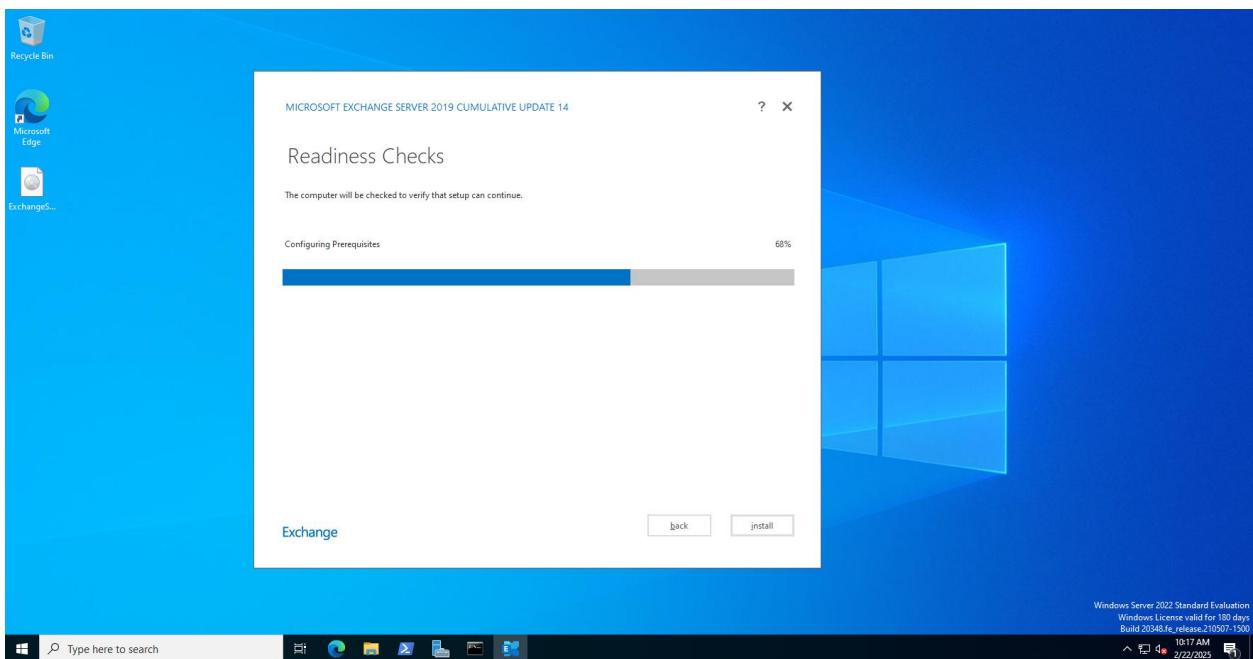
Windows Server 2022 Standard Evaluation
Windows License valid for 180 days
Build 20348.46_release.210507-1500
10:16 AM 2/22/2025



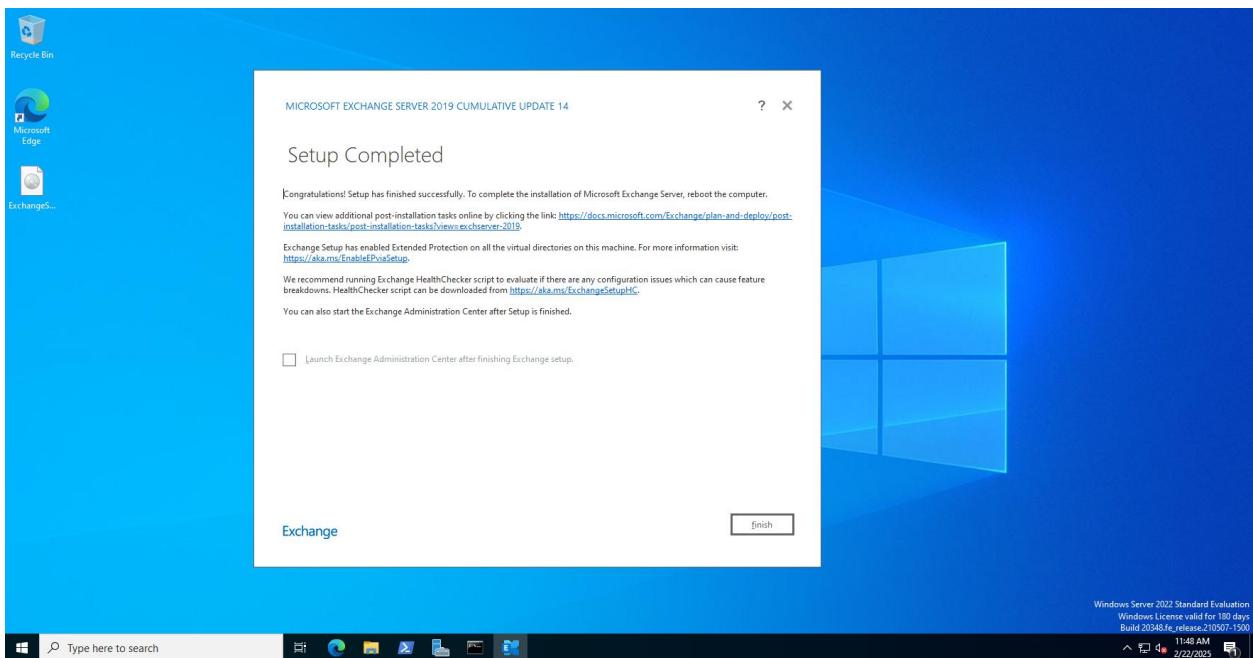
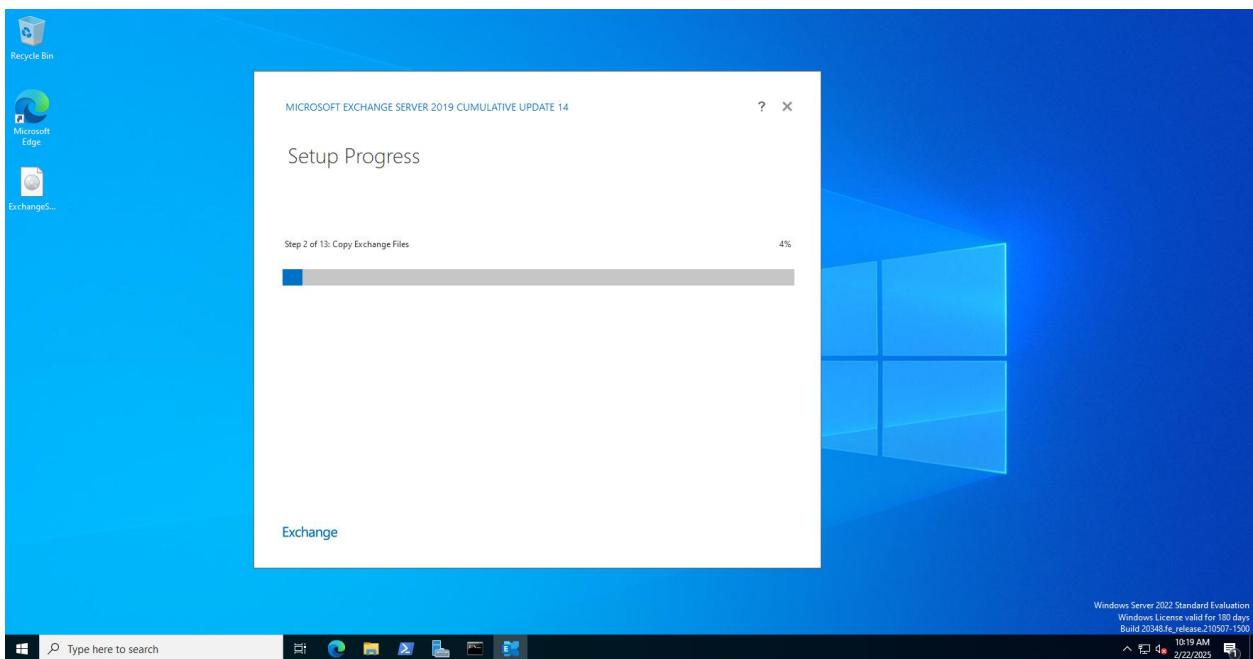
Windows Server 2022 Standard Evaluation
Windows License valid for 180 days
Build 20348.46_release.210507-1500
10:16 AM 2/22/2025



Exchange Installation

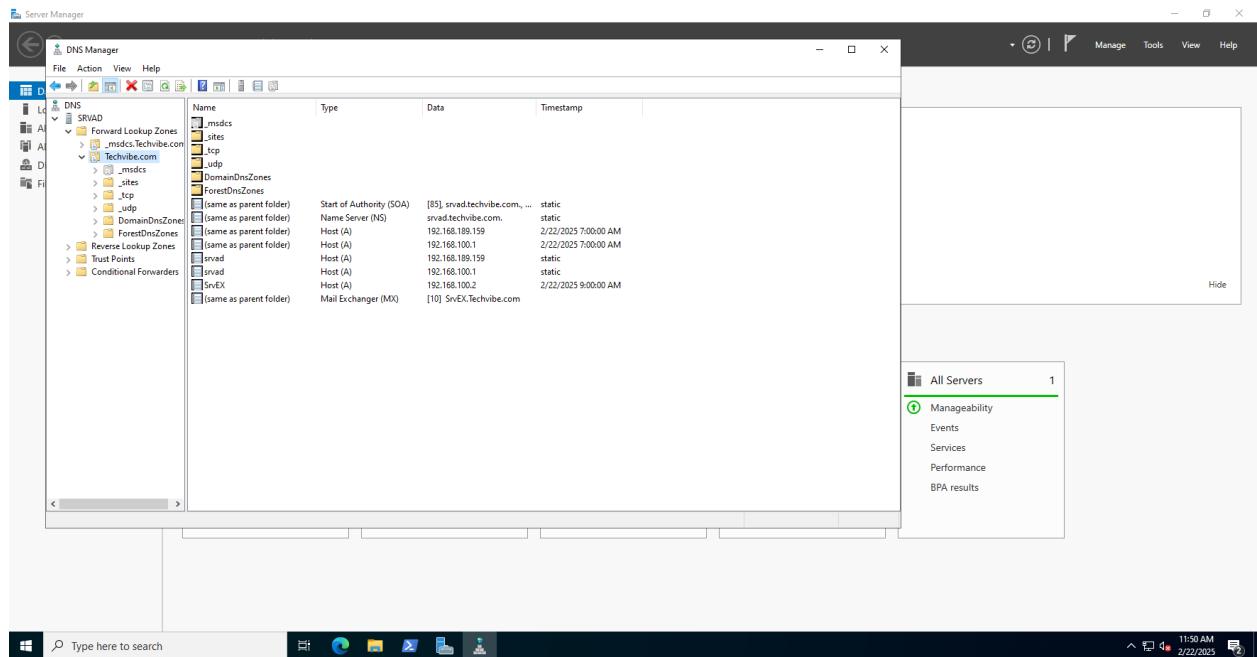


Exchange Installation



• ADD MX RECORD IN DNS SERVER

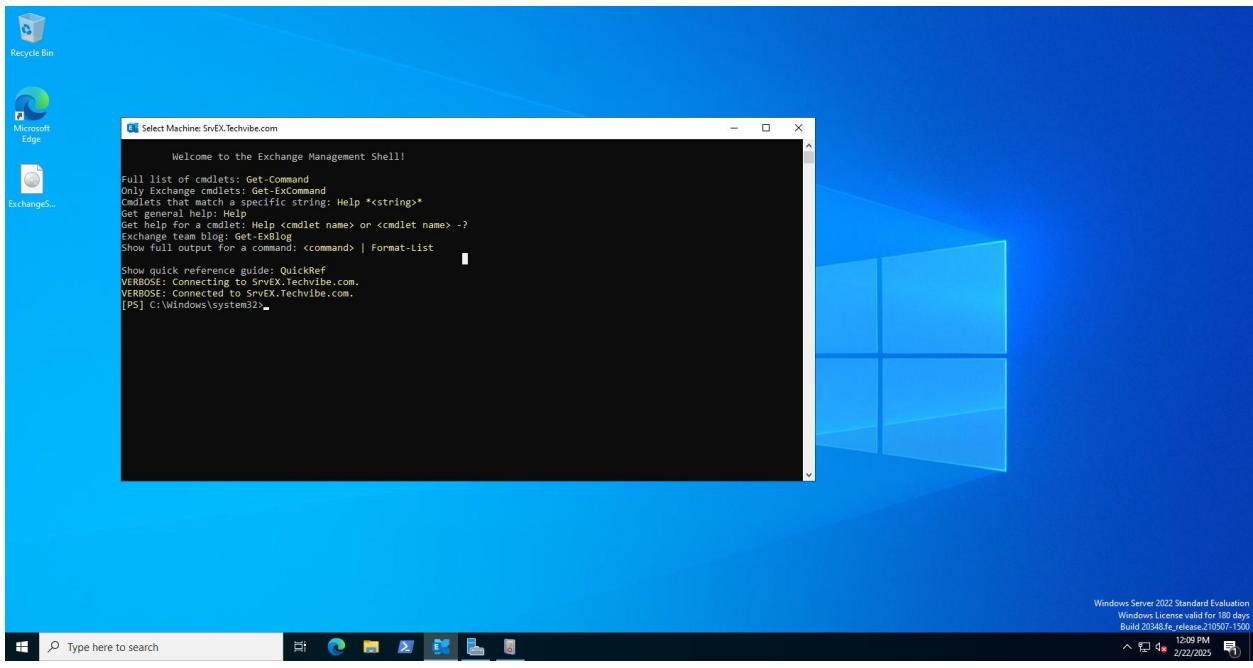
Add MX record in SrvAD DNS Server.



• VERIFY THE INSTALLATION

1. Open Exchange Management Shell in SrvEX, and check if it connects to your Mail server, here we have SrvEX.Techvibe.com, and you can even try to access Exchange Management Shell via web.

Exchange Installation



If it does not connect, restart it once and try to connect again.

DISPLAY NAME	MAILBOX TYPE	EMAIL ADDRESS
Administrator	User	Administrator@techvibe.com

0 selected of 1 total

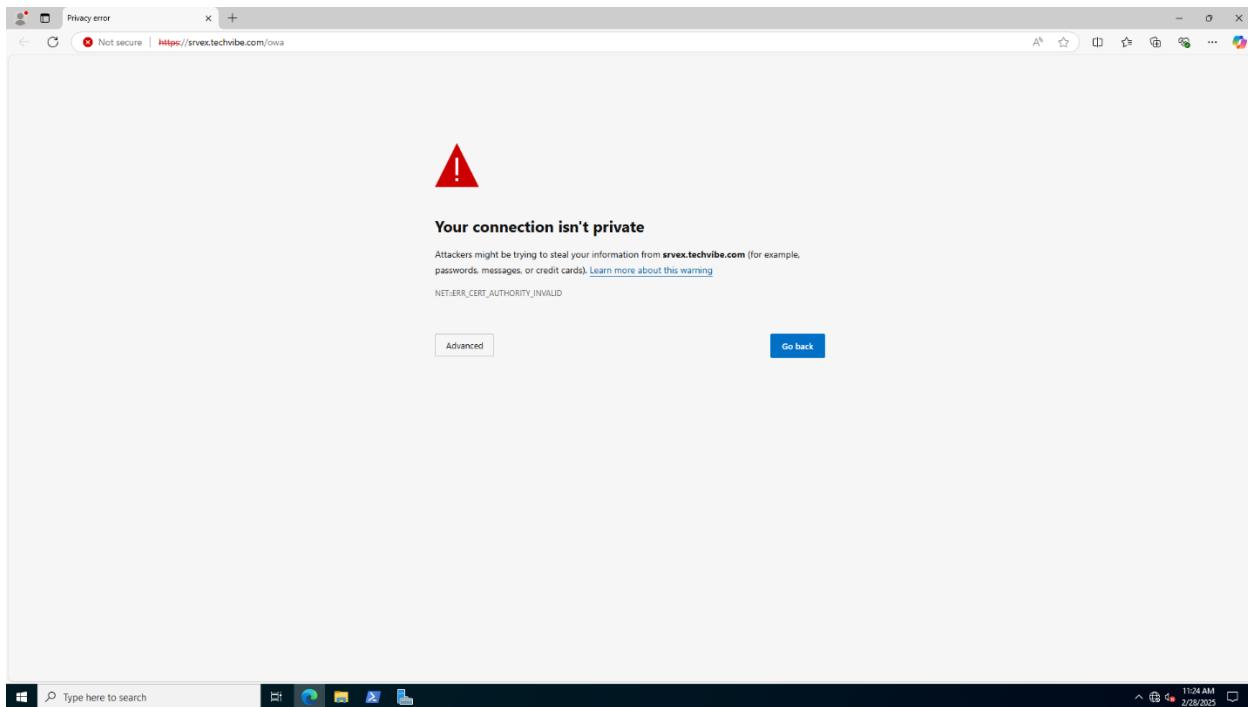


PART4: DEPLOYING TRUSTED CERTIFICATE AUTHORITY FOR SECURE COMMUNICATION

Certificates are a fundamental component of modern **cybersecurity**. They play a critical role in **securing communications**, **authenticating identities**, and **ensuring data integrity**.

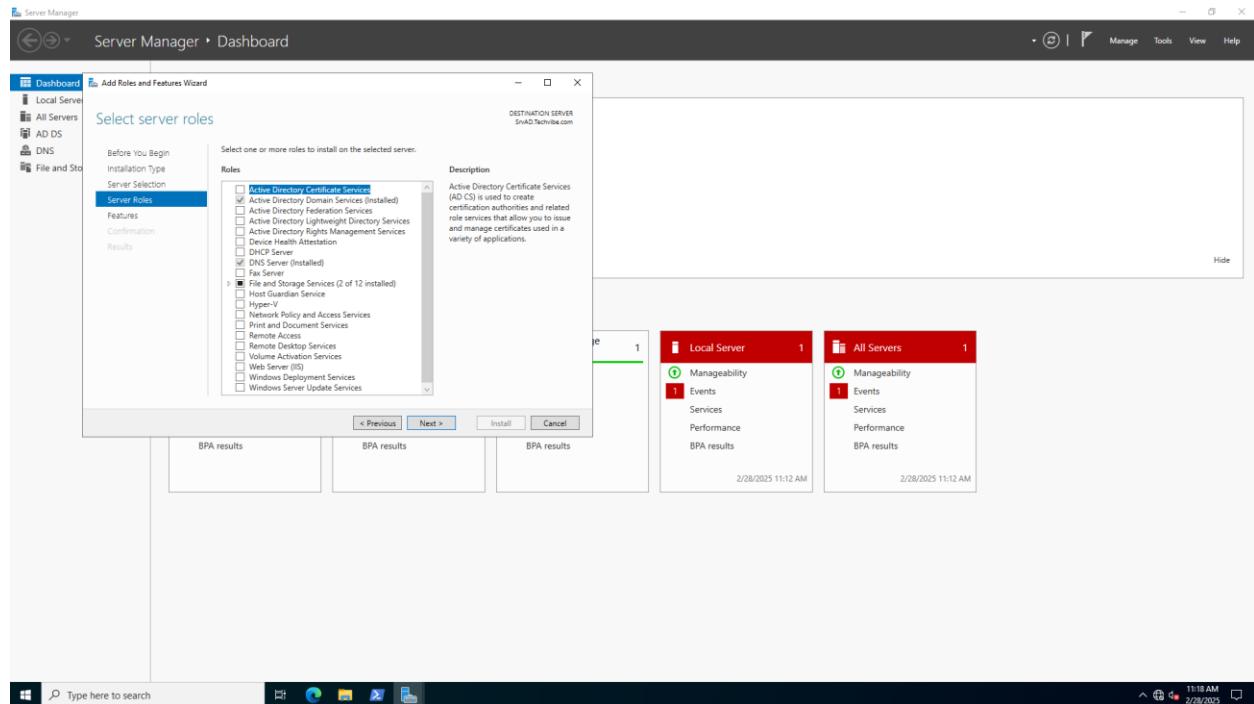
A **Certificate** is a digital document that binds a public key to an entity (e.g., a person, device, or organization). Certificates are issued by a **trusted Certificate Authority (CA)** and are used in Public Key Infrastructure (PKI) to enable secure communication and authentication.

In a **local environment**, deploying a **trusted CA** ensures that all internal services, such as Exchange Server, can use trusted certificates for secure communication. This eliminates the need for self-signed certificates, which are not inherently trusted by clients and can lead to security warnings. By deploying a trusted CA, you can issue certificates that are automatically trusted by all devices and users within your domain.

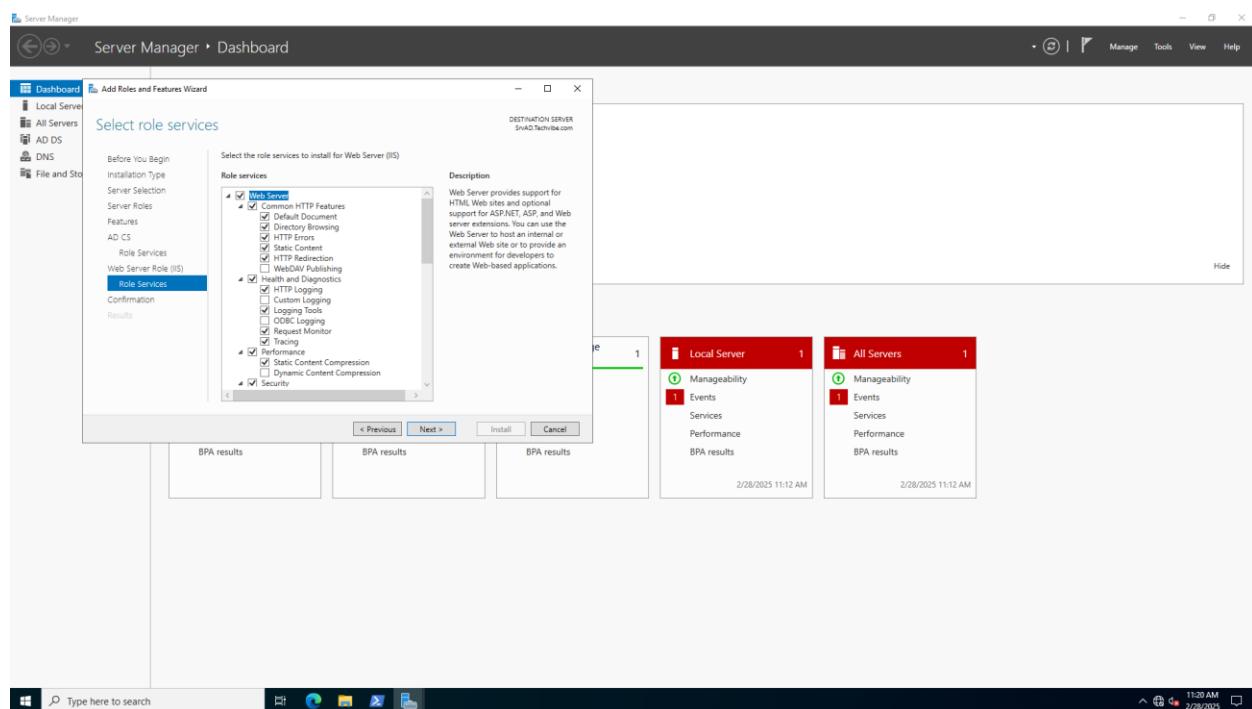
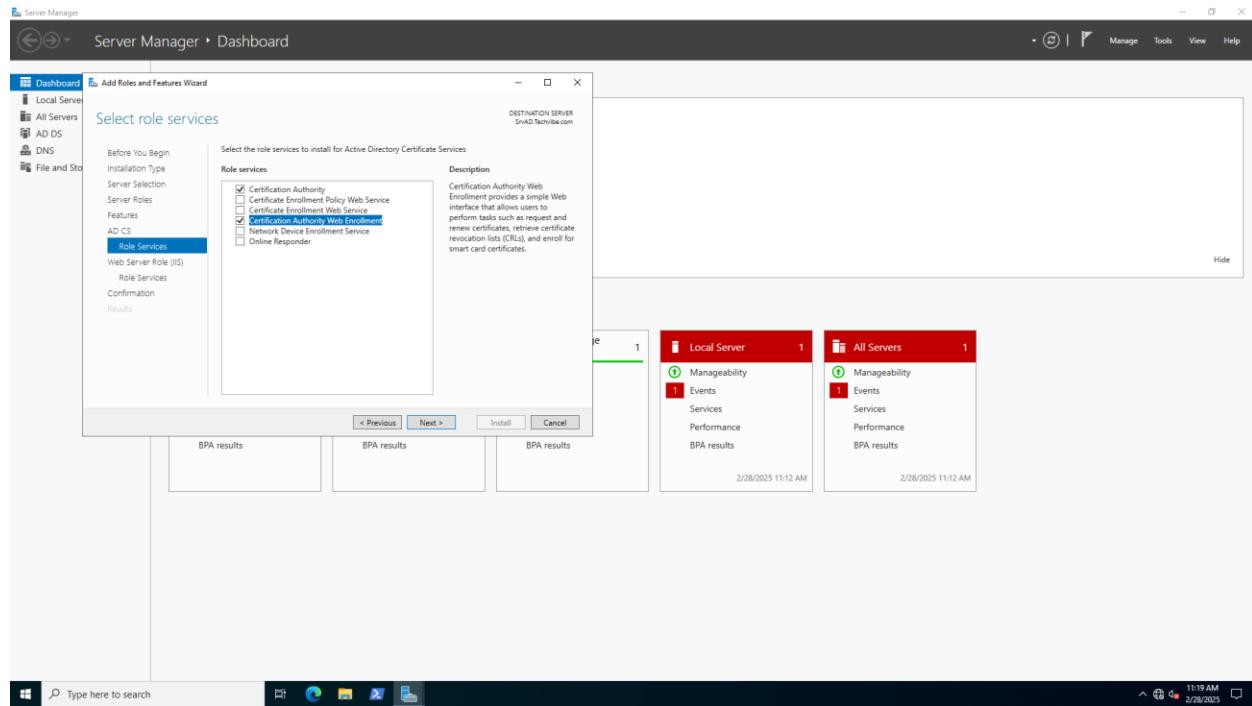


- **INSTALLING ACTIVE DIRECTORY CERTIFICATE SERVICES ON SRVAD**

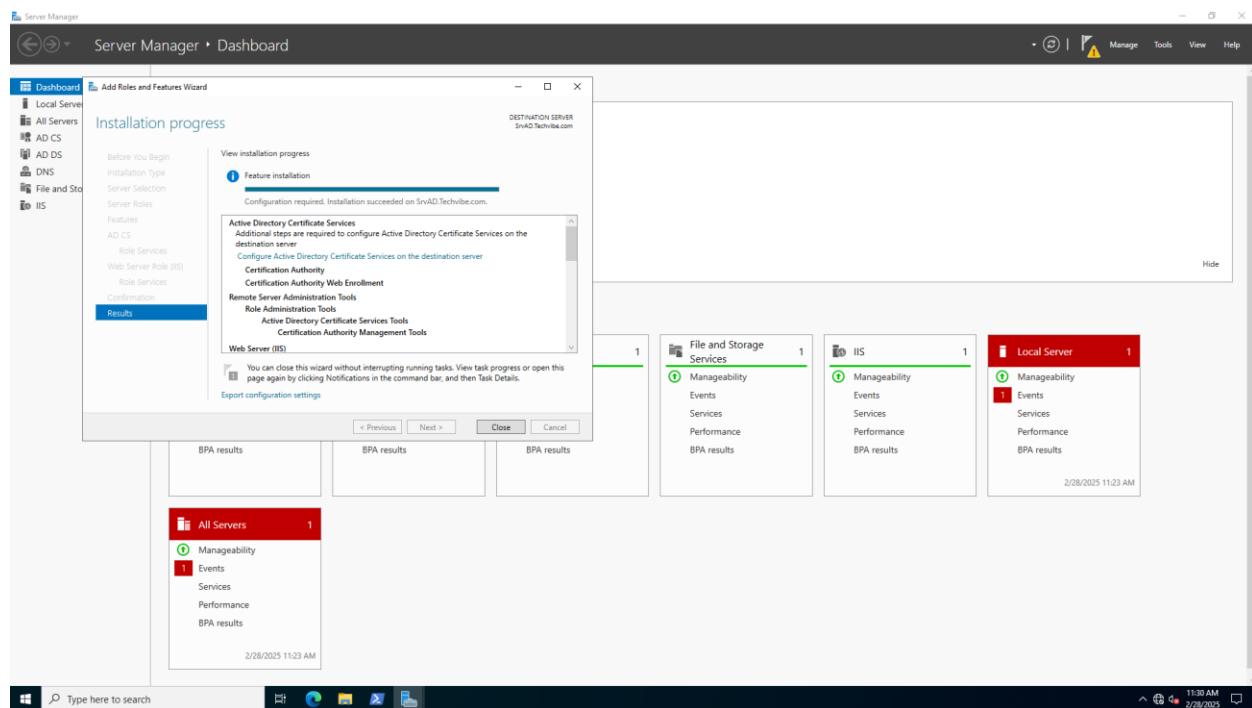
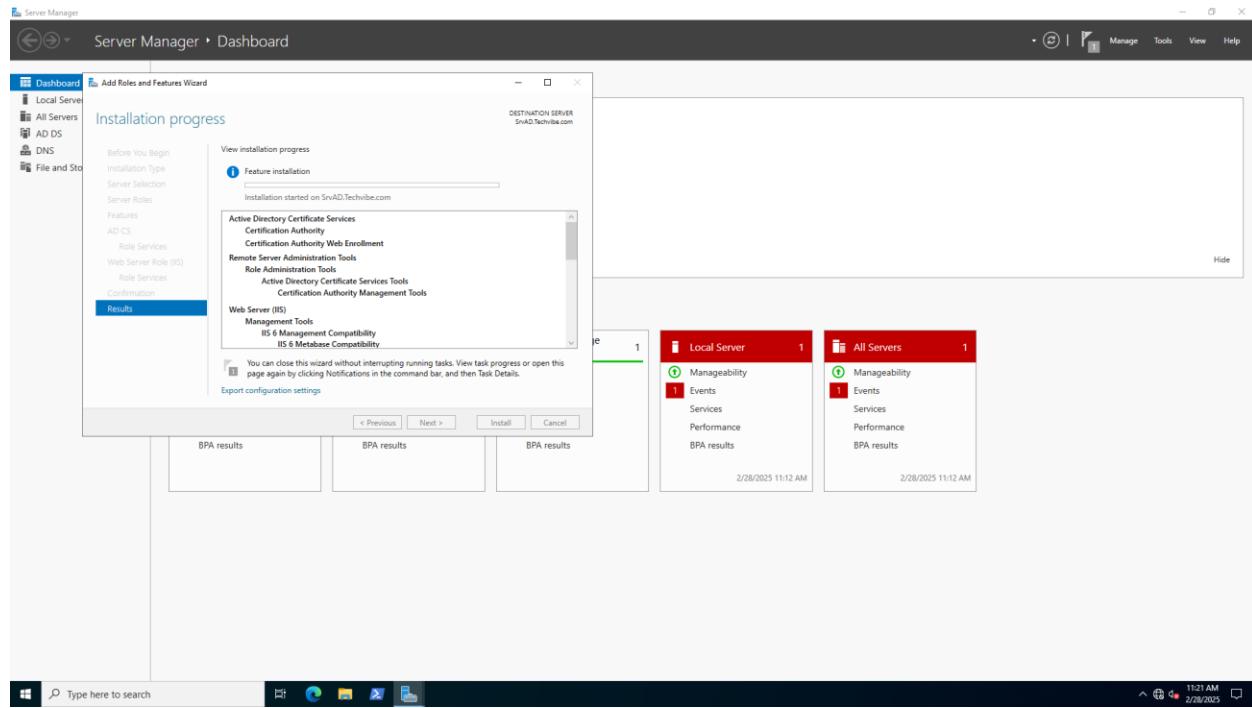
1. We will Proceed with installing ADCS in SrvAD which will serve as our ROOT CA in the PKI hierarchy. We will deploy a **trusted internal Certificate Authority (CA)** within our local environment. This CA will issue certificates that are automatically trusted by all domain-joined devices and users, ensuring secure communication for services like Exchange Server. Additionally, we will configure **auto-enrollment** to automatically distribute certificates to users and devices.



Exchange Installation



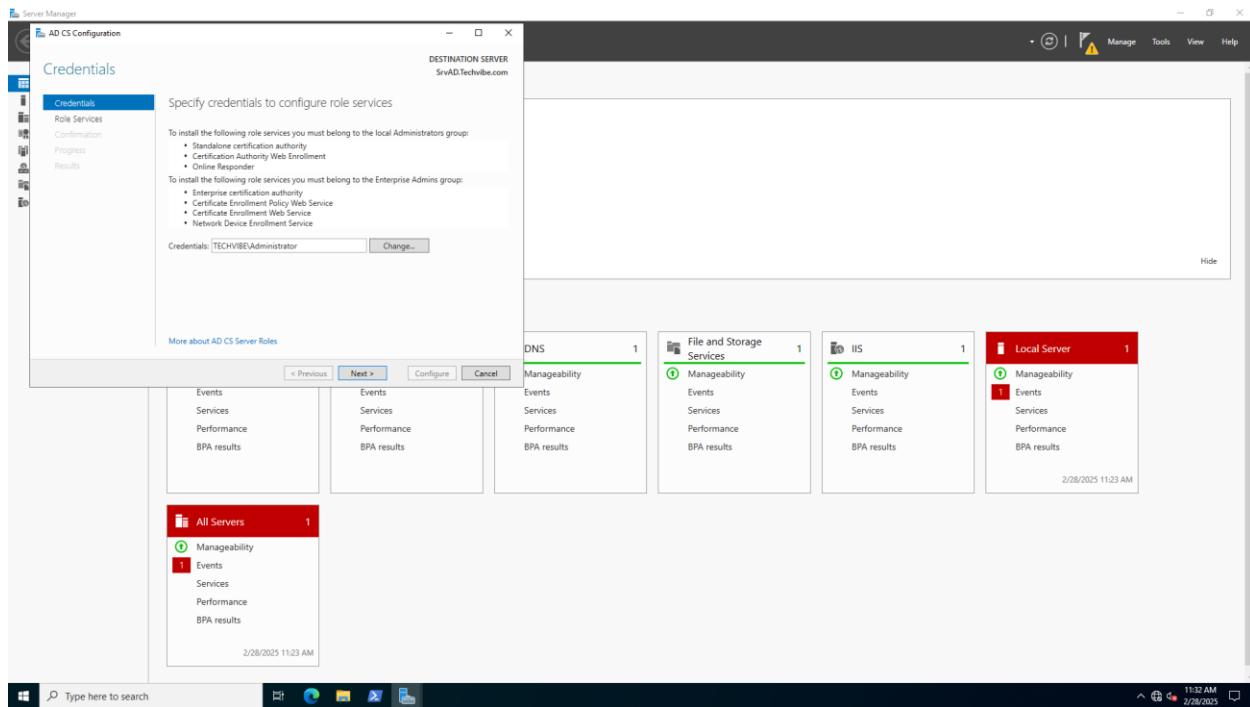
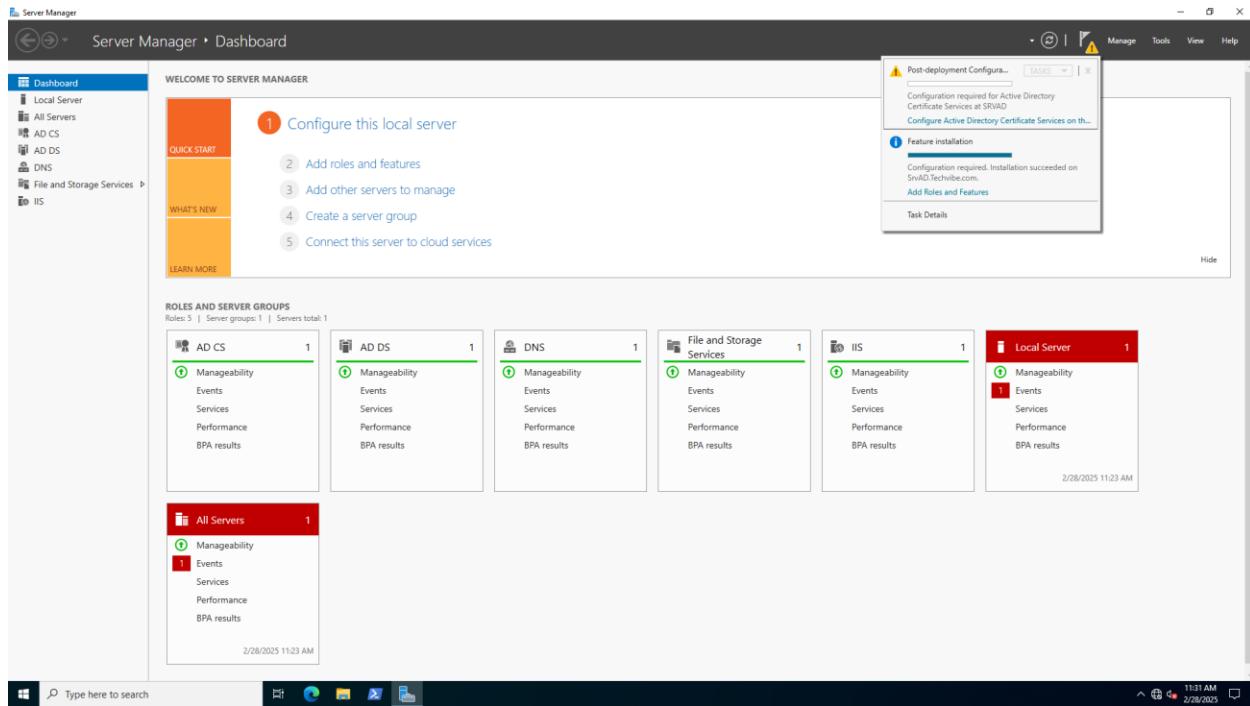
Exchange Installation



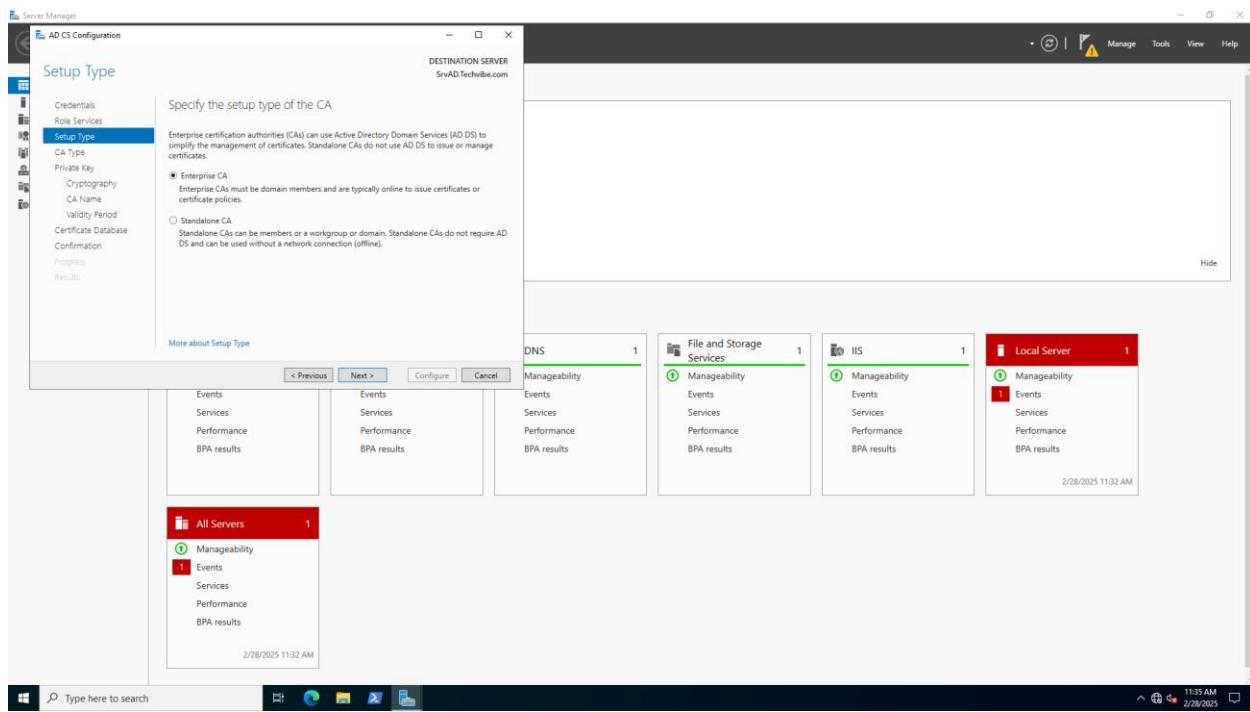
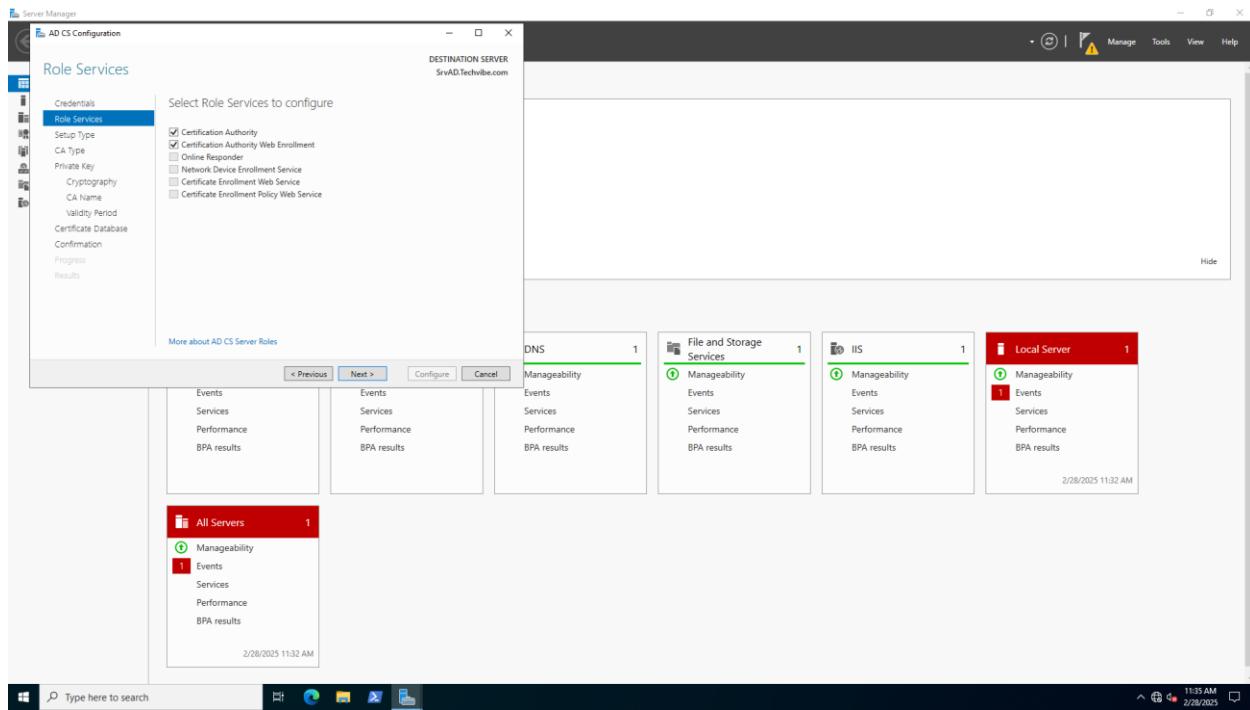
- Click on the yellow flag and the select configure Active Directory Certificate Services, follow the Screenshots for proceeding.



Exchange Installation



Exchange Installation



Exchange Installation

AD CS Configuration

CA Type

Specify the type of the CA

When you install Active Directory Certificate Services (AD CS), you are creating or extending a public key infrastructure (PKI) hierarchy. A root CA is at the top of the PKI hierarchy and issues its own self-signed certificate. A subordinate CA receives a certificate from the CA above it in the PKI hierarchy.

Root CA
Root CAs are the first and may be the only CAs configured in a PKI hierarchy.

Subordinate CA
Subordinate CAs require an established PKI hierarchy and are authorized to issue certificates by the CA above them in the hierarchy.

[More about CA Type](#)

[Previous](#) [Next >](#) [Configure](#) [Cancel](#)

	Events	Events	DNS	File and Storage Services	IIS	Local Server
Credentials	Services	Performance	1	Manageability	1	Manageability
Role Services	BPA results			Events	Events	Events
Setup Type				Services	Services	Services
CA Type				Performance	Performance	Performance
Private Key				BPA results		BPA results
Cryptography						
CA Name						
Validity Period						
Certificate Database						
Confirmation						
Progress						
Results						

All Servers 1

- Manageability
- Events
- Services
- Performance
- BPA results

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11:35 AM 2/28/2025

AD CS Configuration

Private Key

Specify the type of the private key

To generate and issue certificates to clients, a certification authority (CA) must have a private key.

Create a new private key
Use this option if you do not have a private key or want to create a new private key.

Use existing private key
Use this option to ensure continuity with previously issued certificates when reinstalling a CA.

Select a certificate and use its associated private key
Select this option if you have an existing certificate on this computer or if you want to import a certificate and use its associated private key.

Select an existing private key on this computer
Select this option if you have retained private keys from a previous installation or want to use a private key from an alternate source.

[More about Private Key](#)

[Previous](#) [Next >](#) [Configure](#) [Cancel](#)

	Events	Events	DNS	File and Storage Services	IIS	Local Server
Credentials	Services	Performance	1	Manageability	1	Manageability
Role Services	BPA results			Events	Events	Events
Setup Type				Services	Services	Services
Private Key				Performance	Performance	Performance
Cryptography				BPA results		BPA results
CA Name						
Validity Period						
Certificate Database						
Confirmation						
Progress						
Results						

All Servers 1

- Manageability
- Events
- Services
- Performance
- BPA results

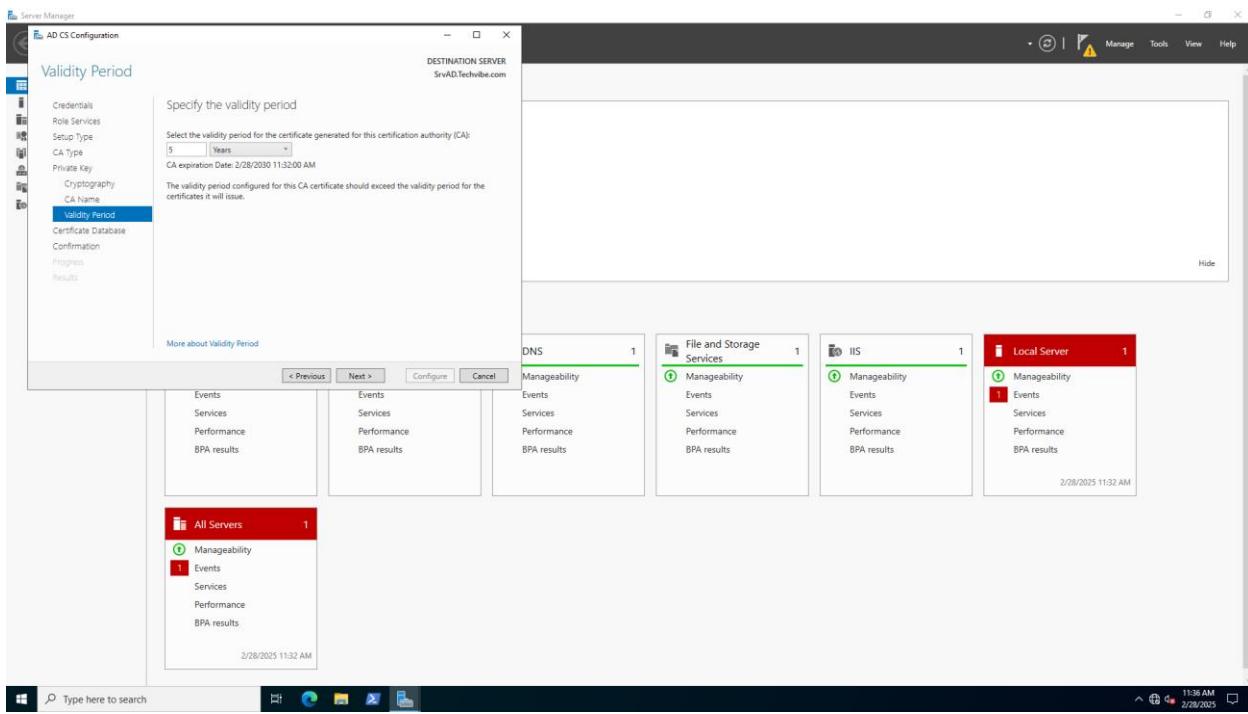
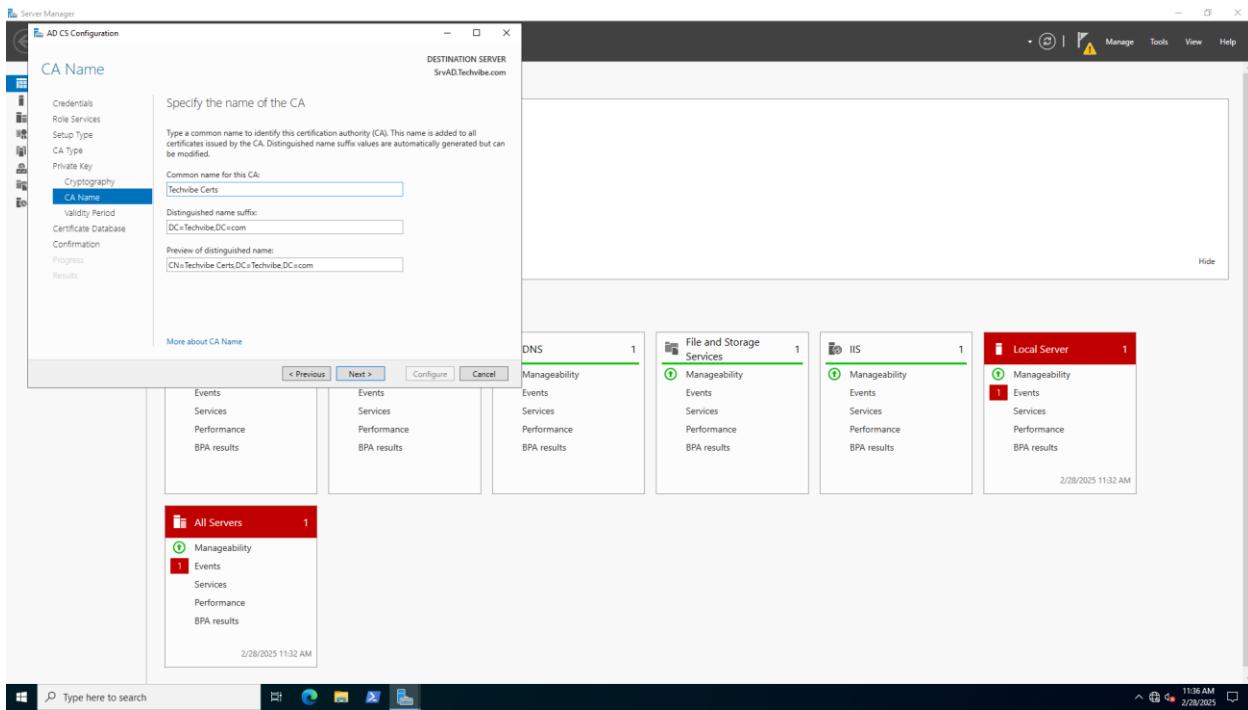
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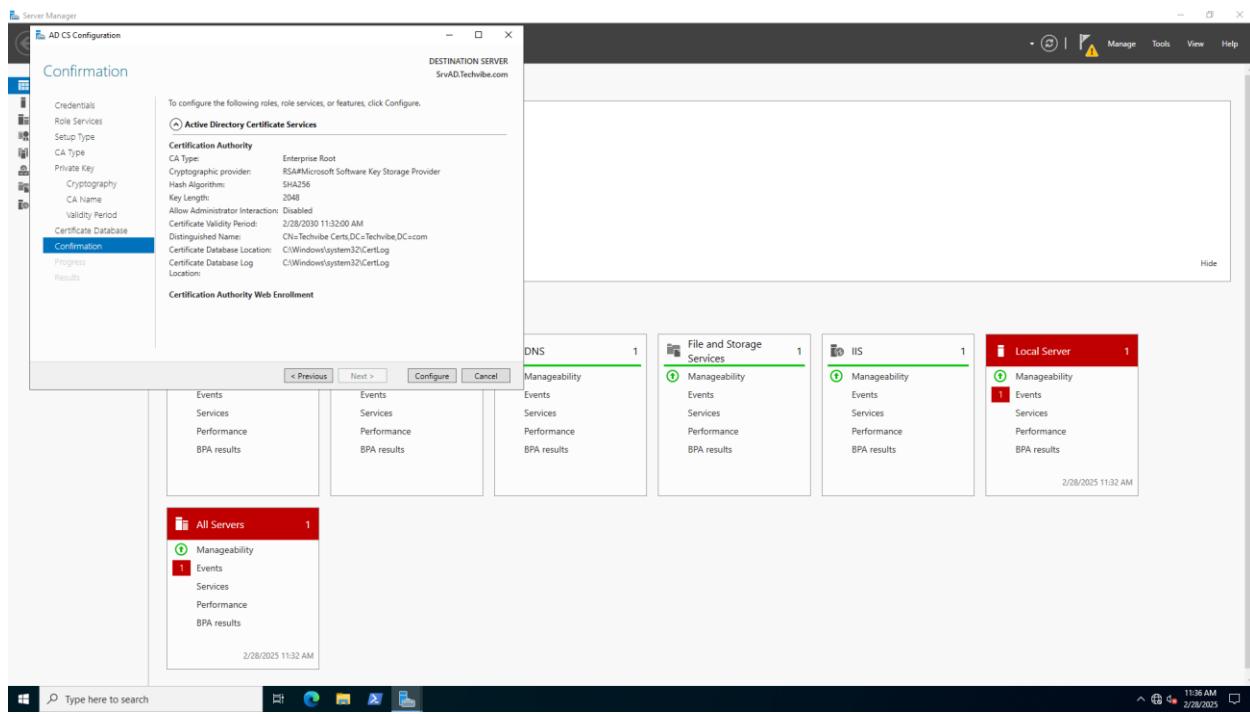
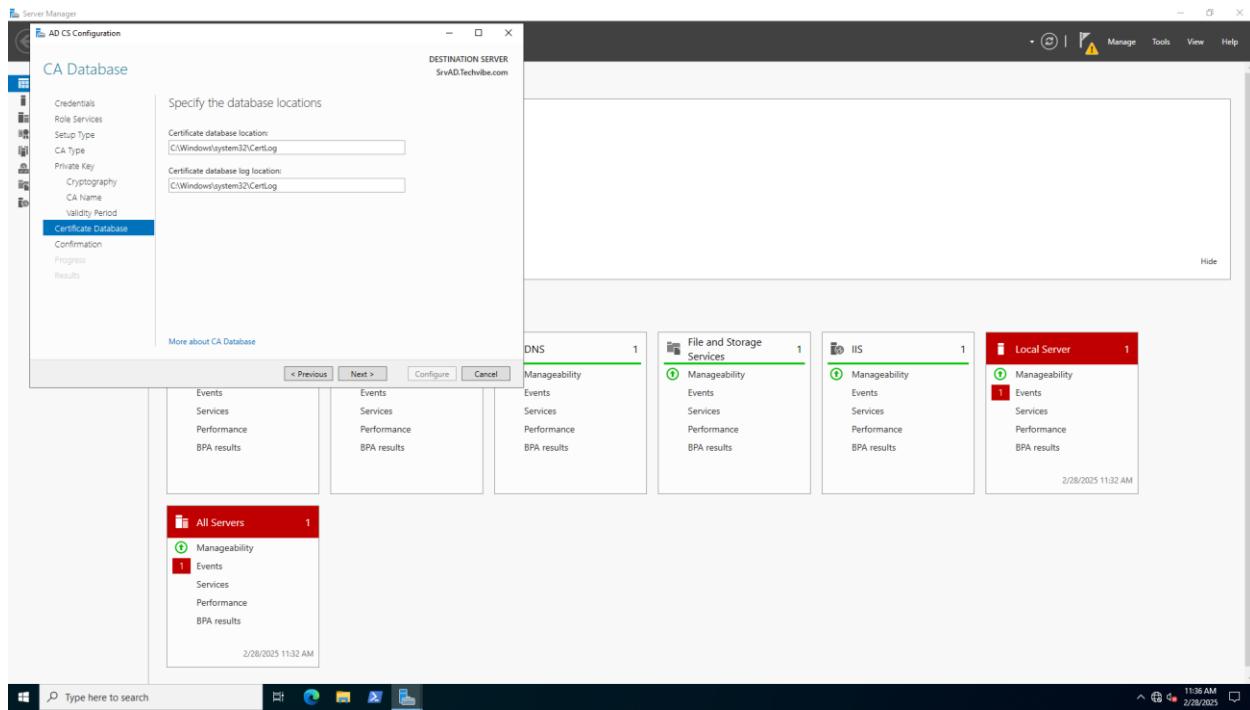
11:35 AM 2/28/2025



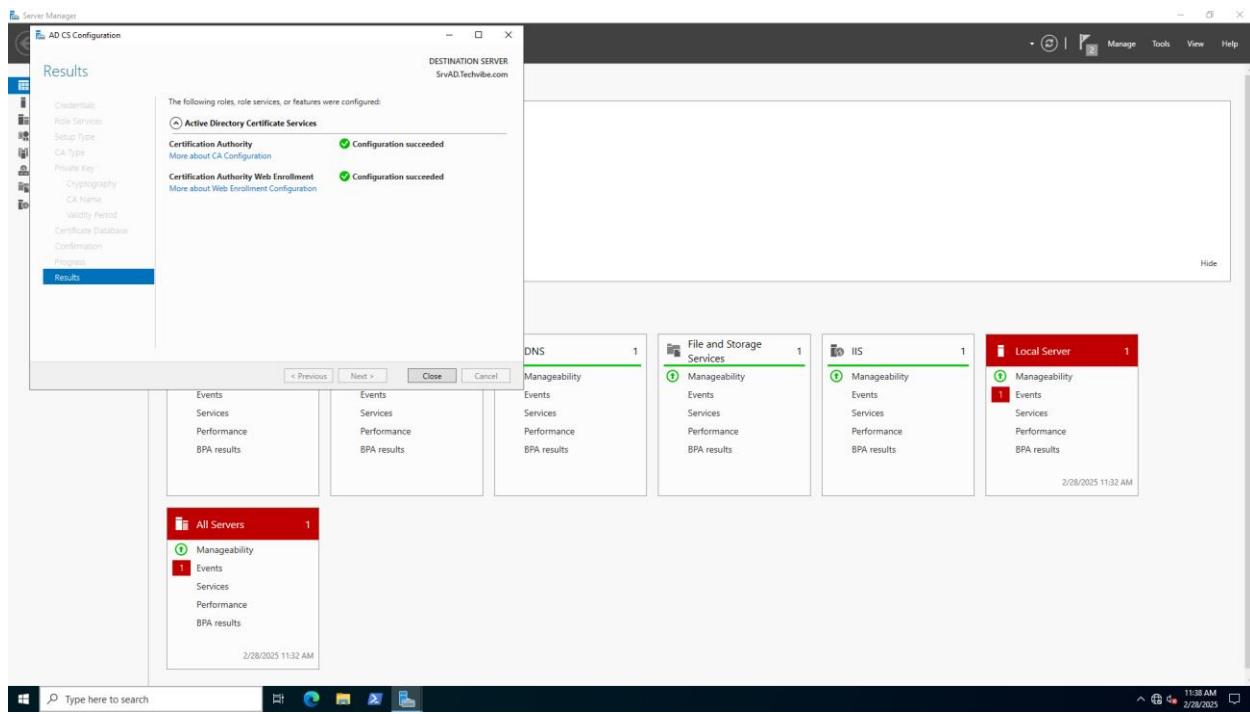
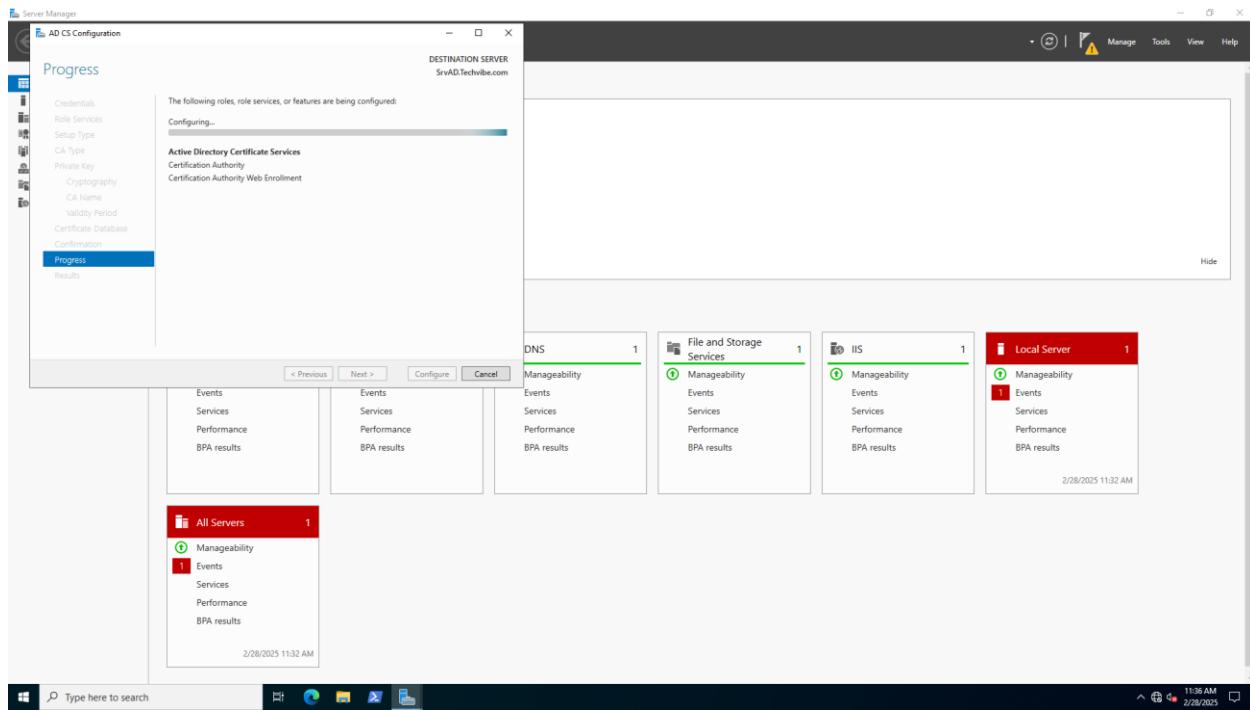
Exchange Installation



Exchange Installation



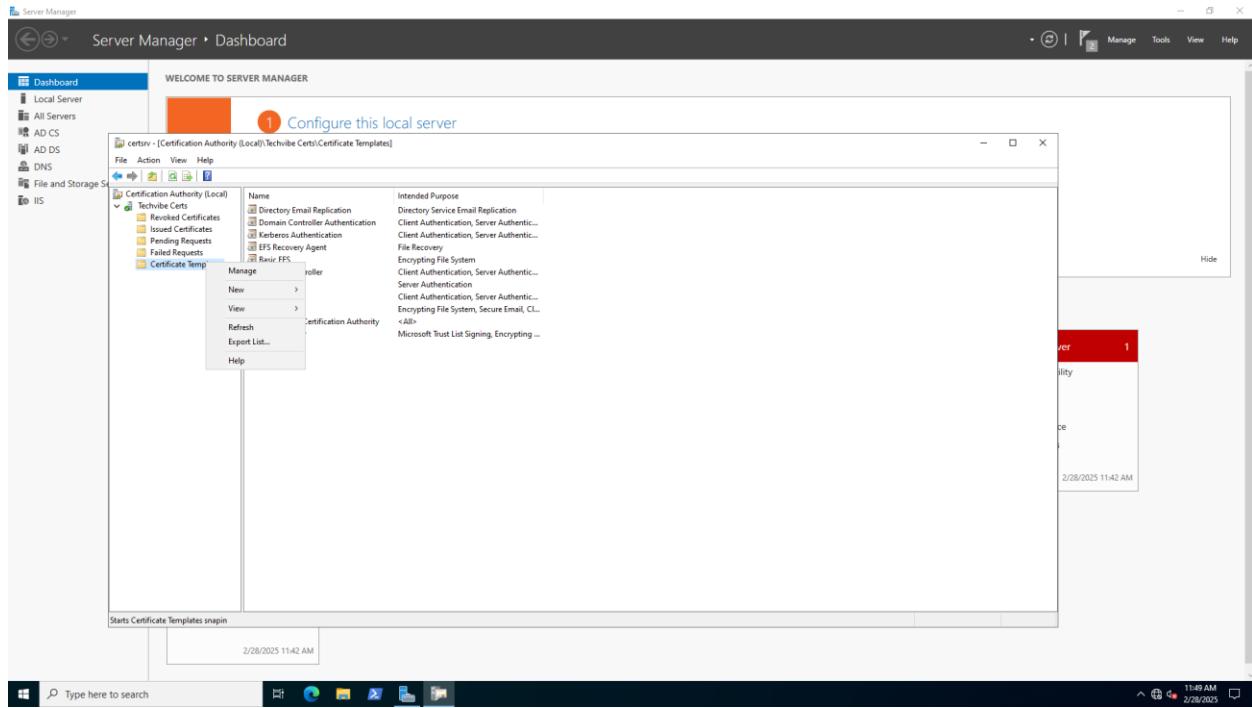
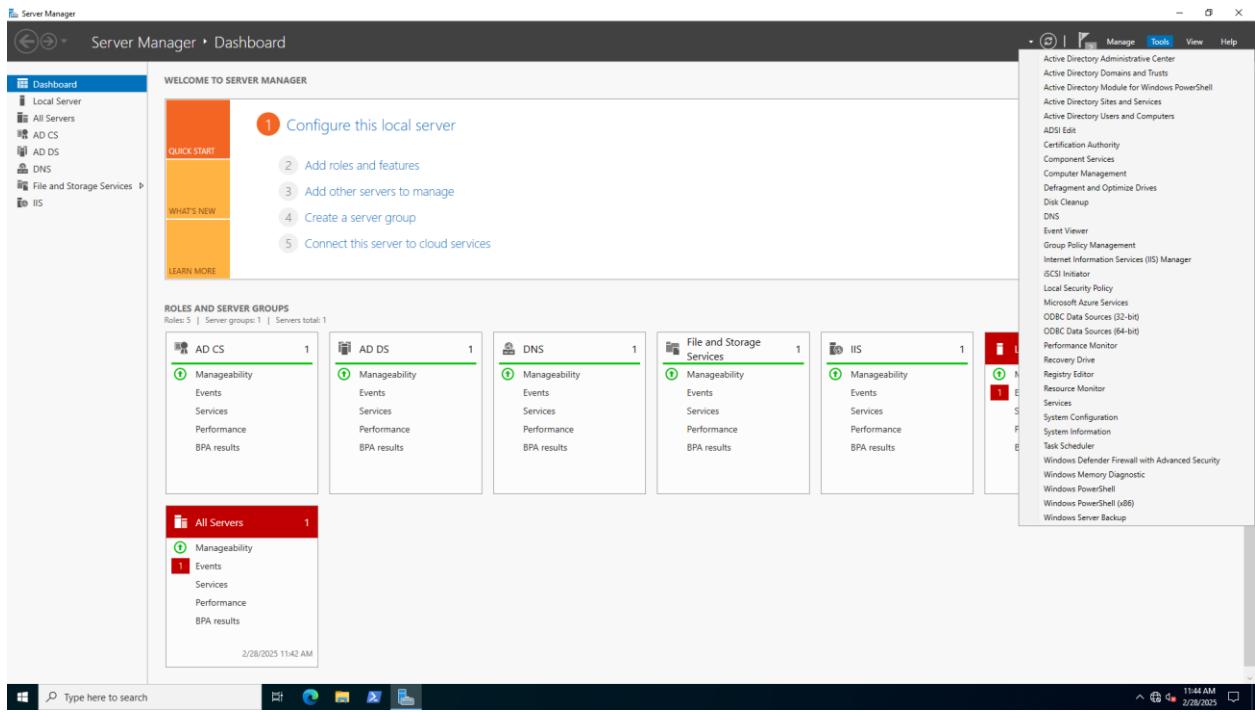
Exchange Installation



- Certificate Authority has been configured successfully, now we will duplicate the template from the Certificate Template store.
Go to Tools>Certification Authority>Right click Certificate Templates>Manage



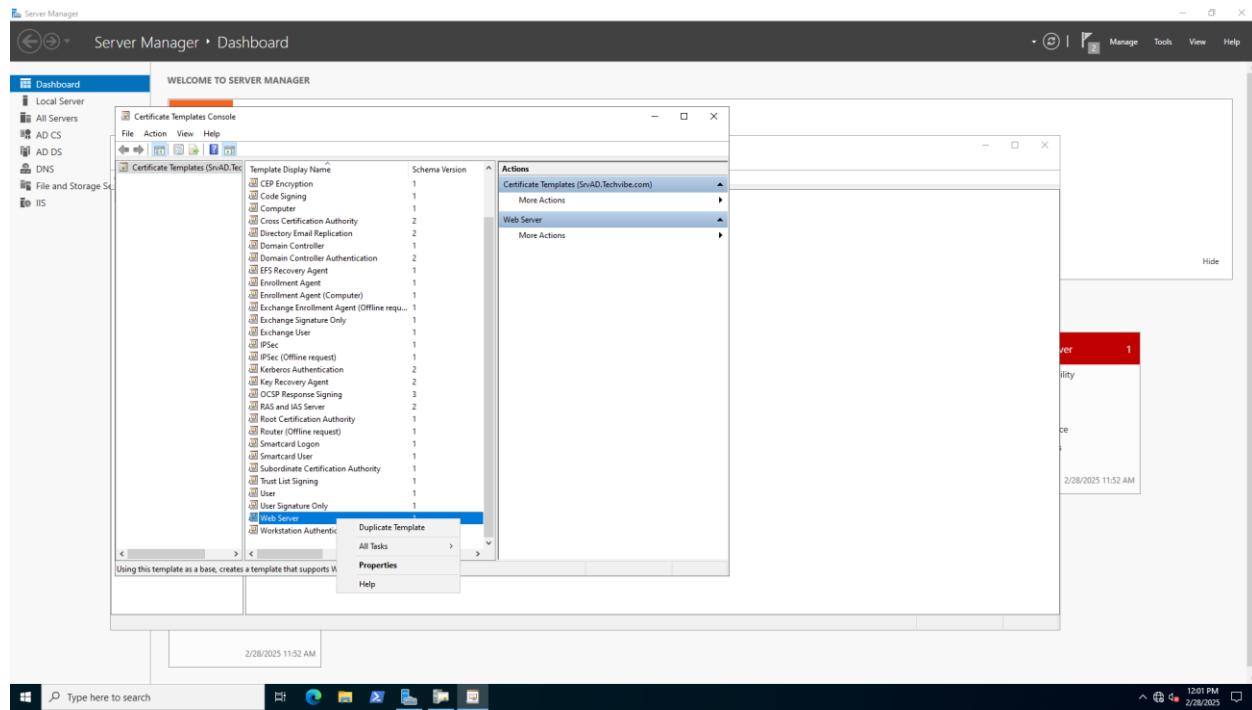
Exchange Installation



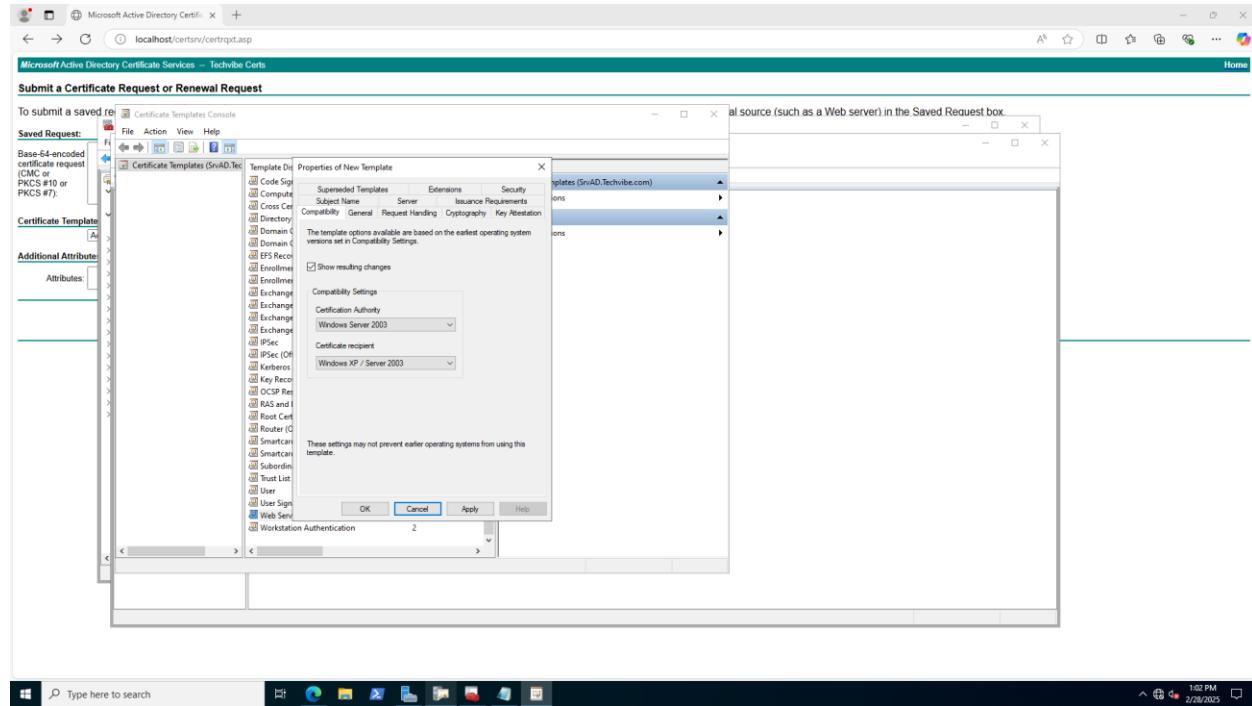
- Duplicate the Web Server template, and then we will add **Extended key Usage** required for exchange server authentication.



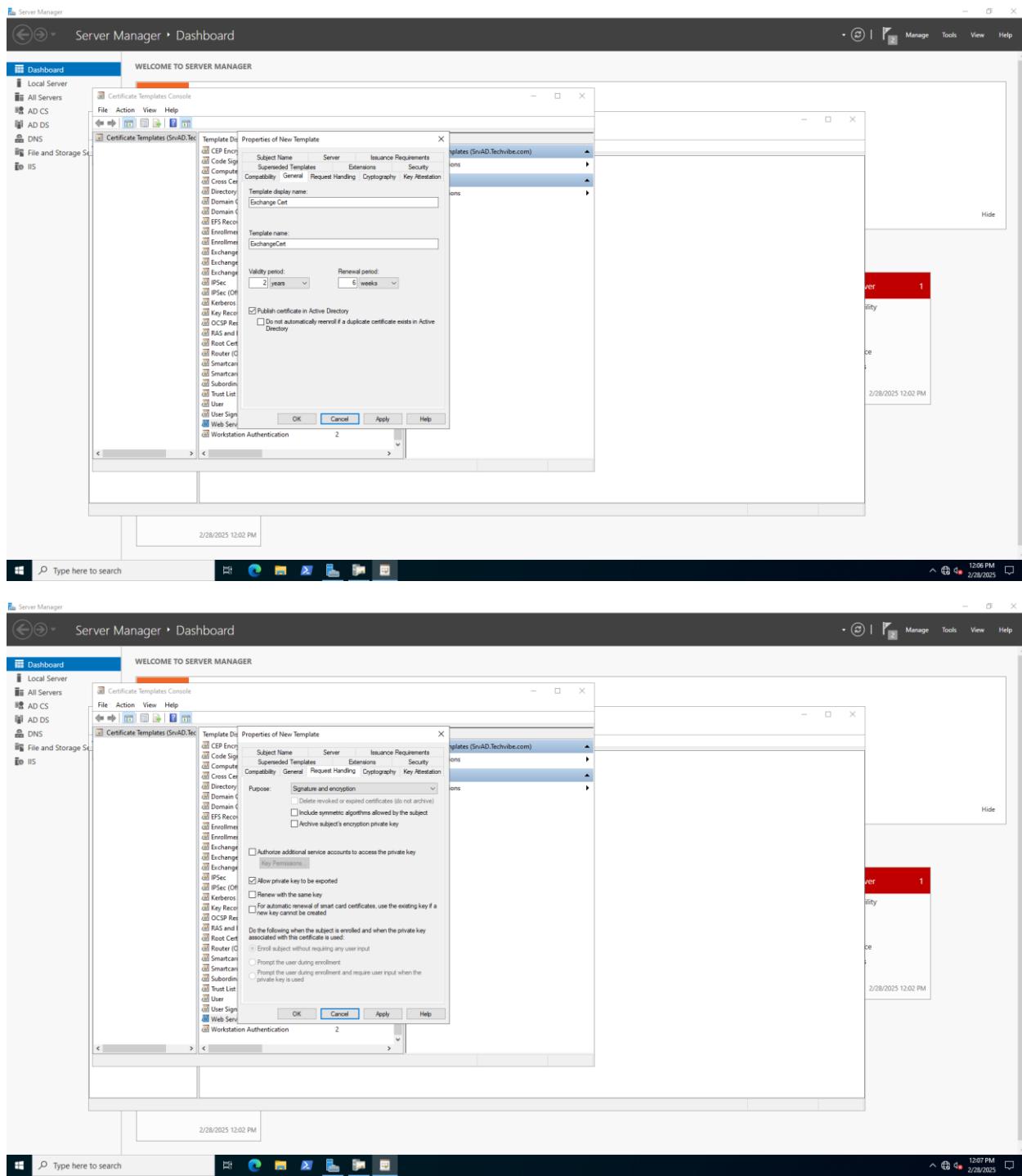
Exchange Installation



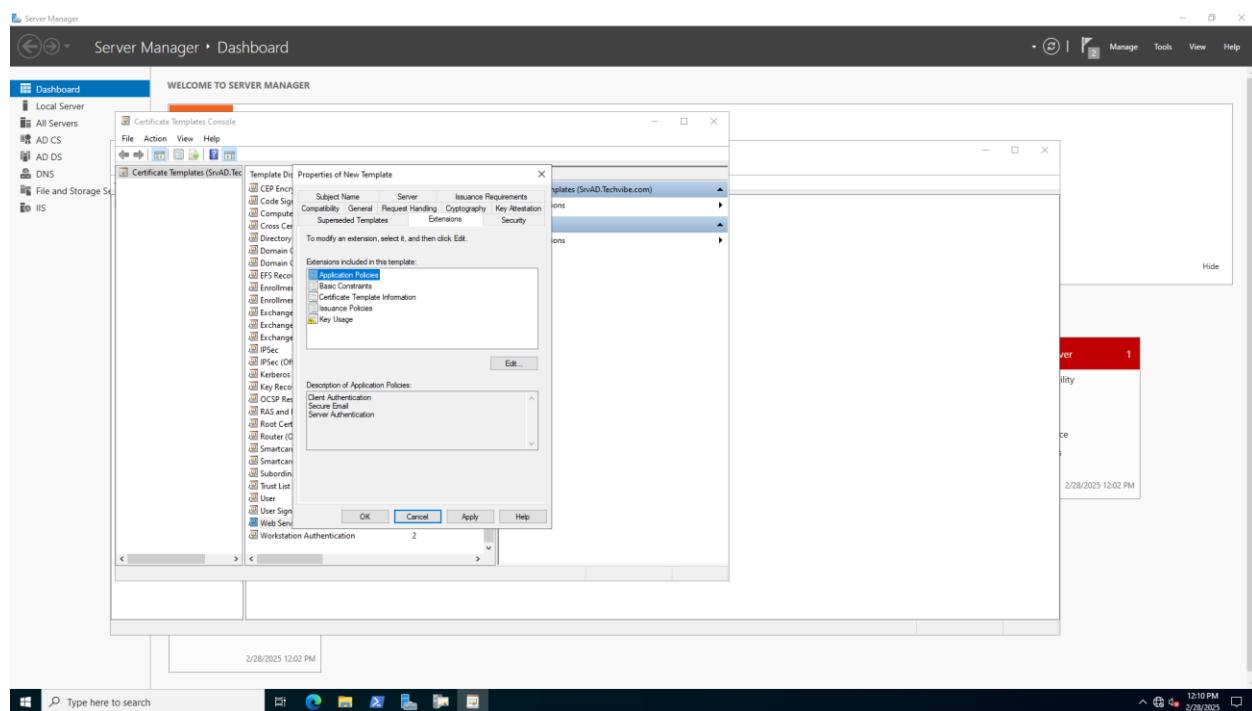
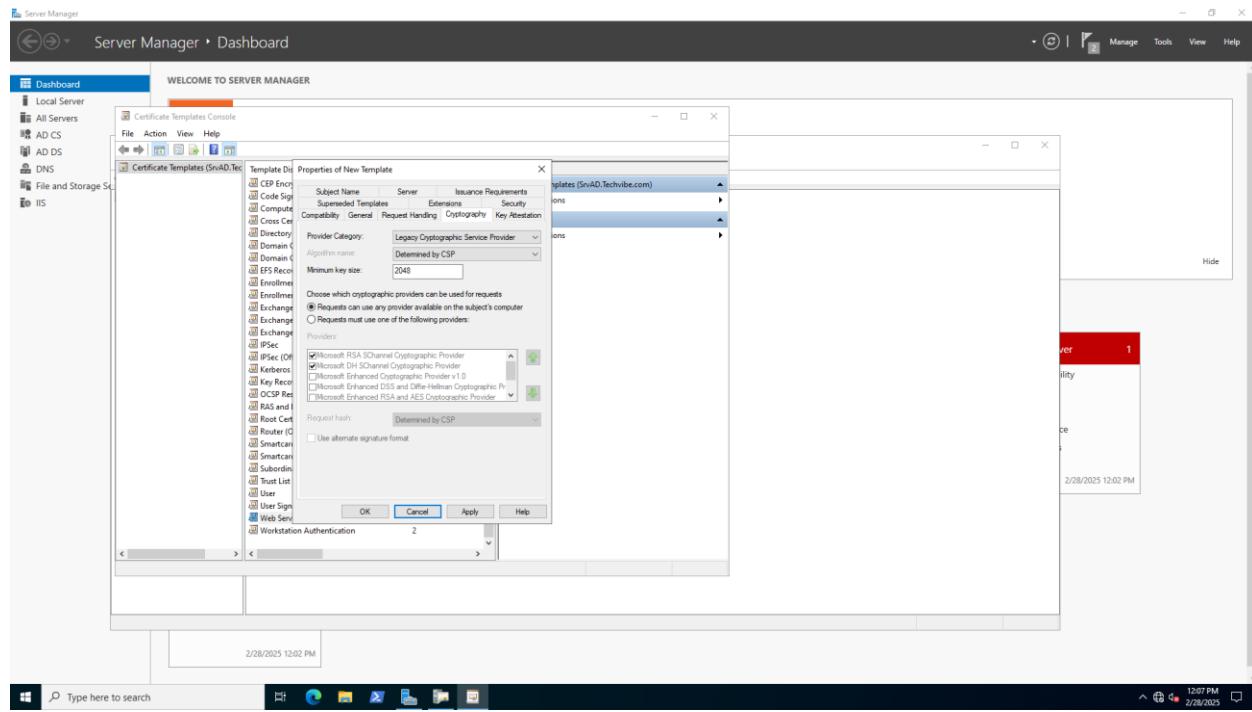
5. Change the settings by following the screenshots.



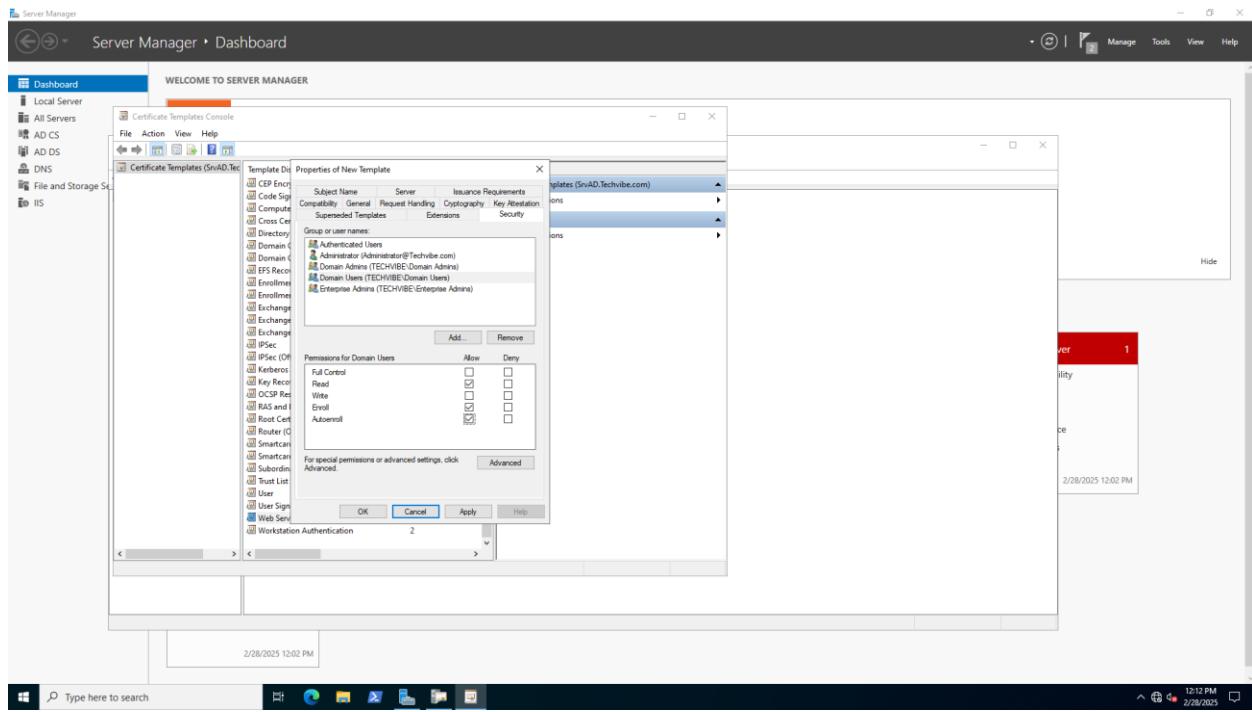
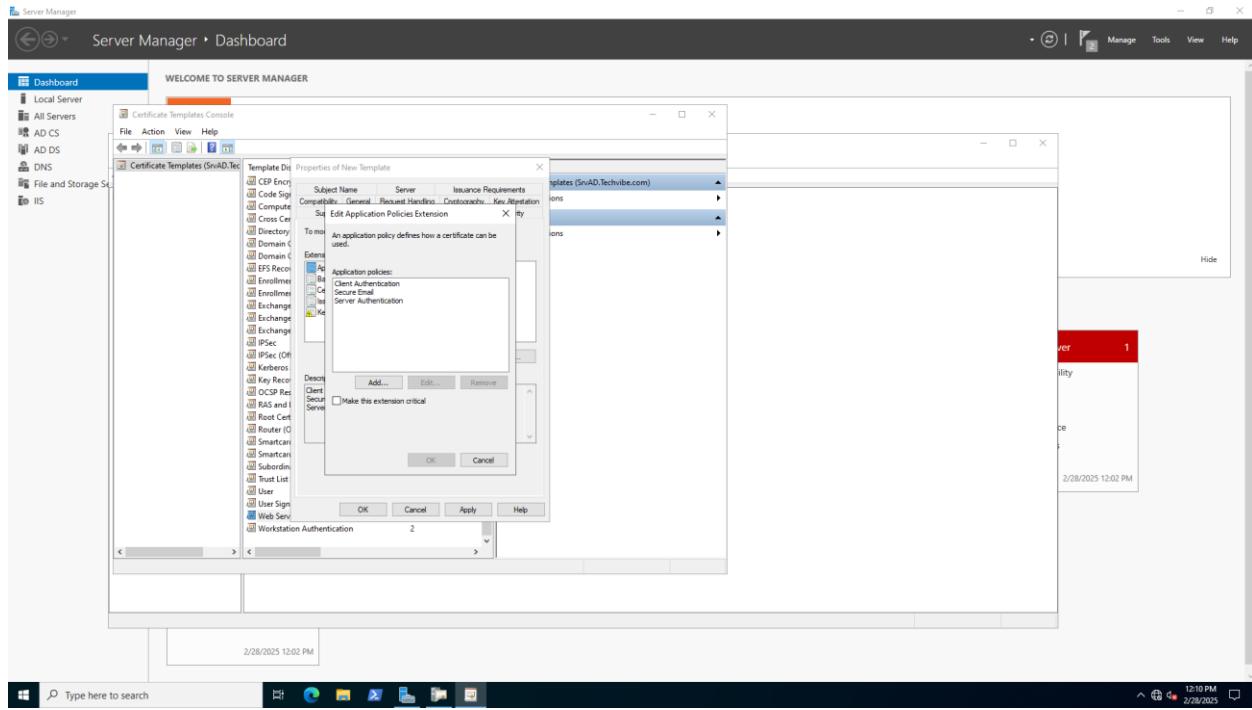
Exchange Installation



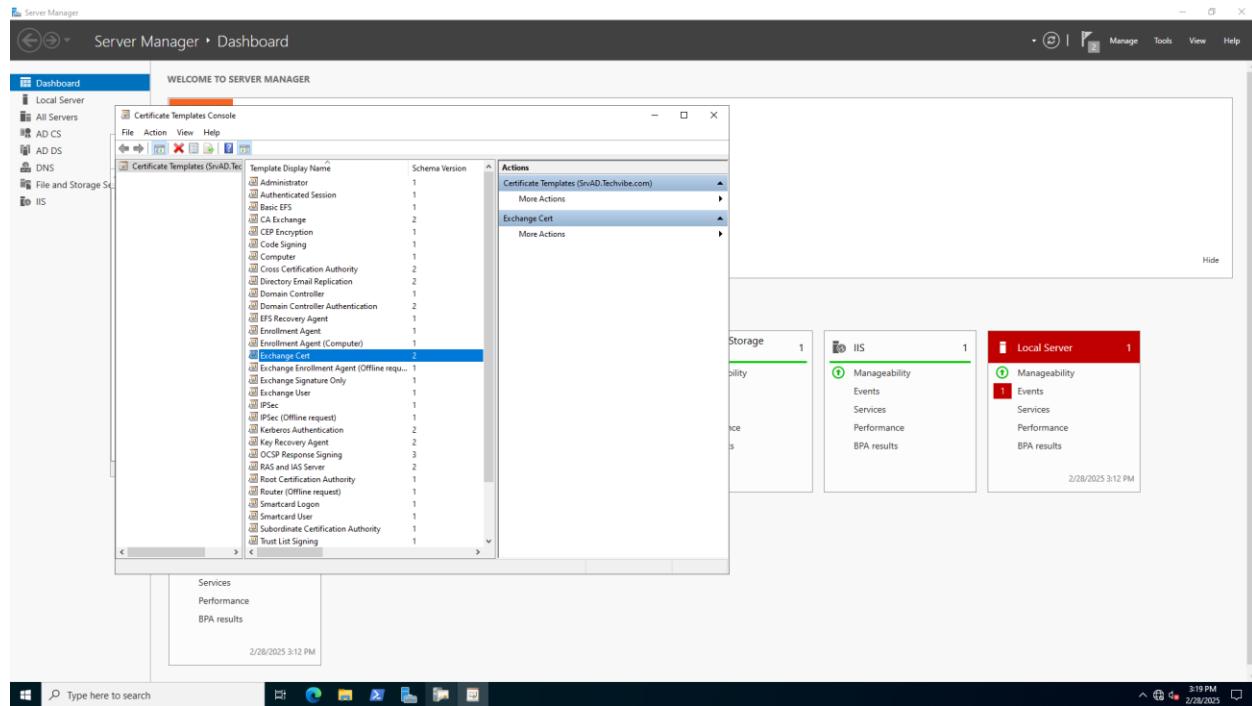
Exchange Installation



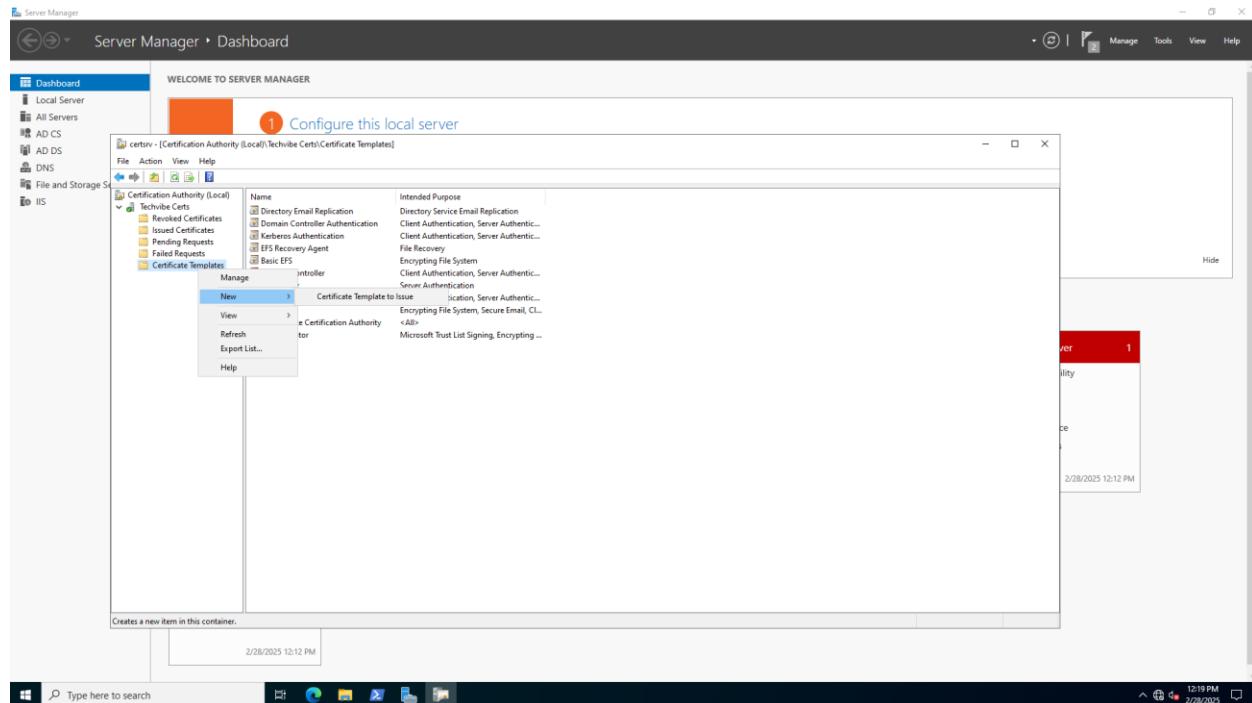
Exchange Installation



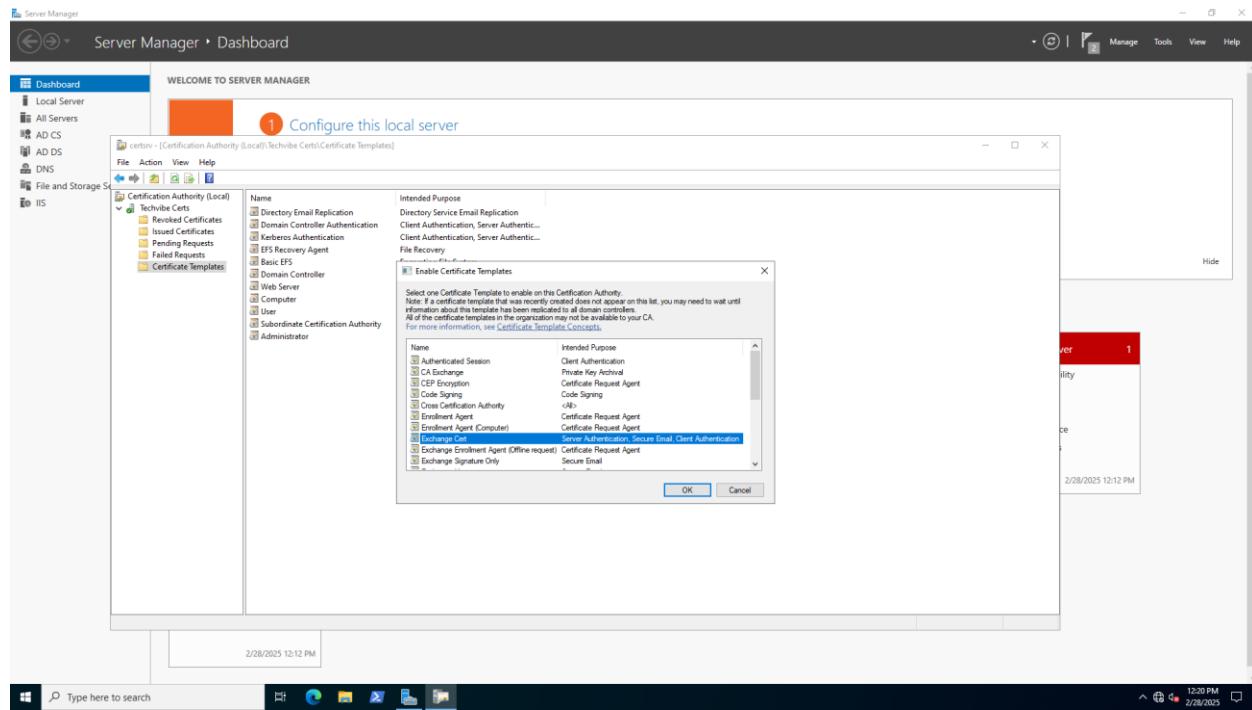
Exchange Installation



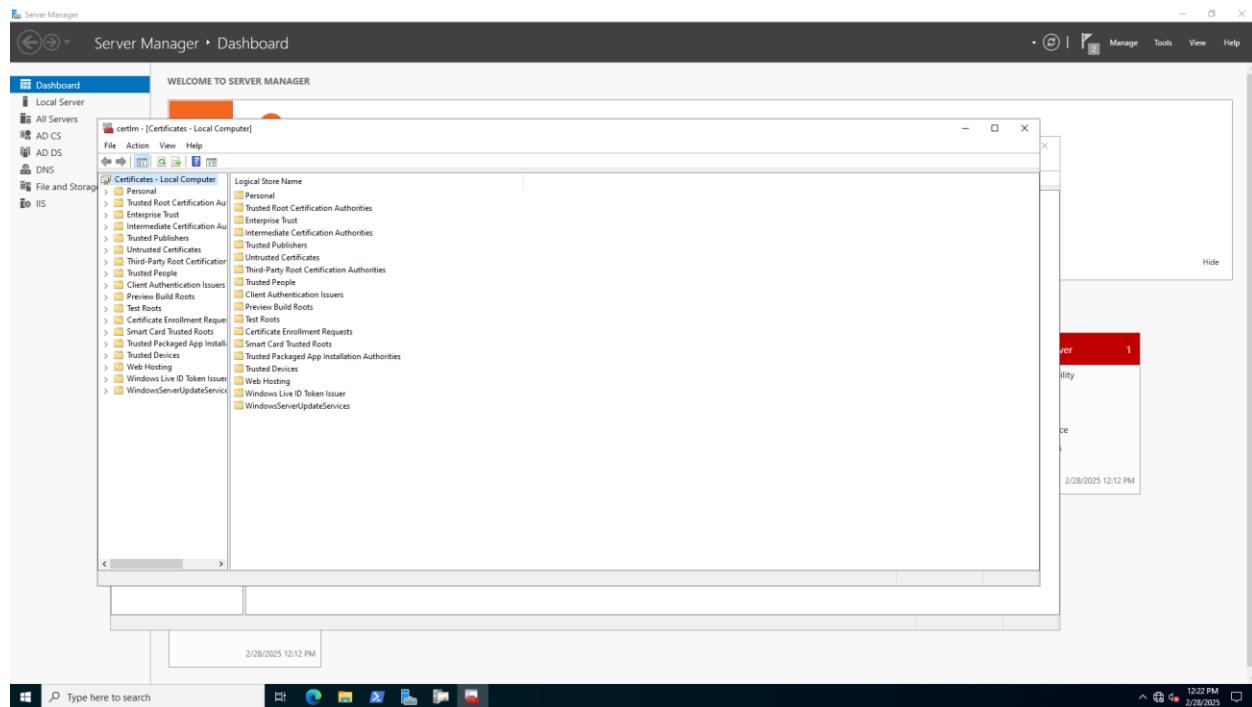
6. Now go back to the Certification Authority and issue the Template you created.



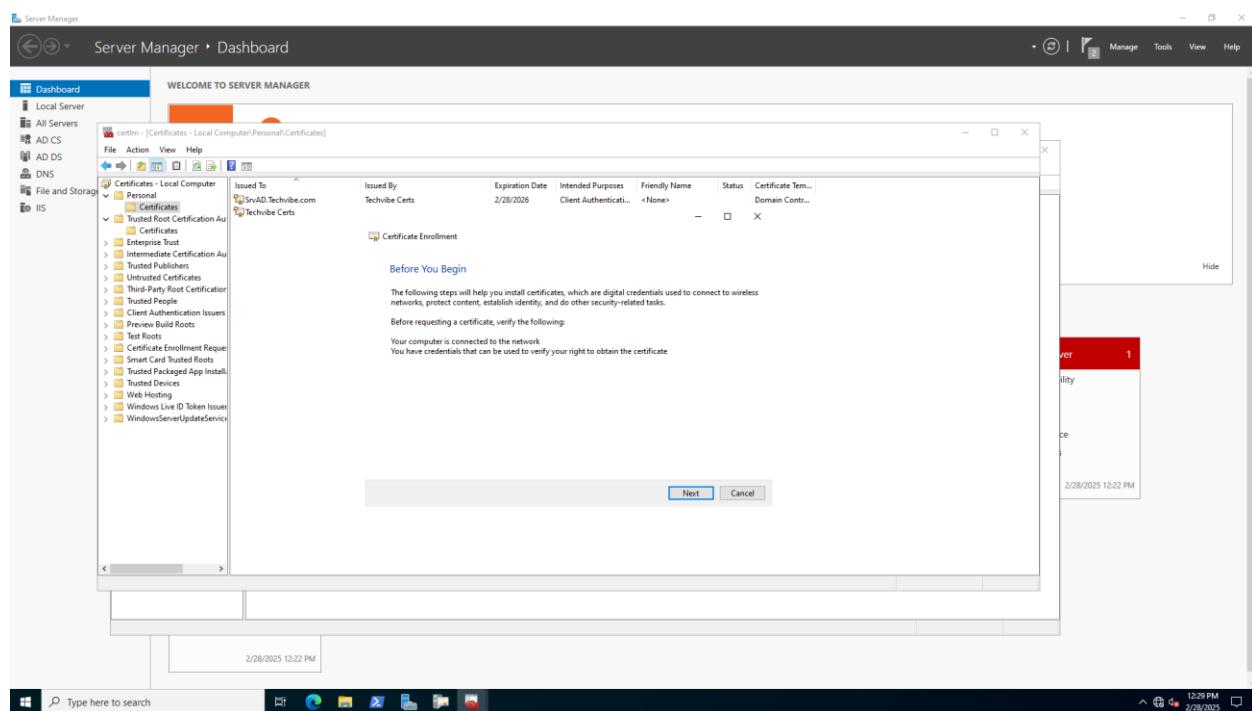
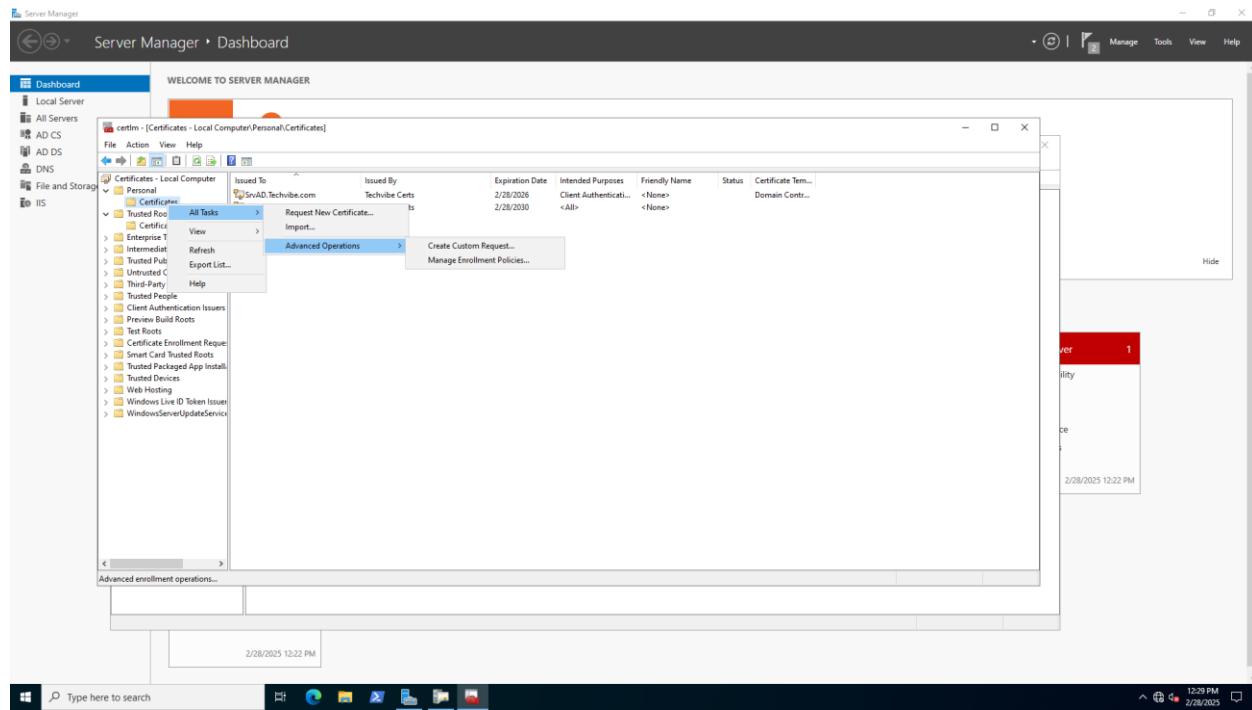
Exchange Installation



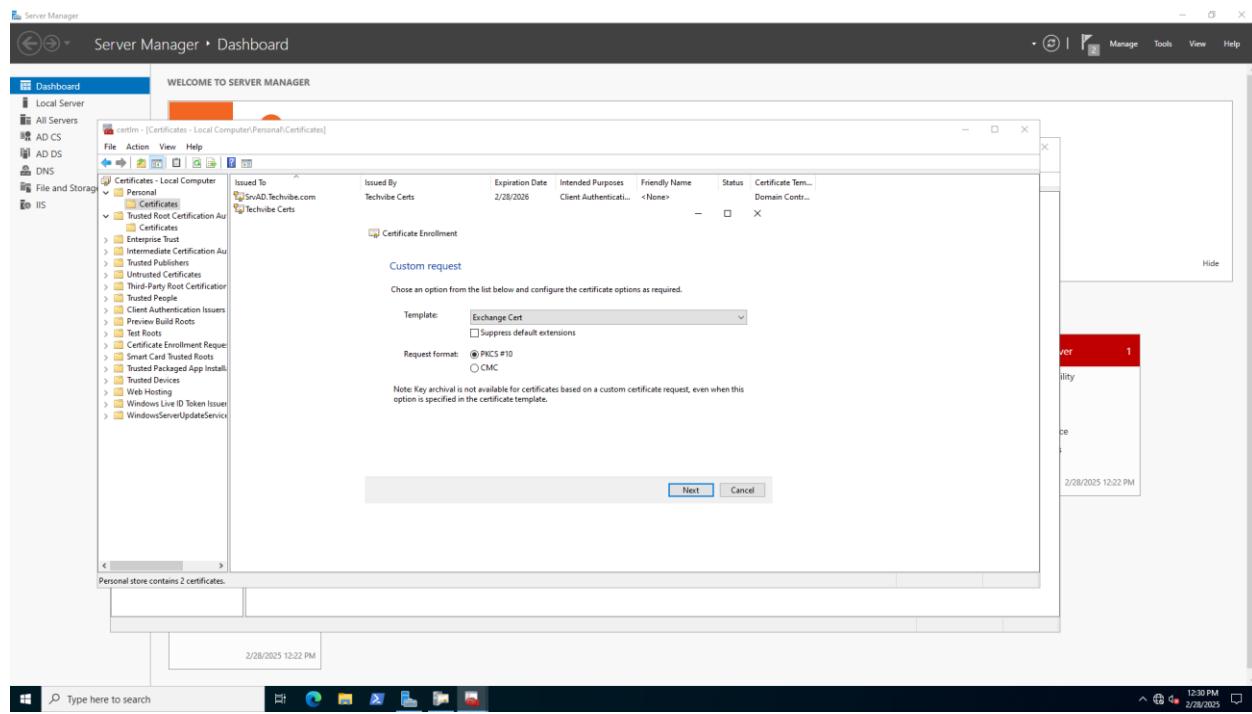
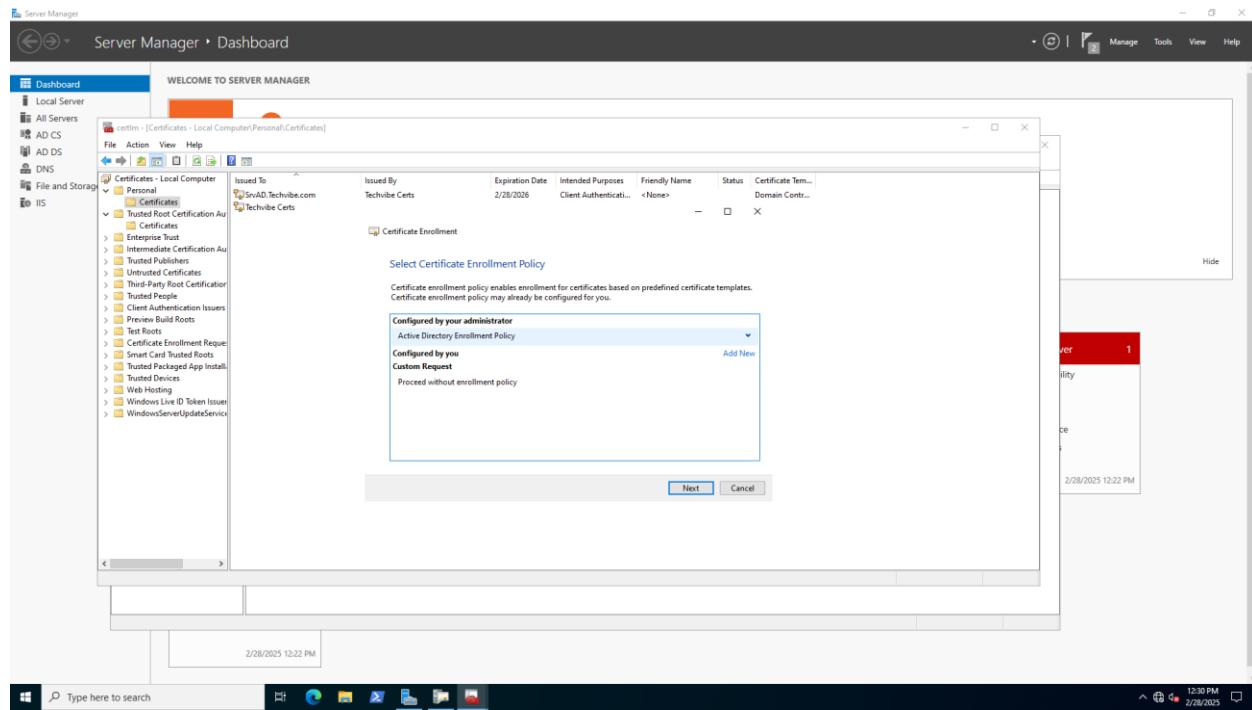
7. Press **win+R**, then type **certlm.msc**. **Personal>Certificates>Right Click>All Tasks>Advanced Options>Create custom request**.



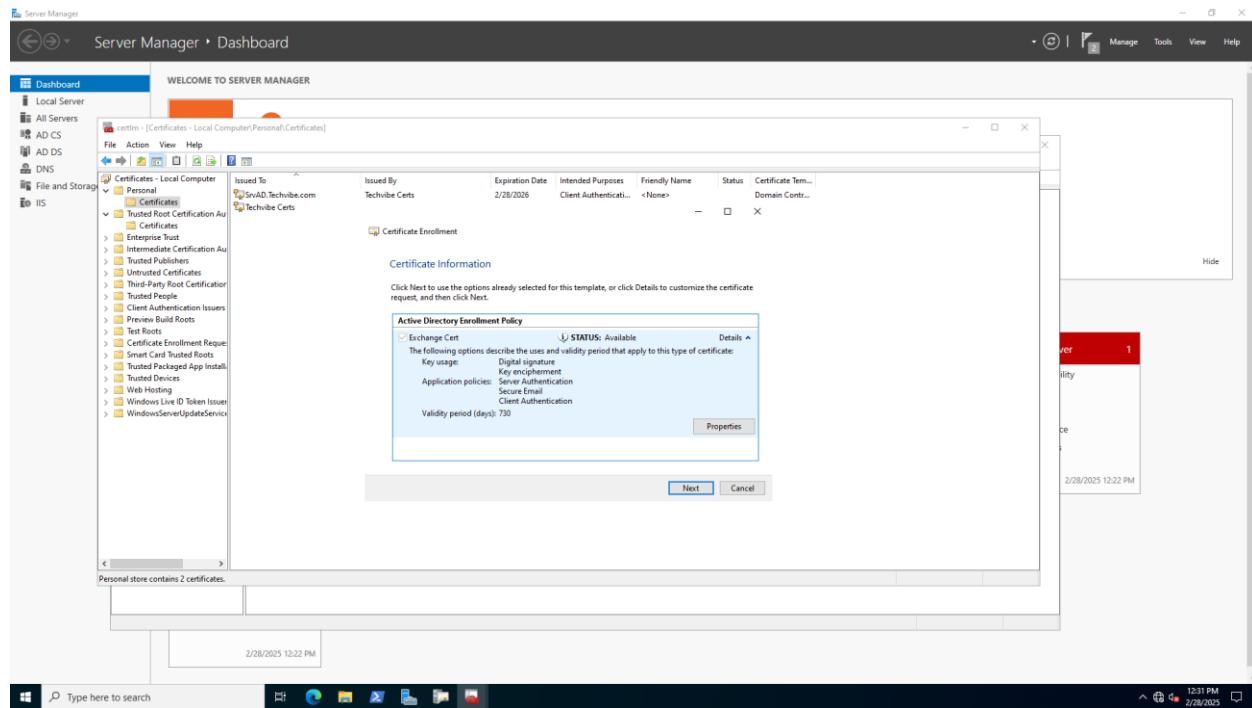
Exchange Installation



Exchange Installation



Exchange Installation



8. Configure Subject Name and Subject Alternative Names (SANs):

- **Go to Properties:**
 - In the certificate request or template, navigate to the **Properties** section.
- **Add Subject Name Details:**
 - Under the **Subject Name** tab, provide the following details:
 - **Common Name (CN):** Enter the primary domain name (e.g., techvibe.com).
 - **Country (C):** Enter the two-letter country code (e.g., US for the United States).
 - **Organization (O):** Enter the name of your organization (e.g., TechVibe Inc.).
- **Add Subject Alternative Names (SANs):**
 - Under the **Extensions** or **SANs** tab, add the following:
 - **DNS Names:**
 - Add the **fully qualified domain names (FQDNs)** of all websites hosted on the server.
 - Include:
 - The **main server FQDN** (e.g., techvibe.com).
 - A **wildcard entry** for subdomains (e.g., *.techvibe.com). This allows the certificate to be used for any subdomain (e.g., support.techvibe.com, mail.techvibe.com).



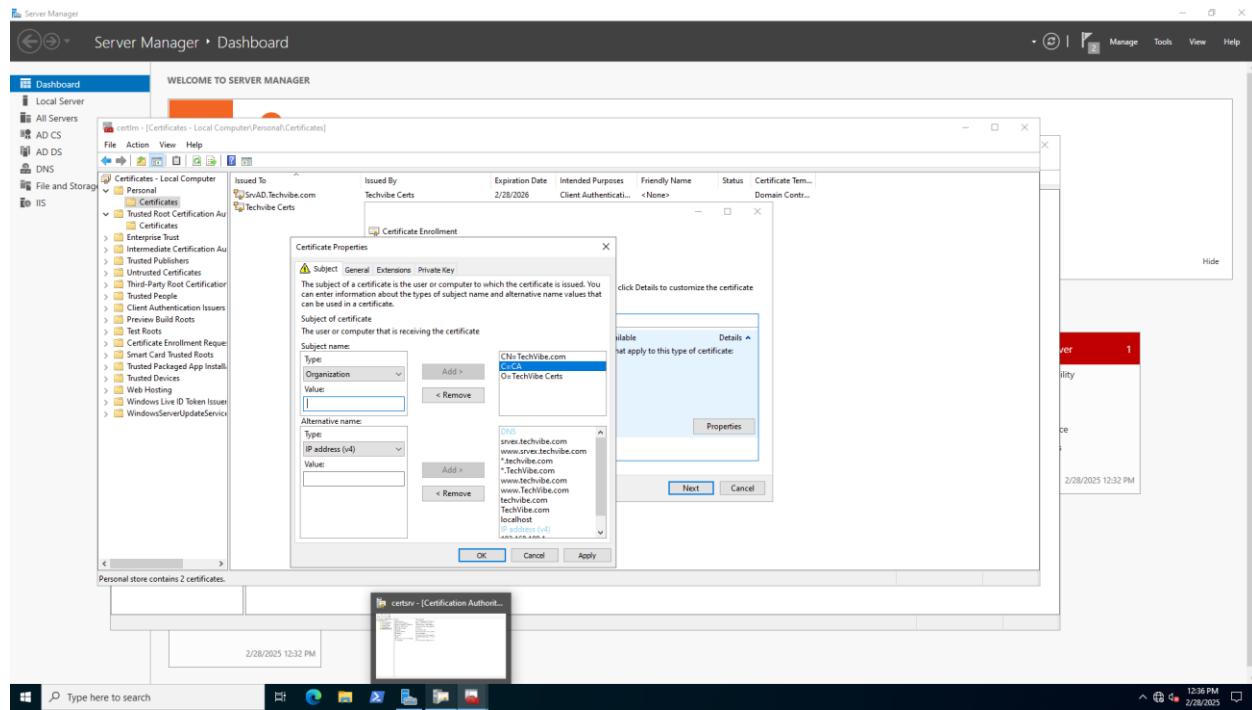
Exchange Installation

■ IP Addresses (Optional):

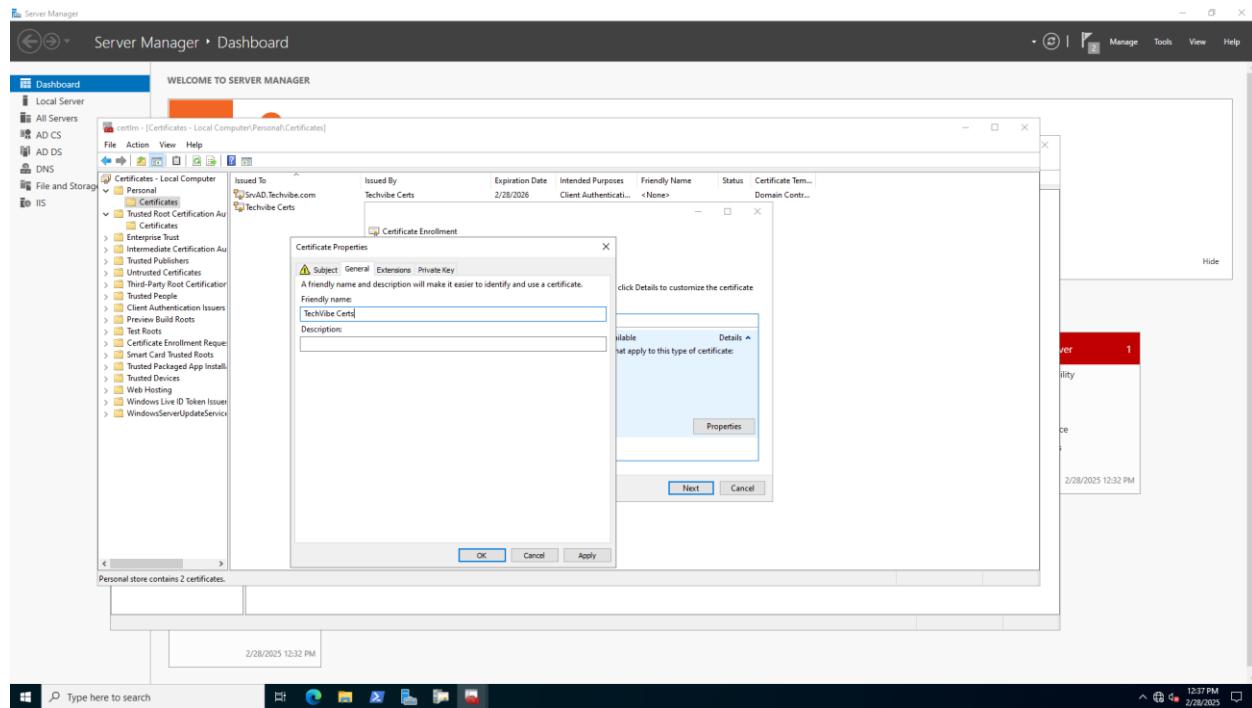
- If your websites are accessed via IP addresses, add the **IPv4 addresses** of the servers.

- **Save the Configuration:**

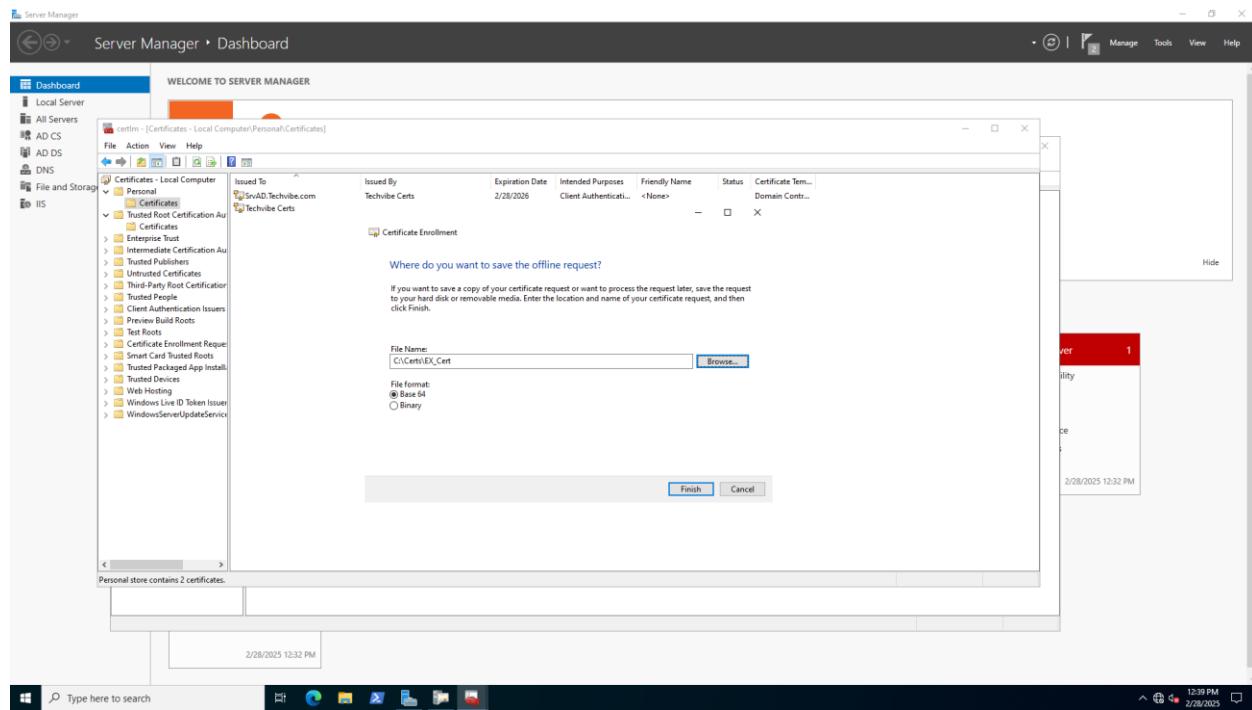
- Ensure all details are correct, then save the configuration.



Exchange Installation

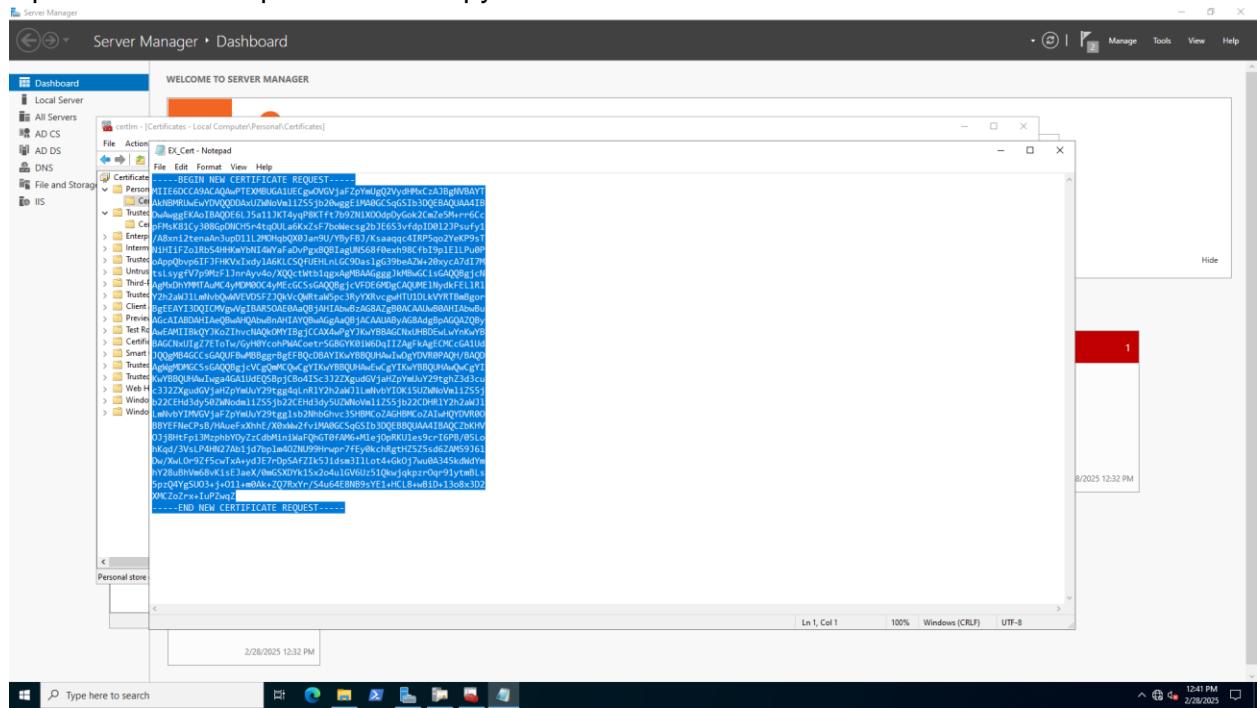


9. Close the Properties Tab and Click Next, then specify a location where you want to save your request file.



Exchange Installation

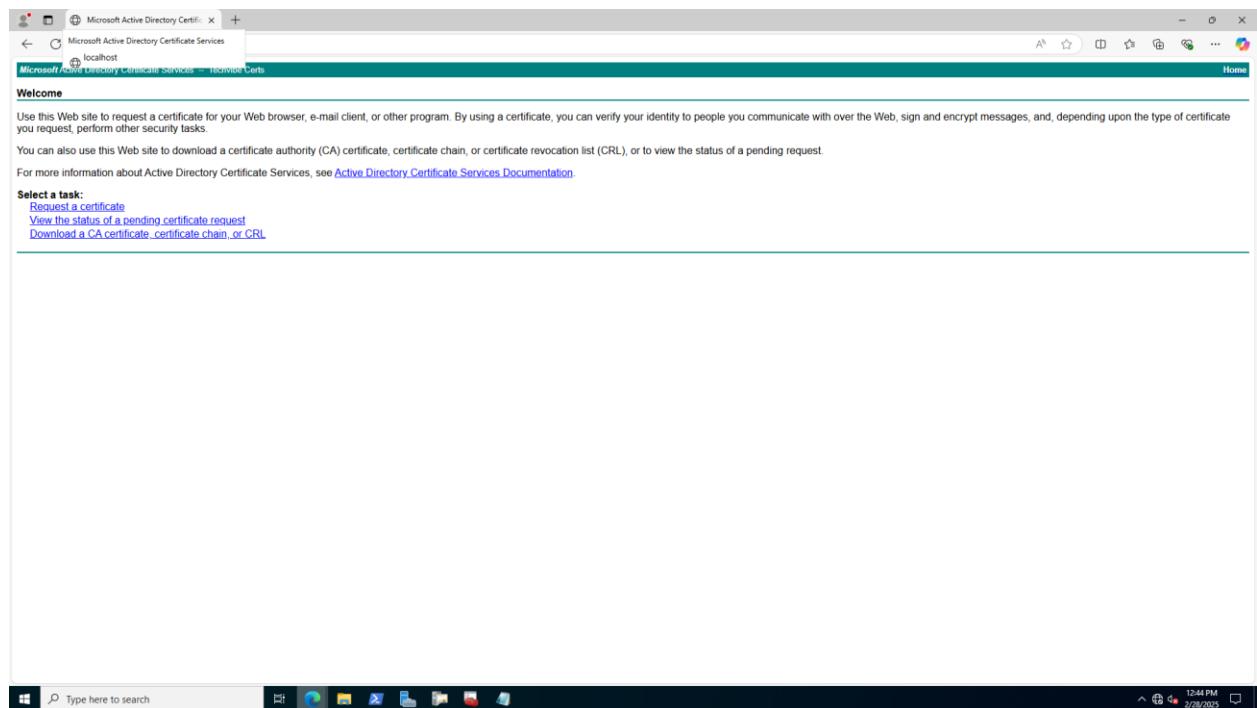
10. Open the saved request file and copy all content.

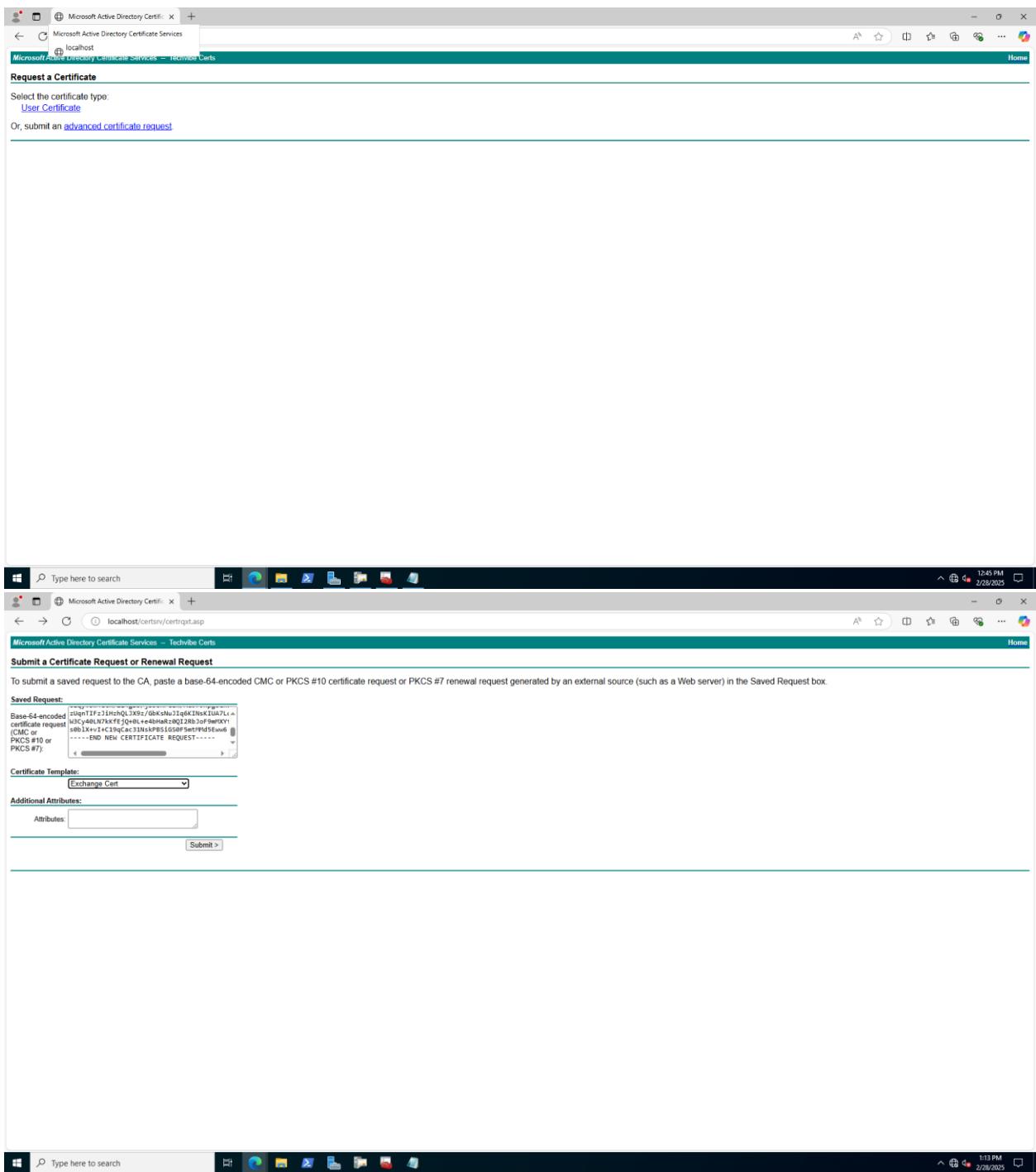


11. Open Microsoft Edge and type <http://localhost/certsrv>.

Request a new certificate>advanced certificate request

Then paste the copied content in the saved request and select Exchange Cert (Certificate template we created) in certificate template.

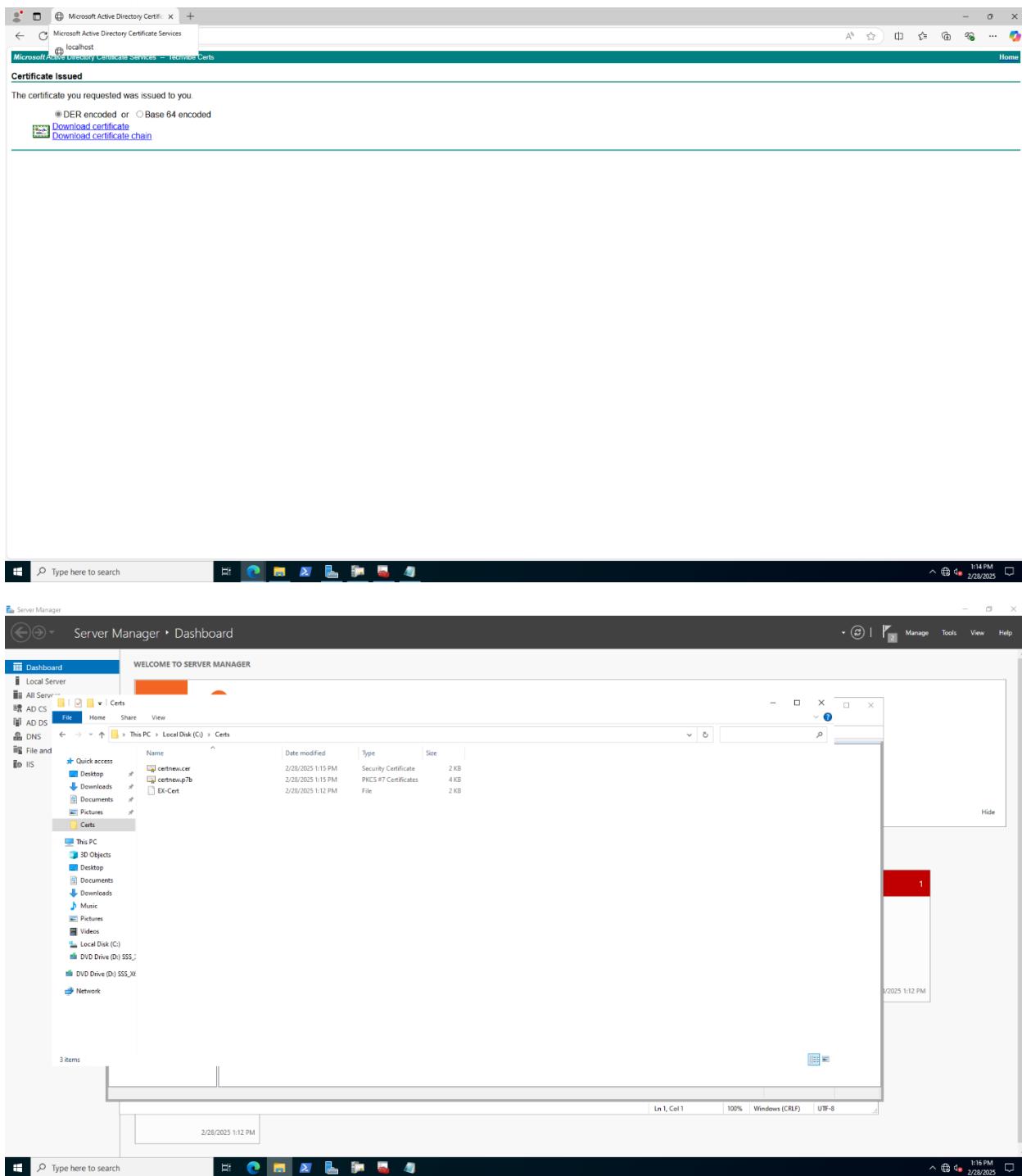




12. Download both certificate and certificate chain. And copy them to the folder where you saved the request file.



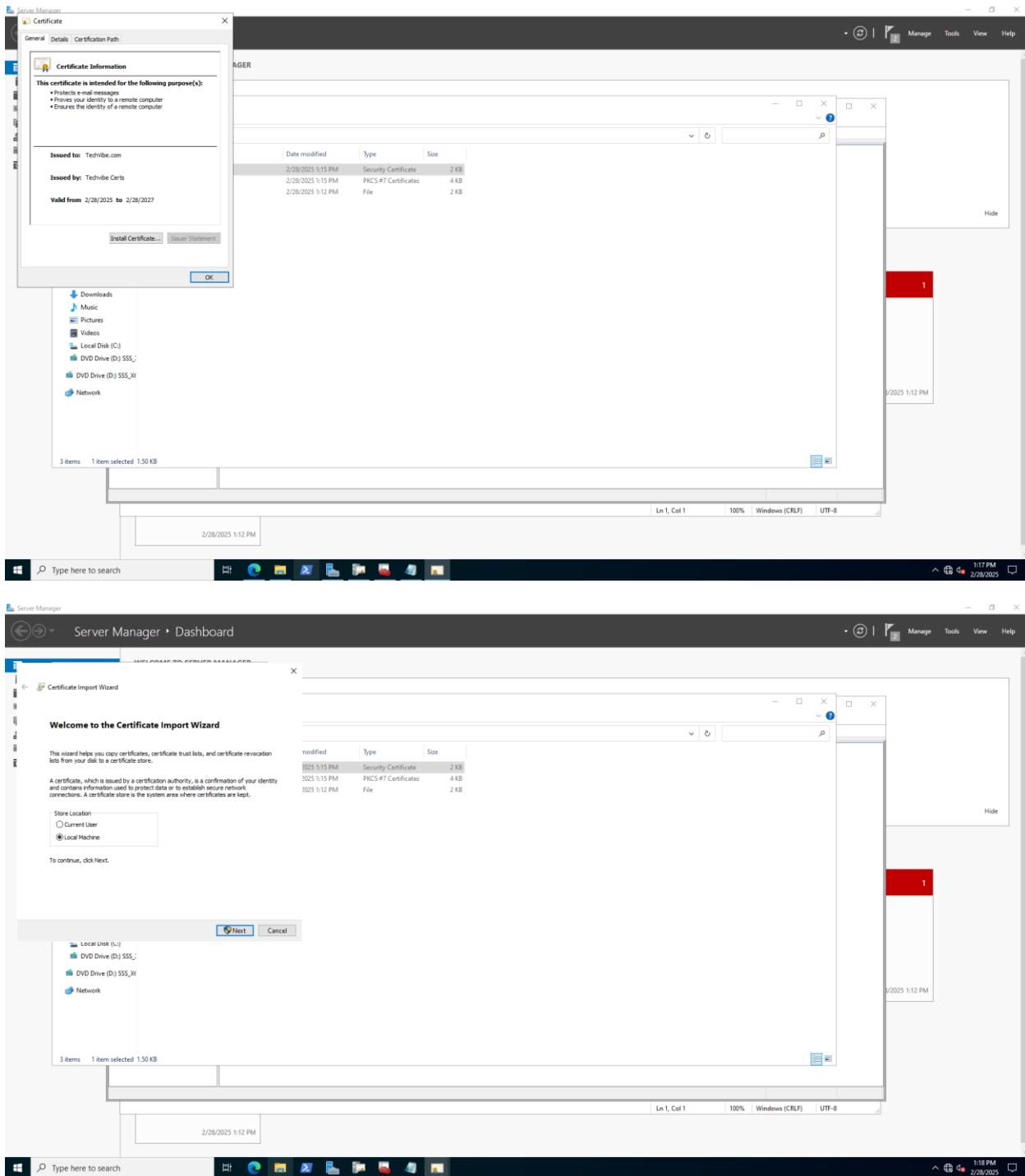
Exchange Installation



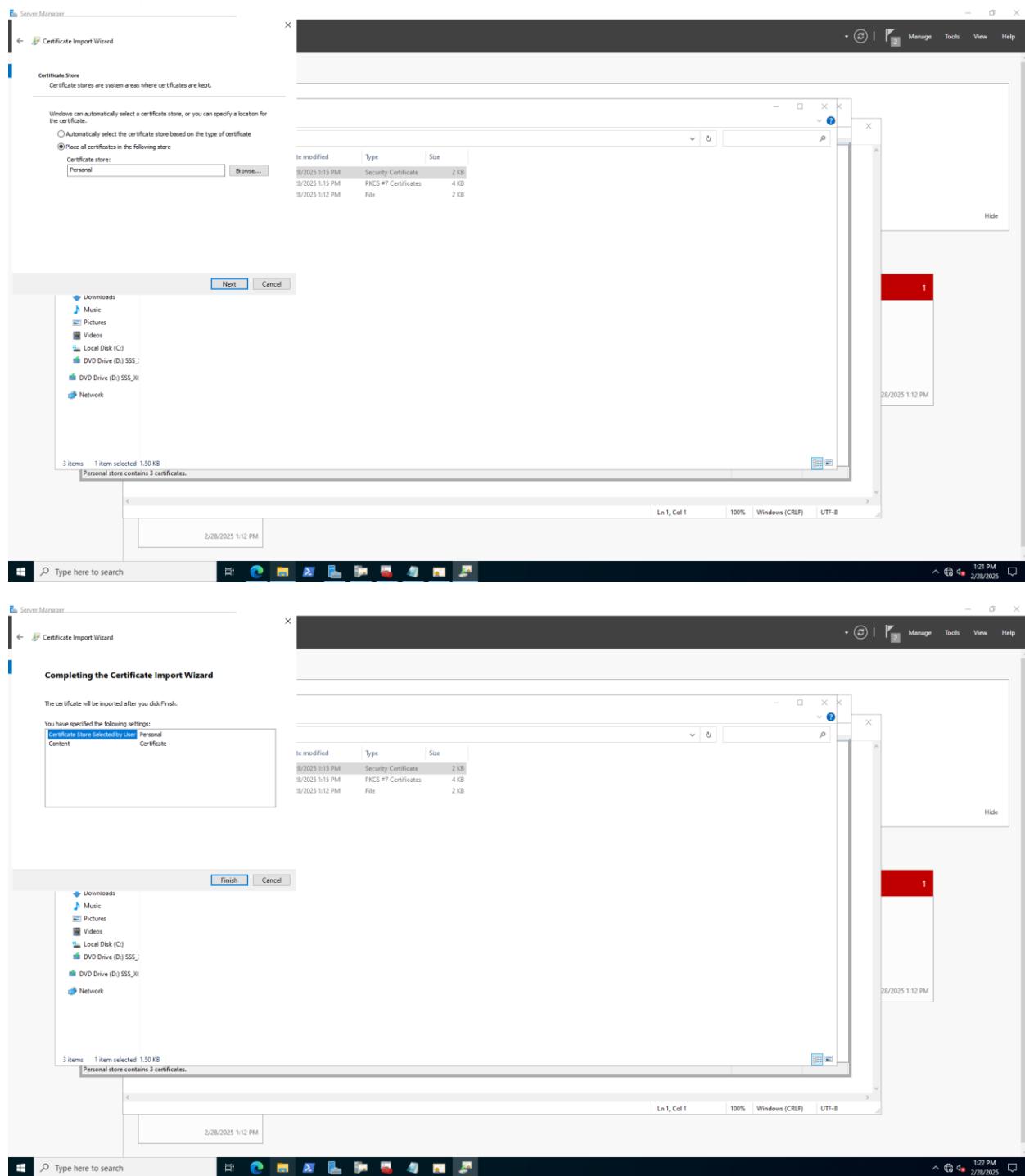
13. Double-Click on certnew.cer file>Install Certificate>Local Machine>Certificate store: Personal>Finish.



Exchange Installation



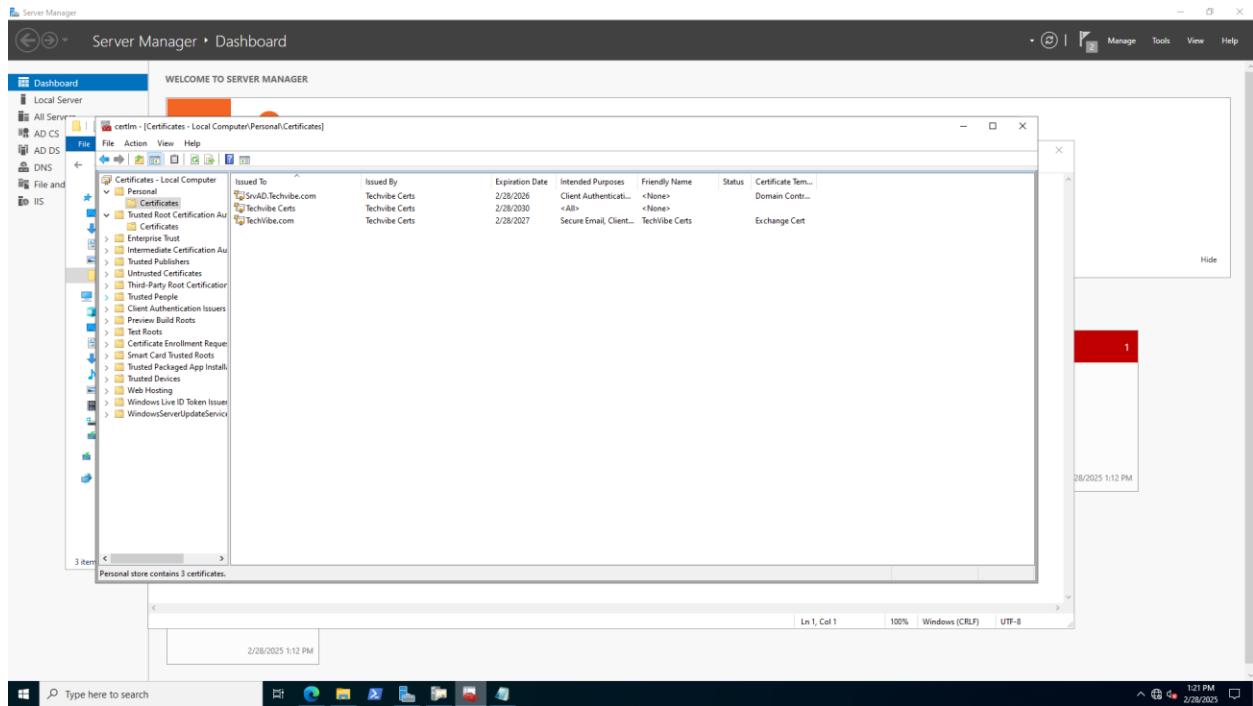
Exchange Installation



14. You will see your certificate in the certificate store in Personal.



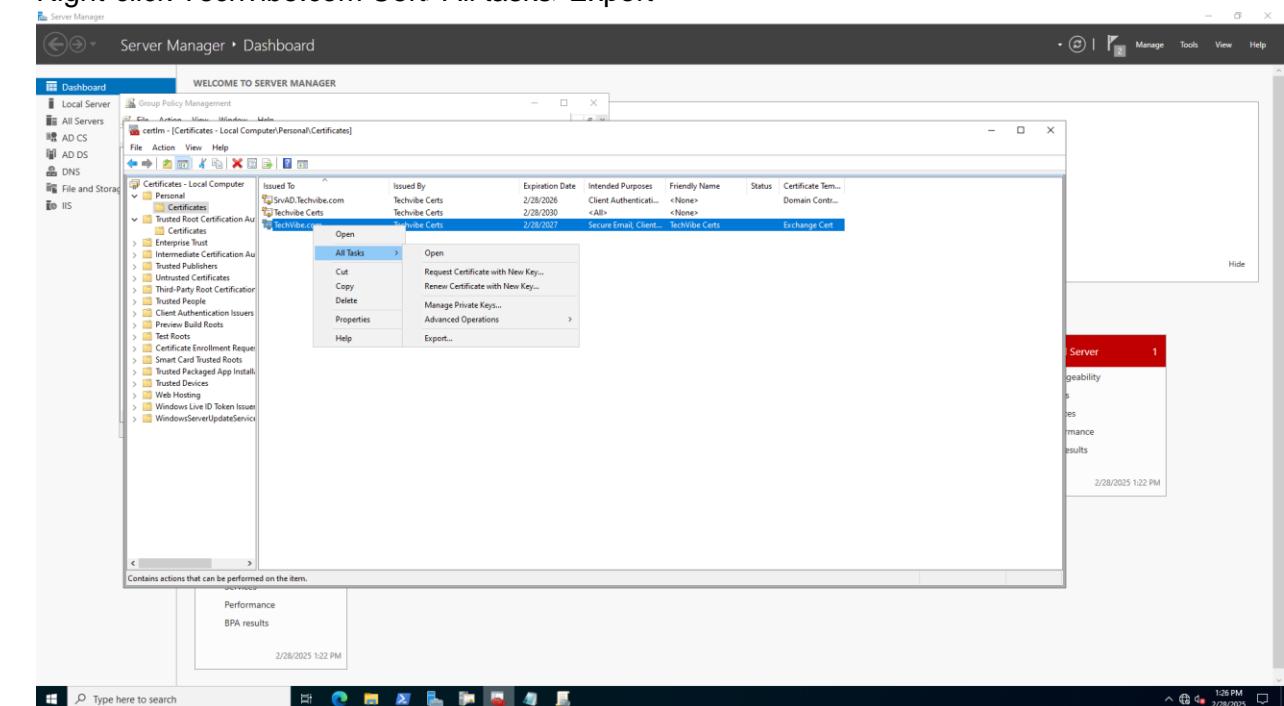
Exchange Installation



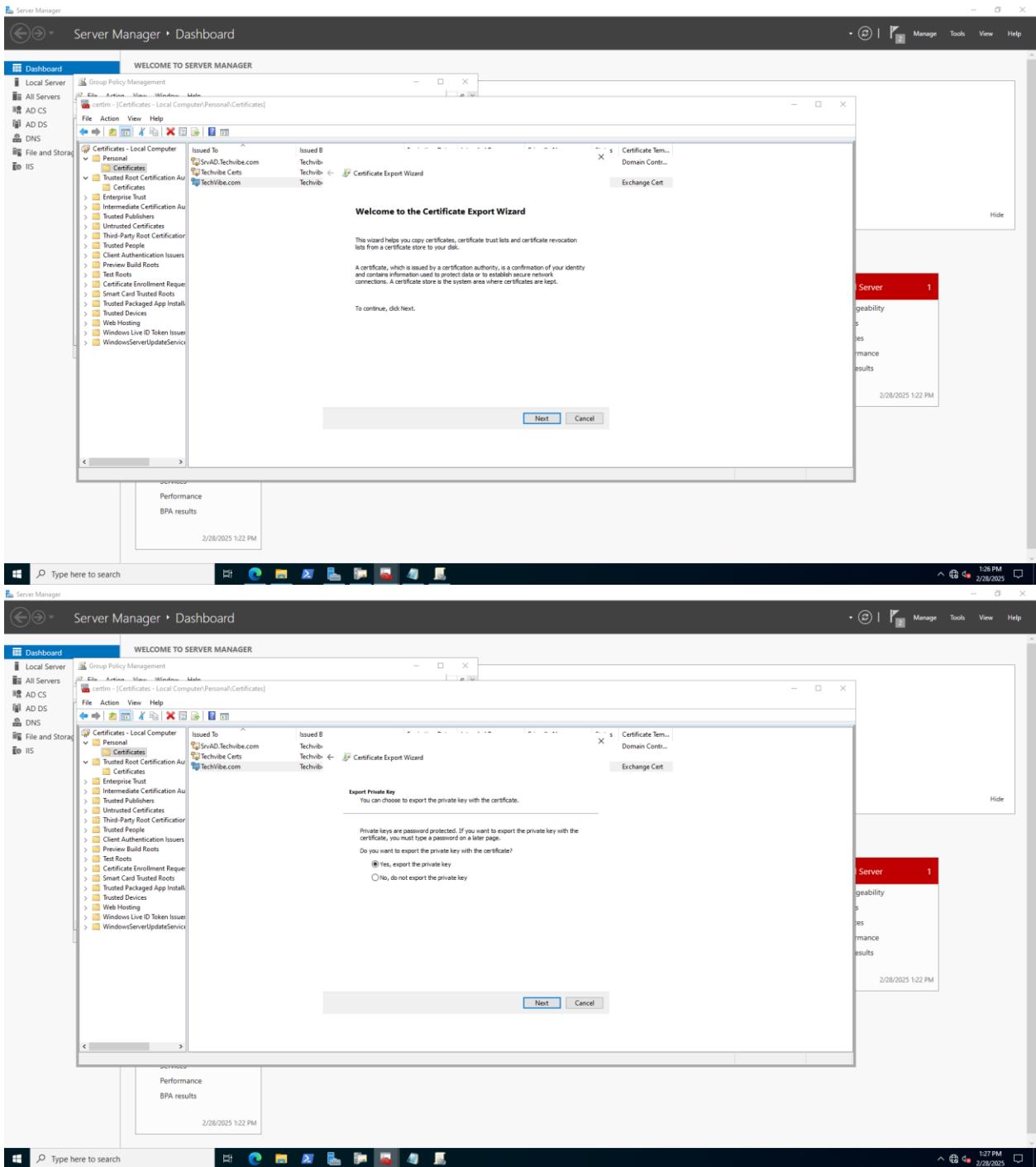
• IMPORTING TRUSTED CERTIFICATE ON SRVEX

- First, export the certificate from Personal which we installed before (Techvibe.com) in .pfx format.

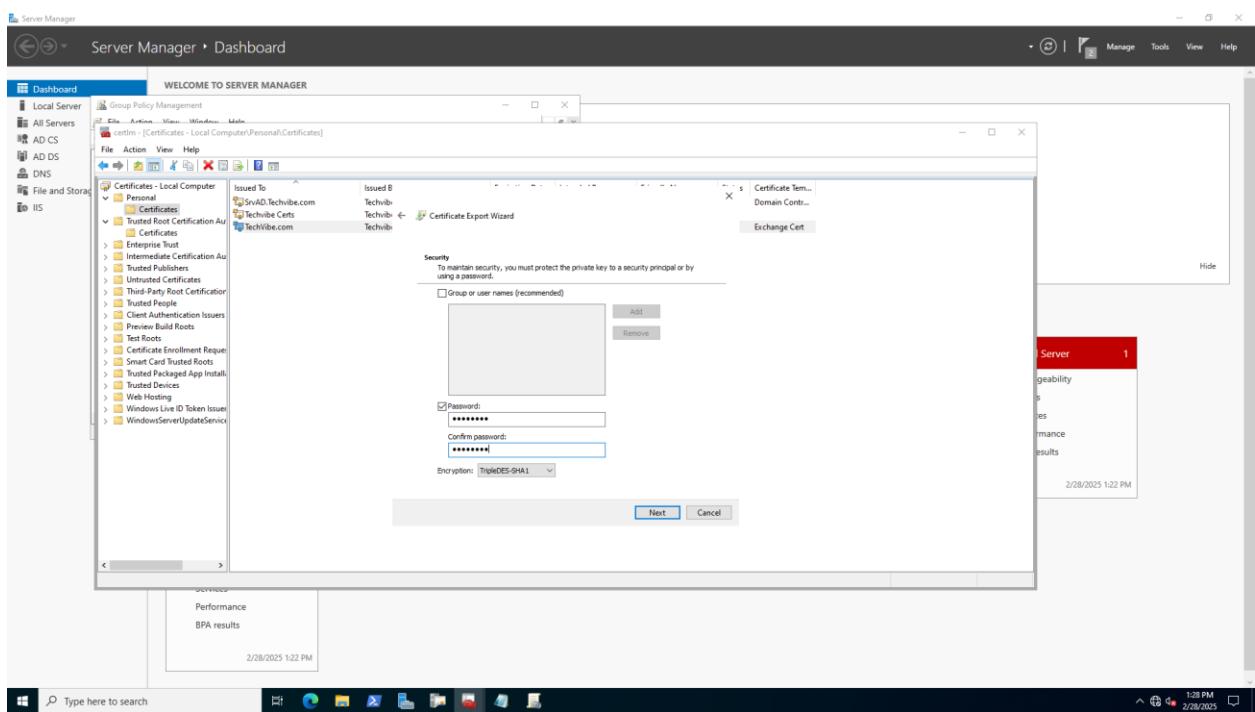
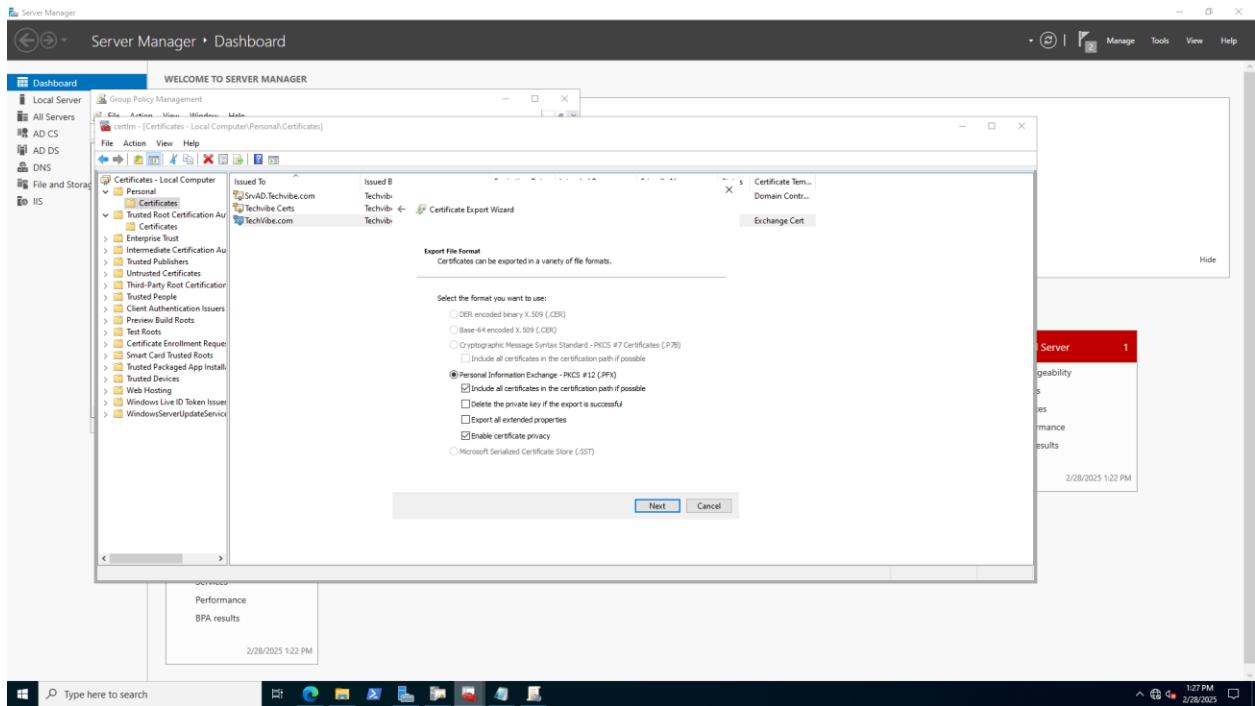
Right-click Techvibe.com Cert>All tasks>Export



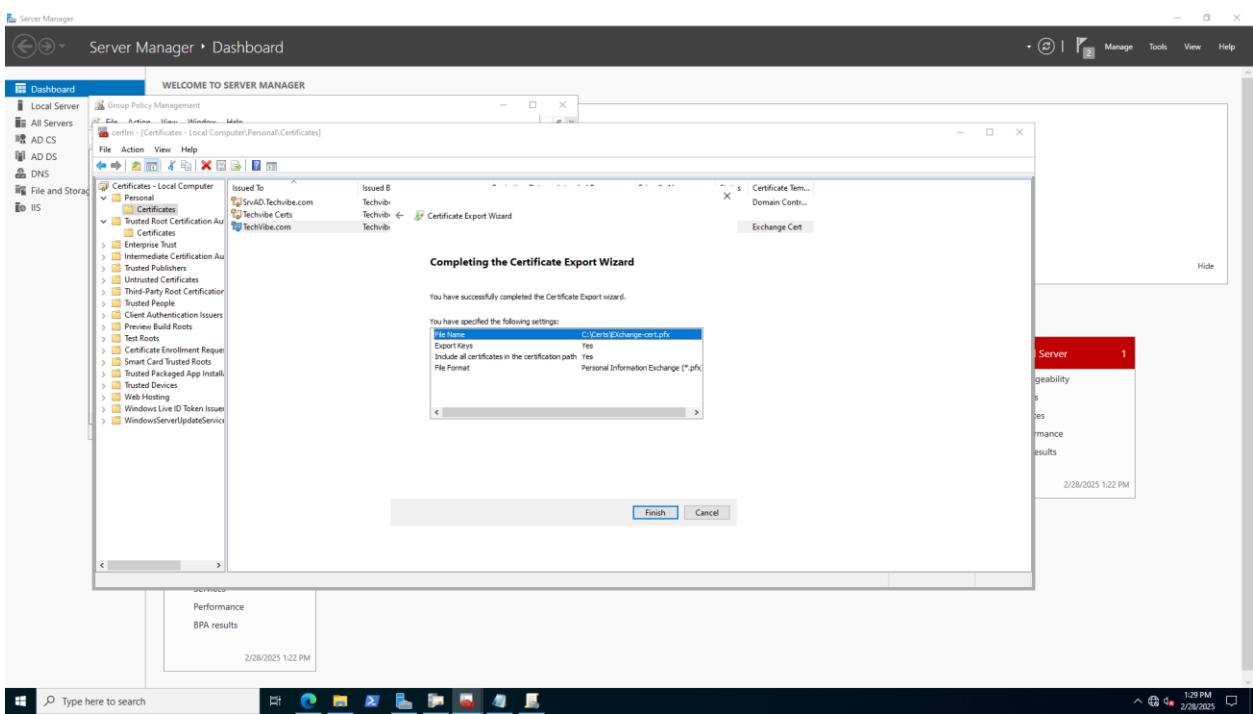
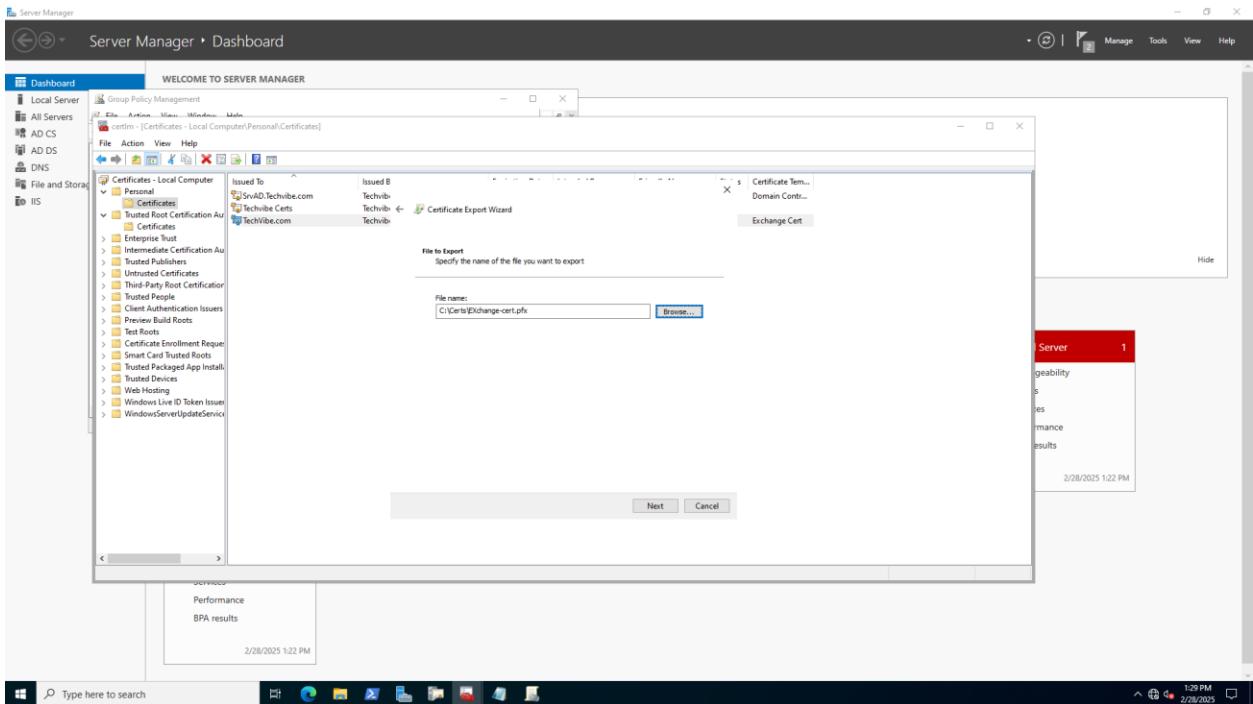
Exchange Installation



Exchange Installation



Exchange Installation

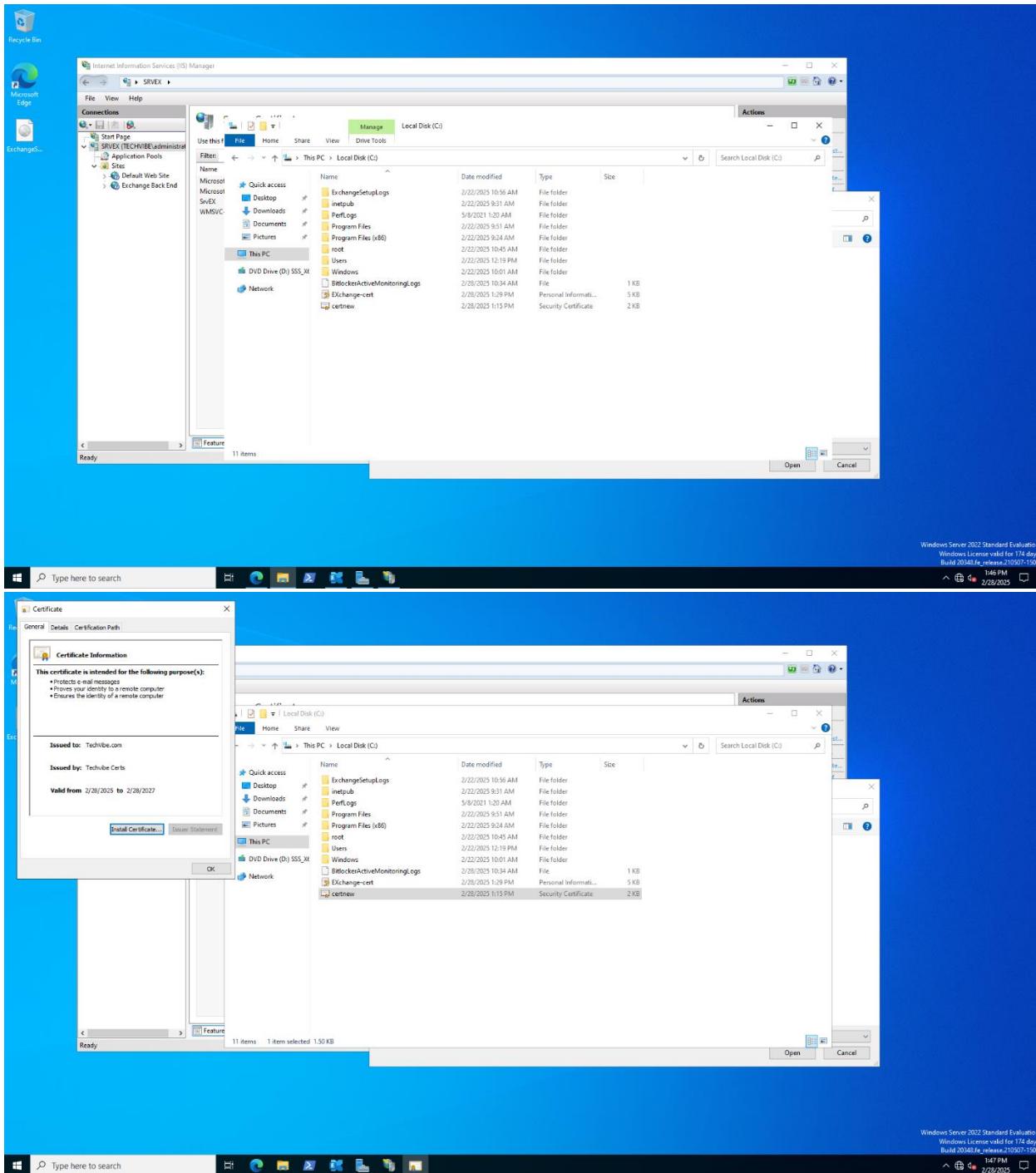


2. Copy both .cer(certnew) and .pfx (Exchange-cert.pfx) file on SrvEX. Then double-click certnew.cer>Install Certificate>Local Machine>certificate store: Personal>Finish. (As we did before)



Exchange Installation

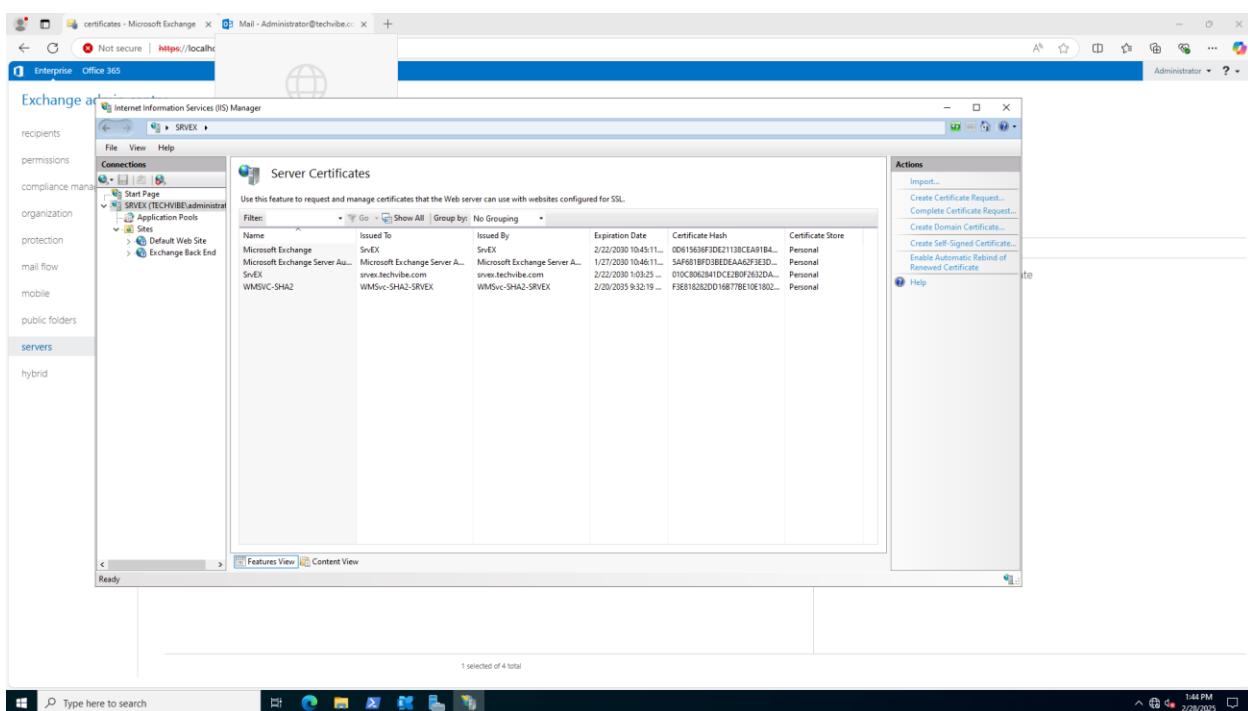
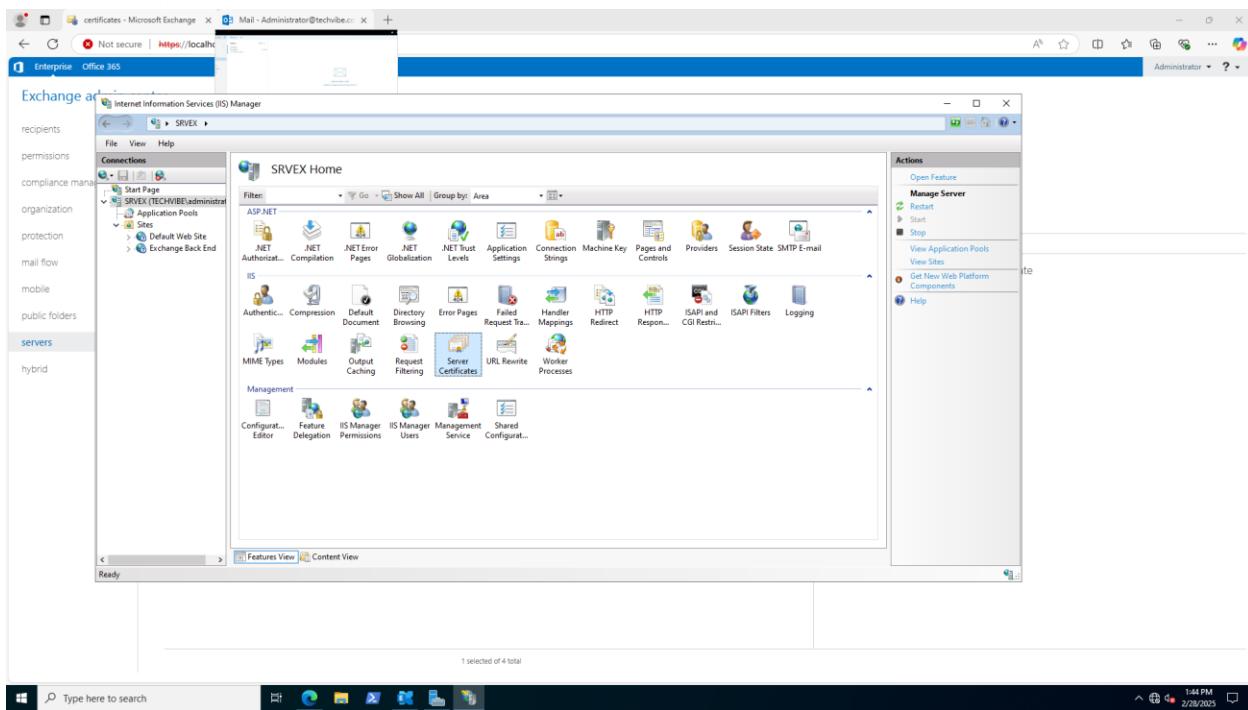
Exchange-cert.pfx>Install Certificate>Local Machine>certificate store:Trusted Root Certification Authorities>Finish.



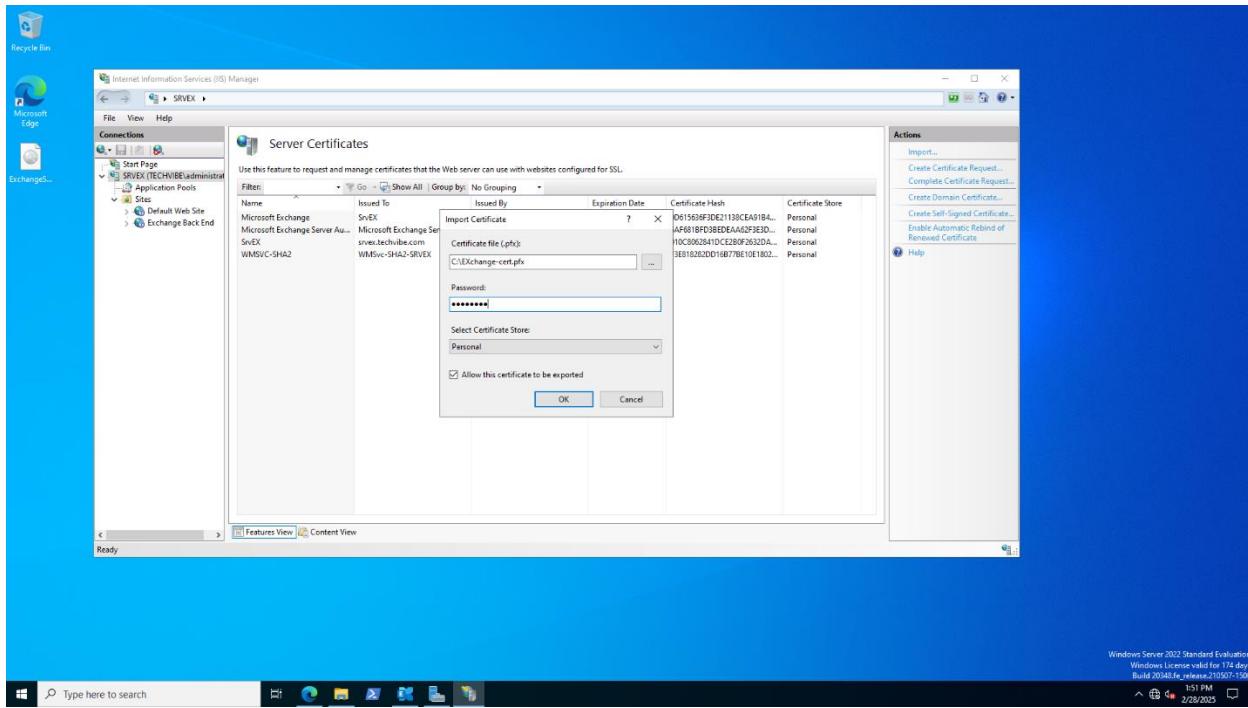
3. Open IIS Manager>Server Certificates>point the location of .pfx file and type in the password>OK



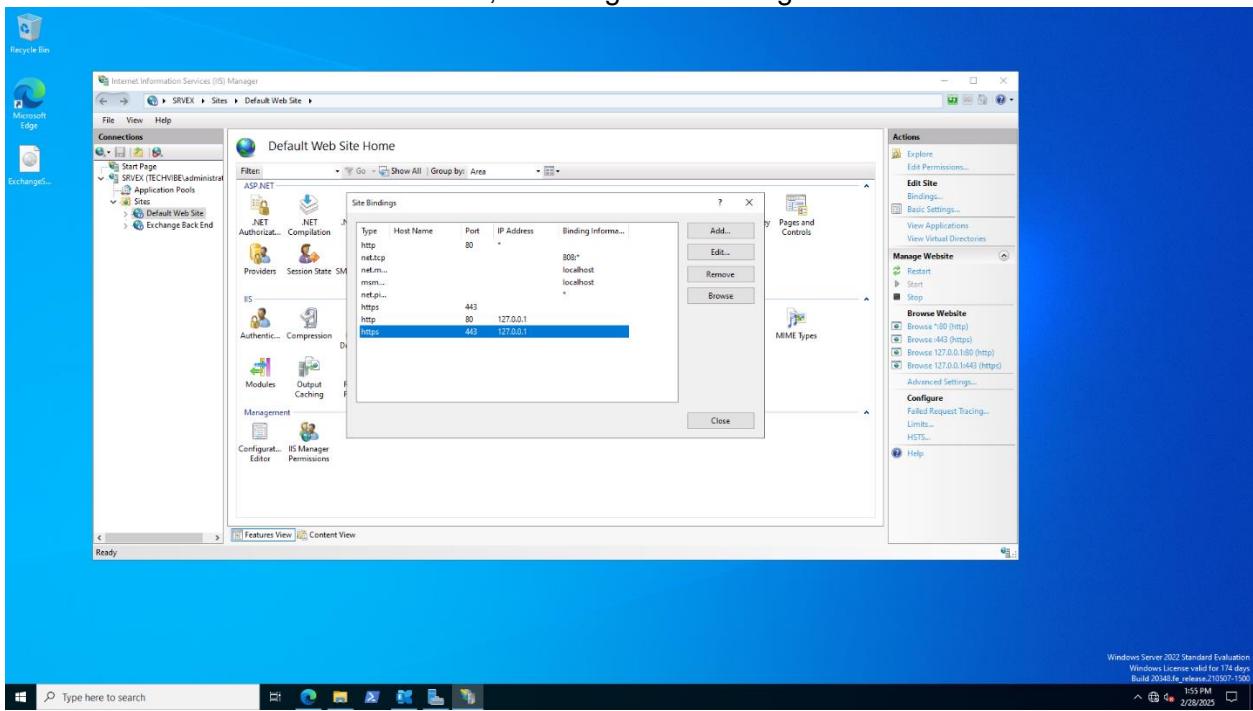
Exchange Installation



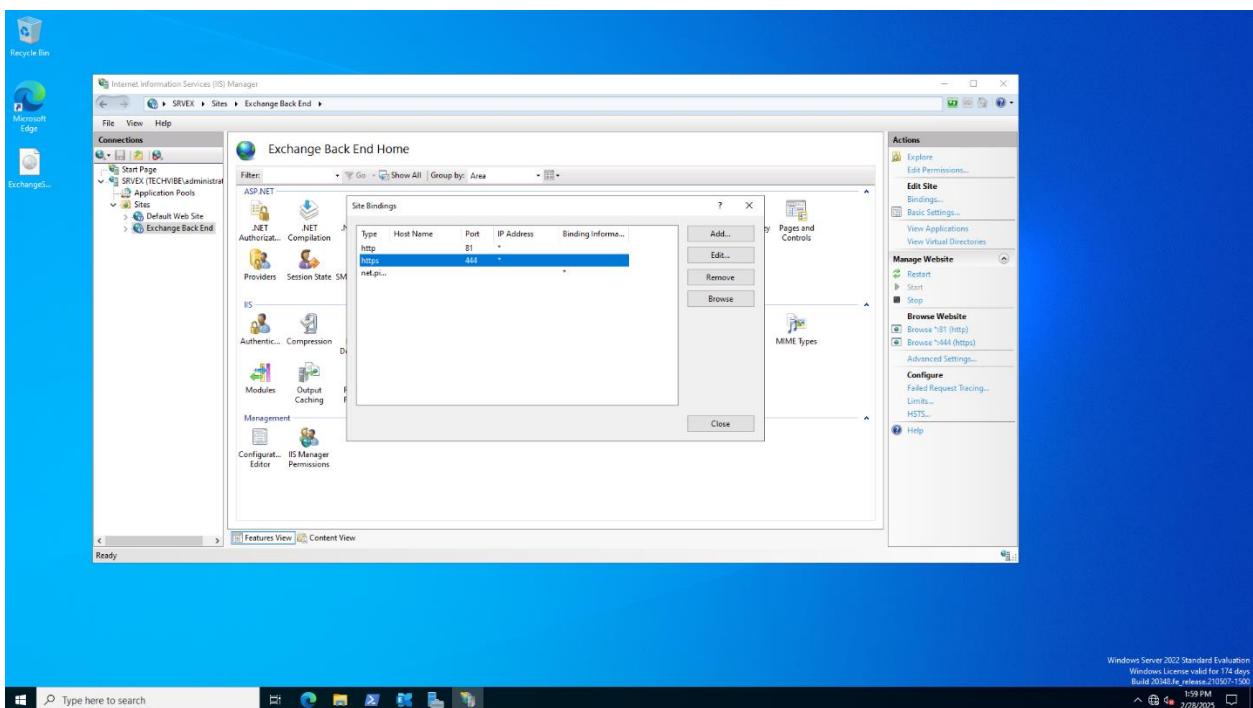
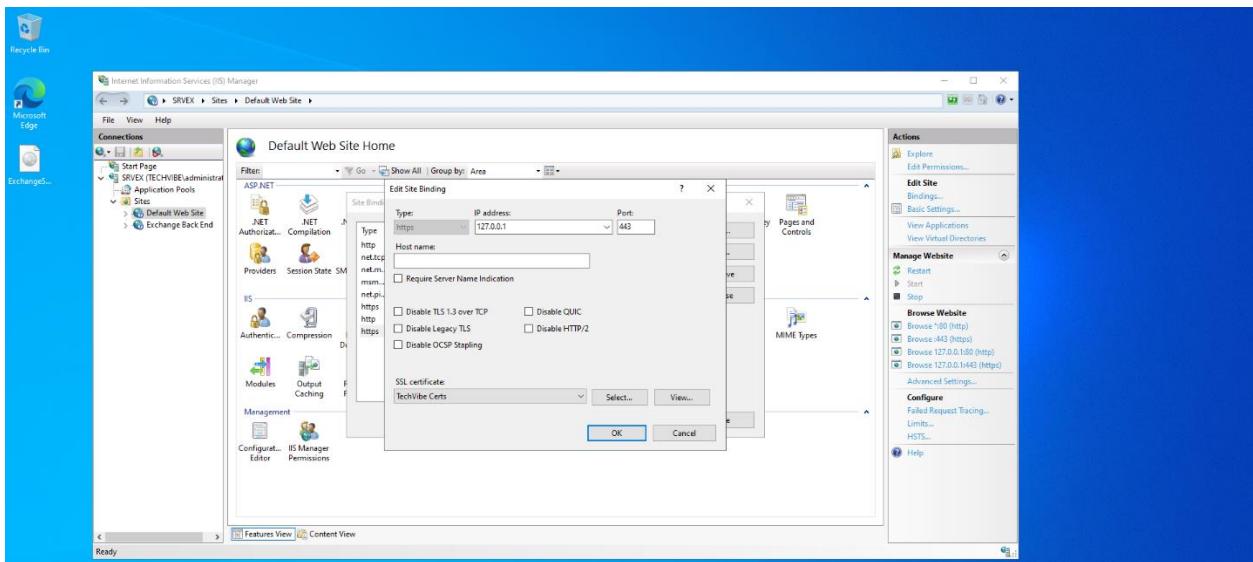
Exchange Installation



4. Next, Click on Default Web Site>Bindings>double-click https type>under SSL certificate, select TechVibe Certs>OK
Bind the certificate to all HTTPS sites, including the Exchange Backend Site.

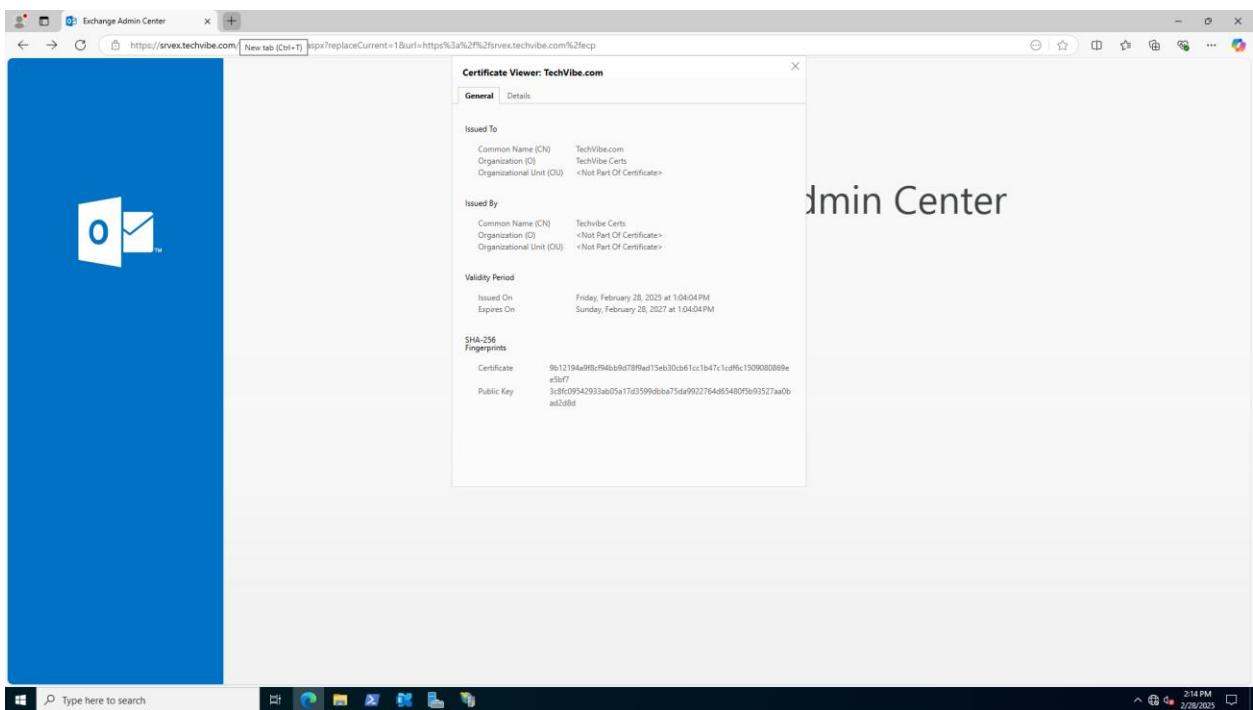
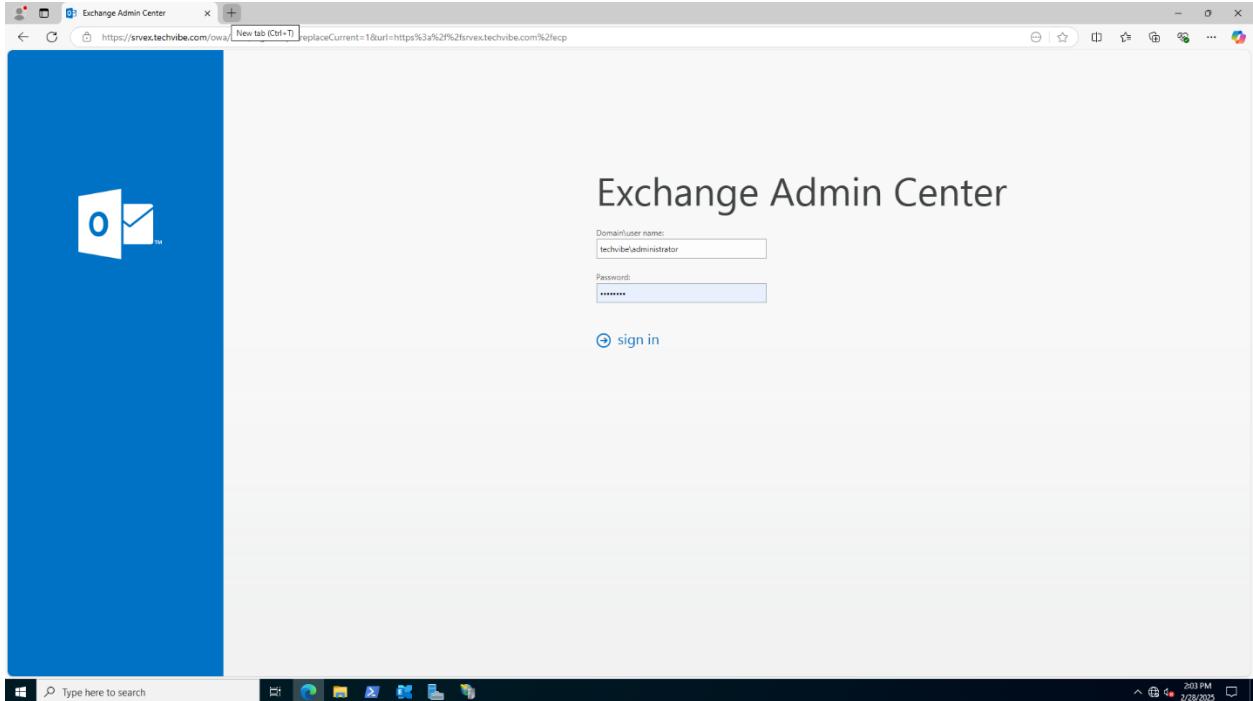


Exchange Installation



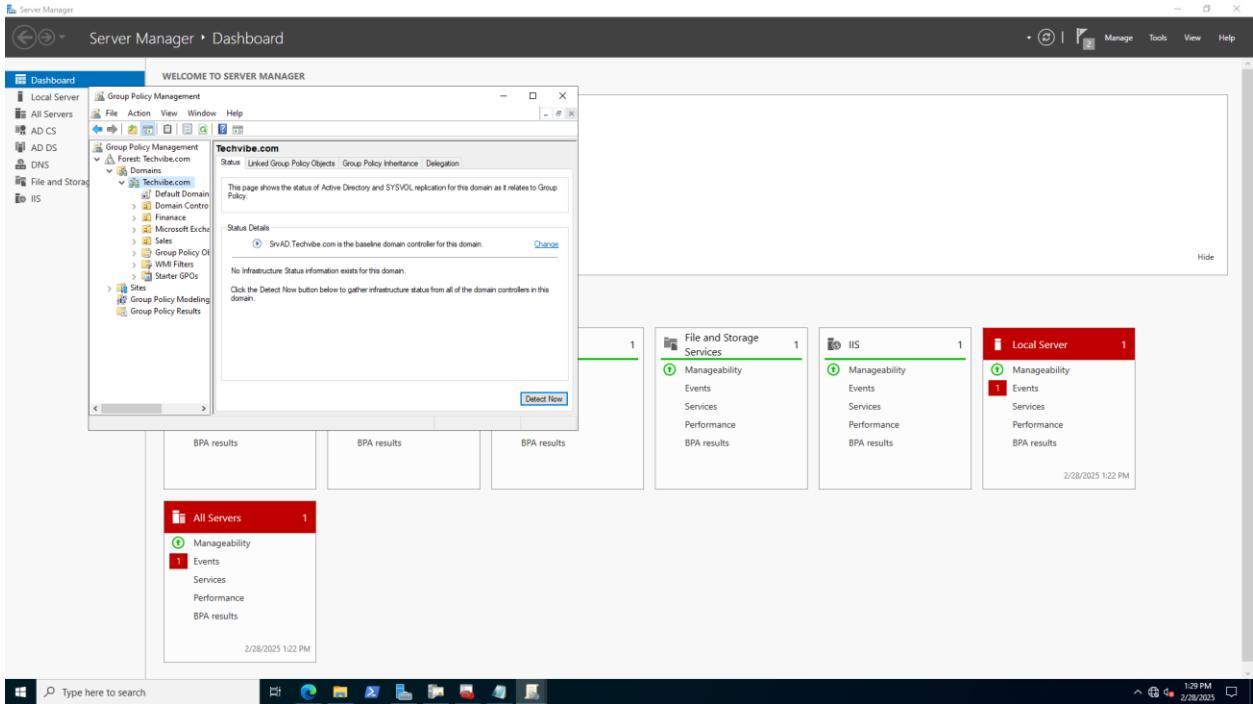
5. Go to the Web browser and Type srvex.techvibe.com/ecp (replace with your exchange server FQDN)

And you will see Lock icon along with URL.



• AUTOMATING THE PROCESS OF DISTRIBUTING THE ROOT CA CERTIFICATE ACROSS THE ENTIRE DOMAIN

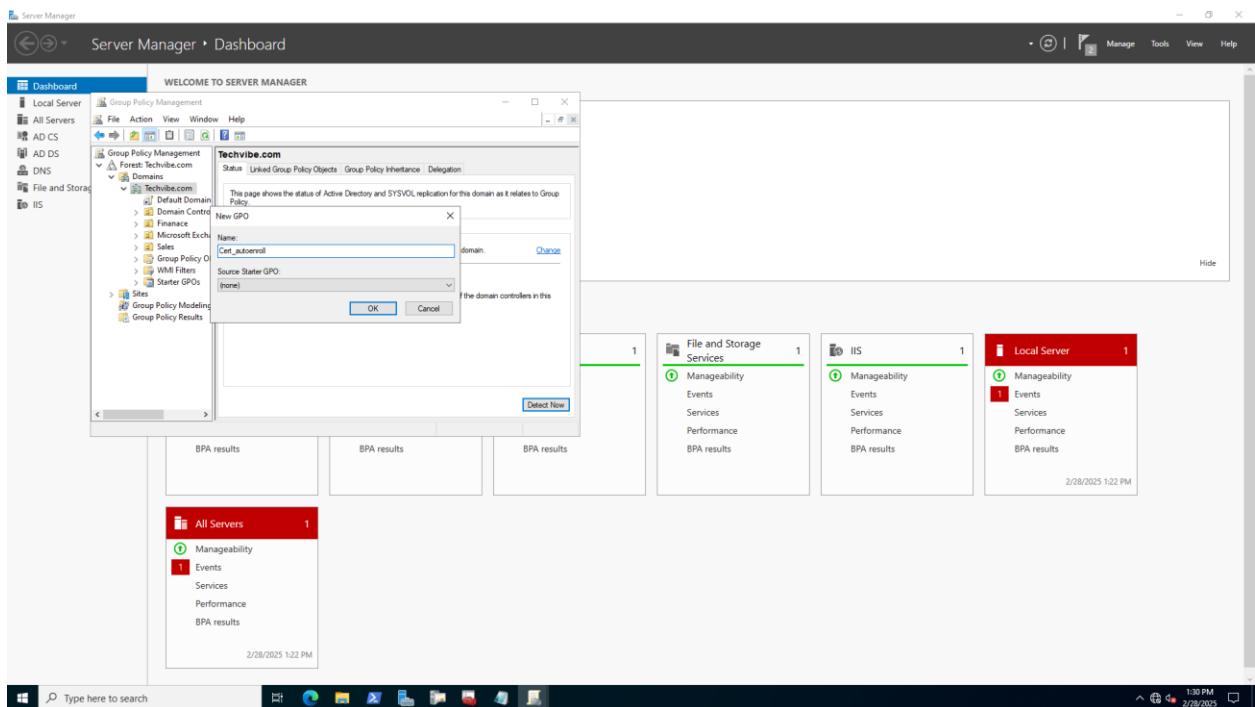
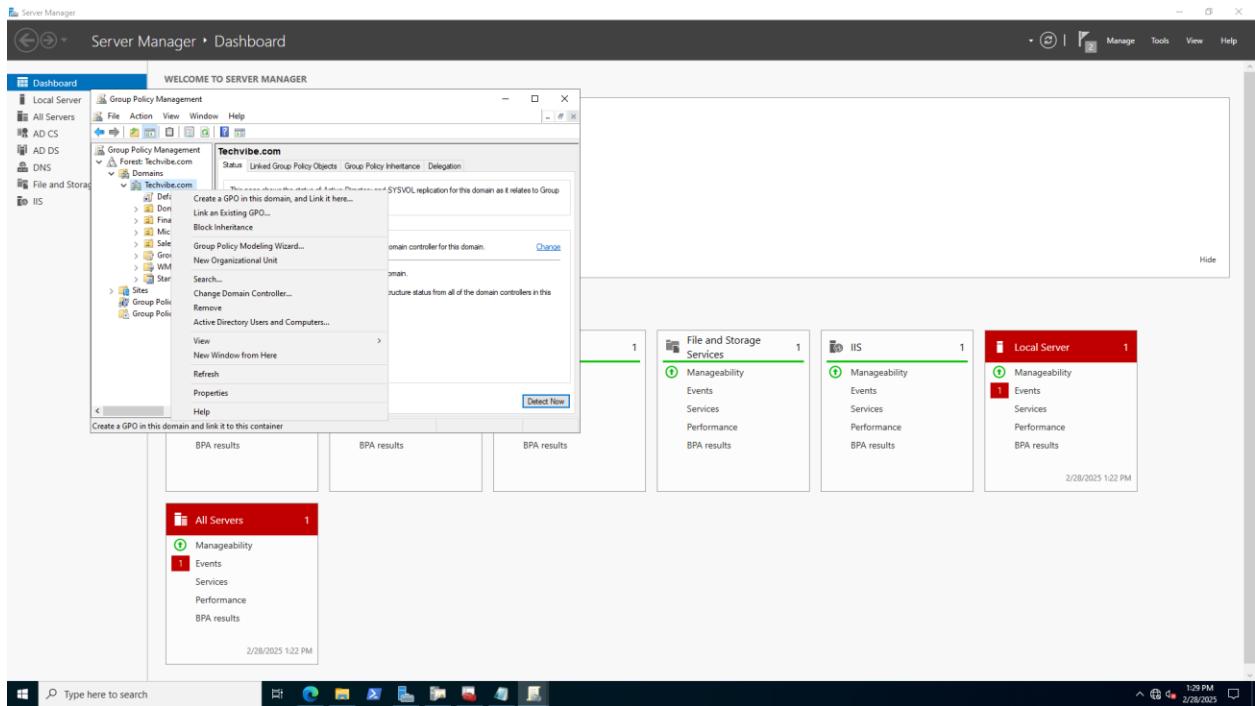
1. Open the **Group Policy Management Console** (gpmc.msc).



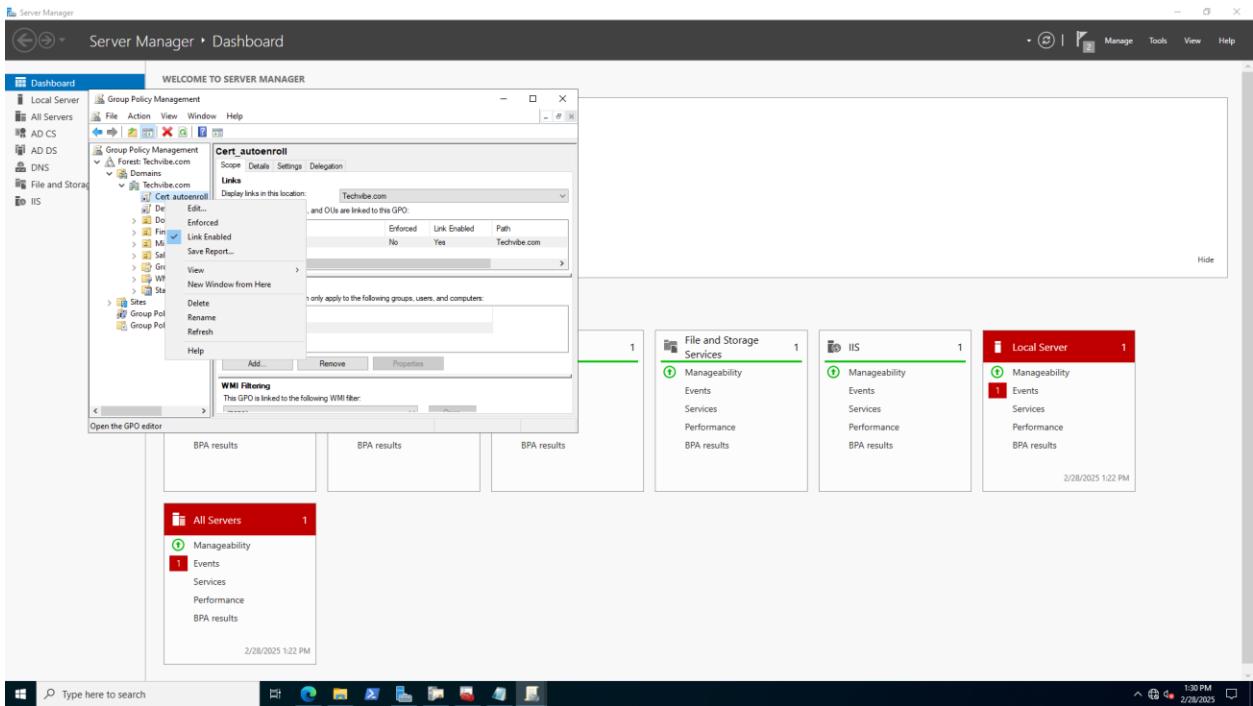
2. Create a new GPO and navigate to: **Computer Configuration > Policies > Windows Settings > Security Settings > Public Key Policies > Trusted Root Certification Authorities**



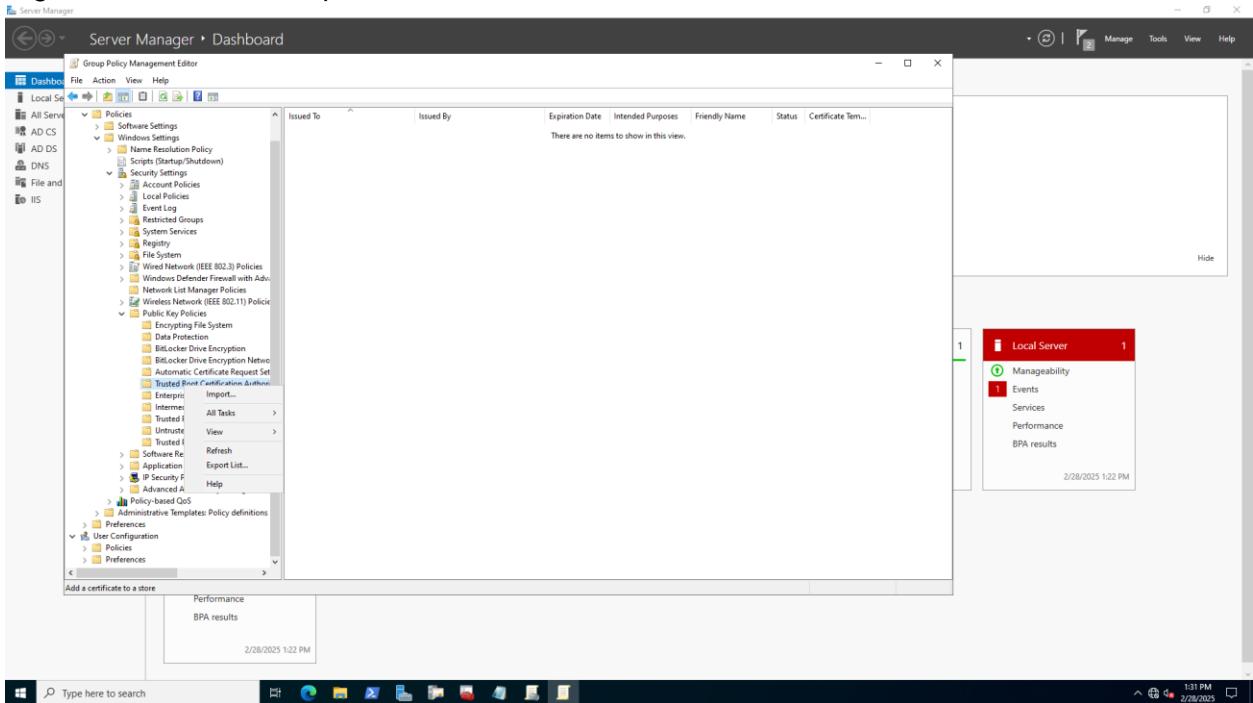
Exchange Installation



Exchange Installation

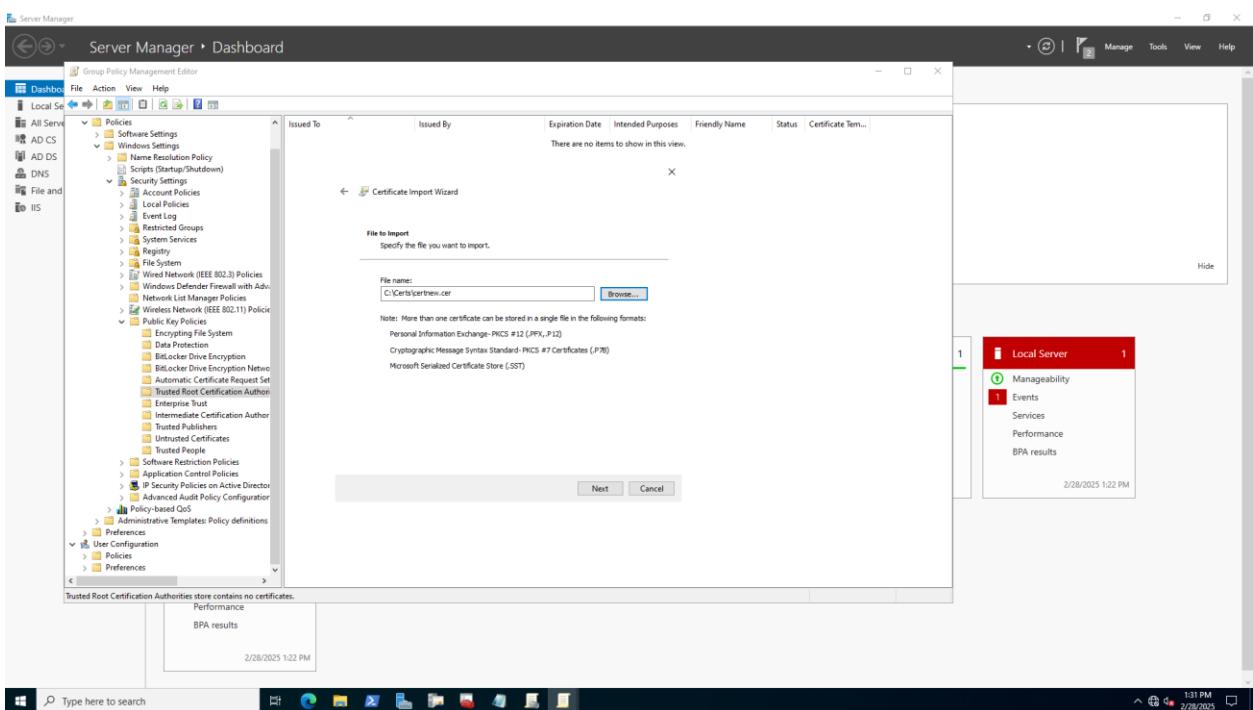
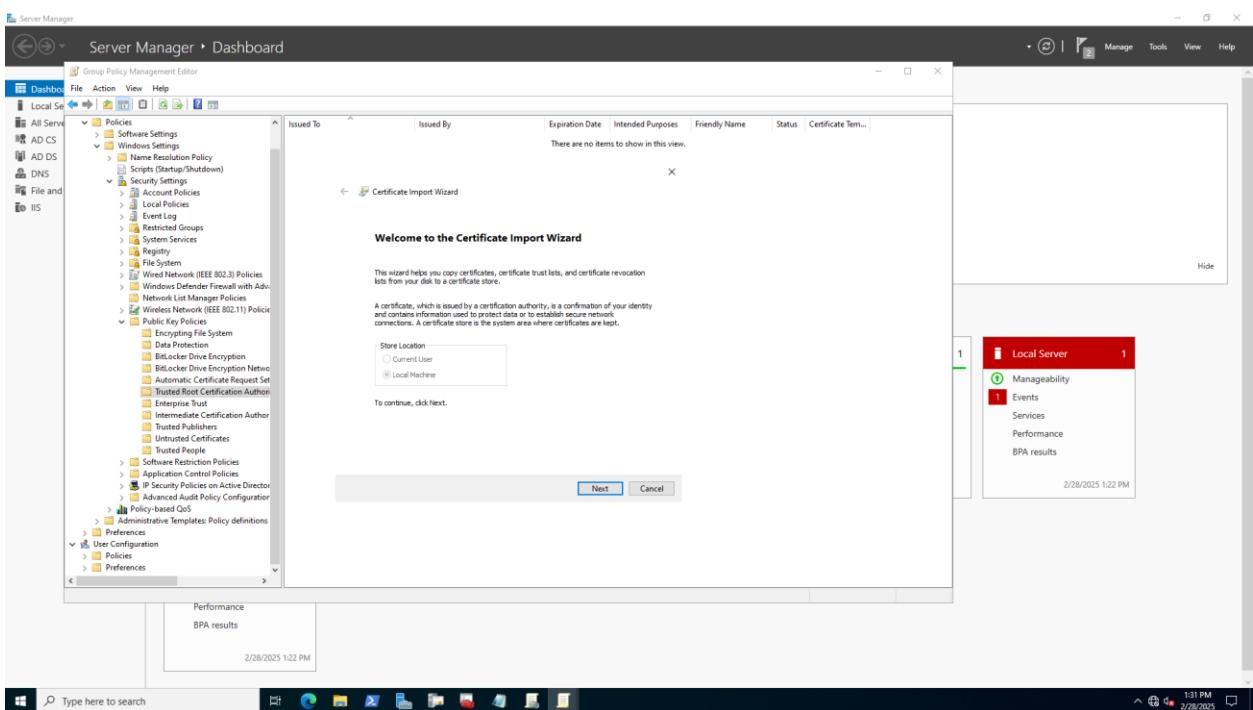


3. Right-click and select Import.

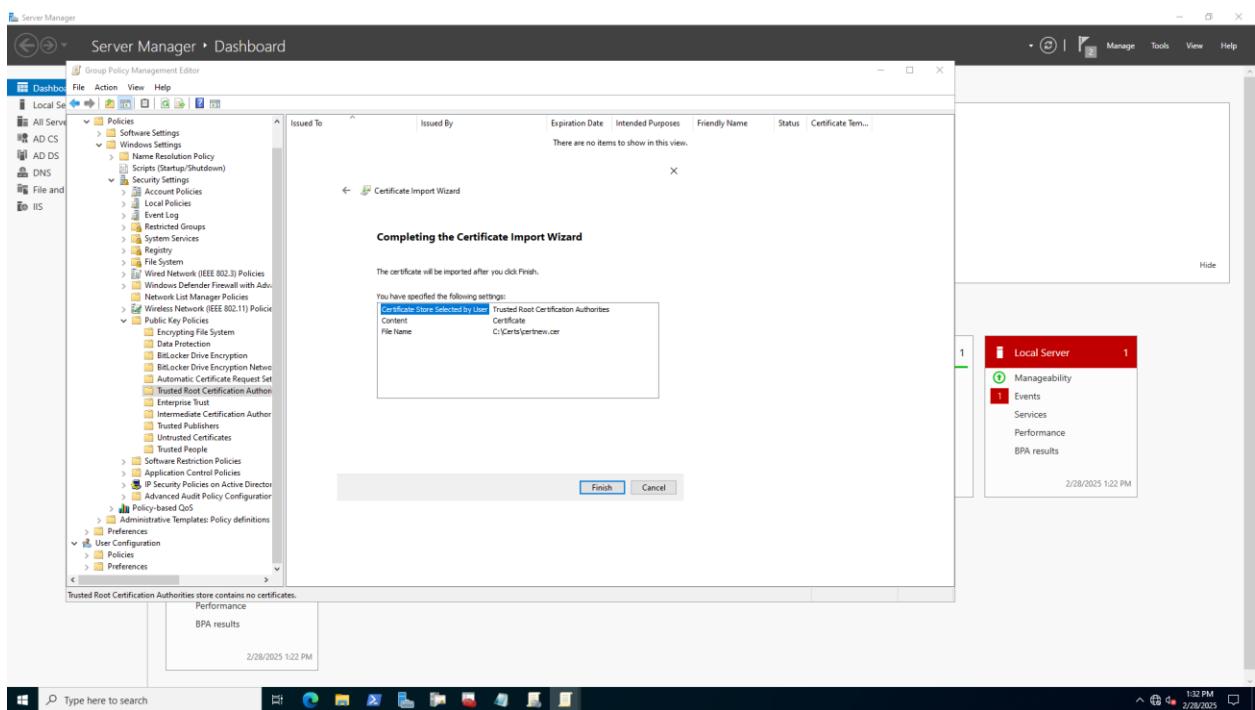
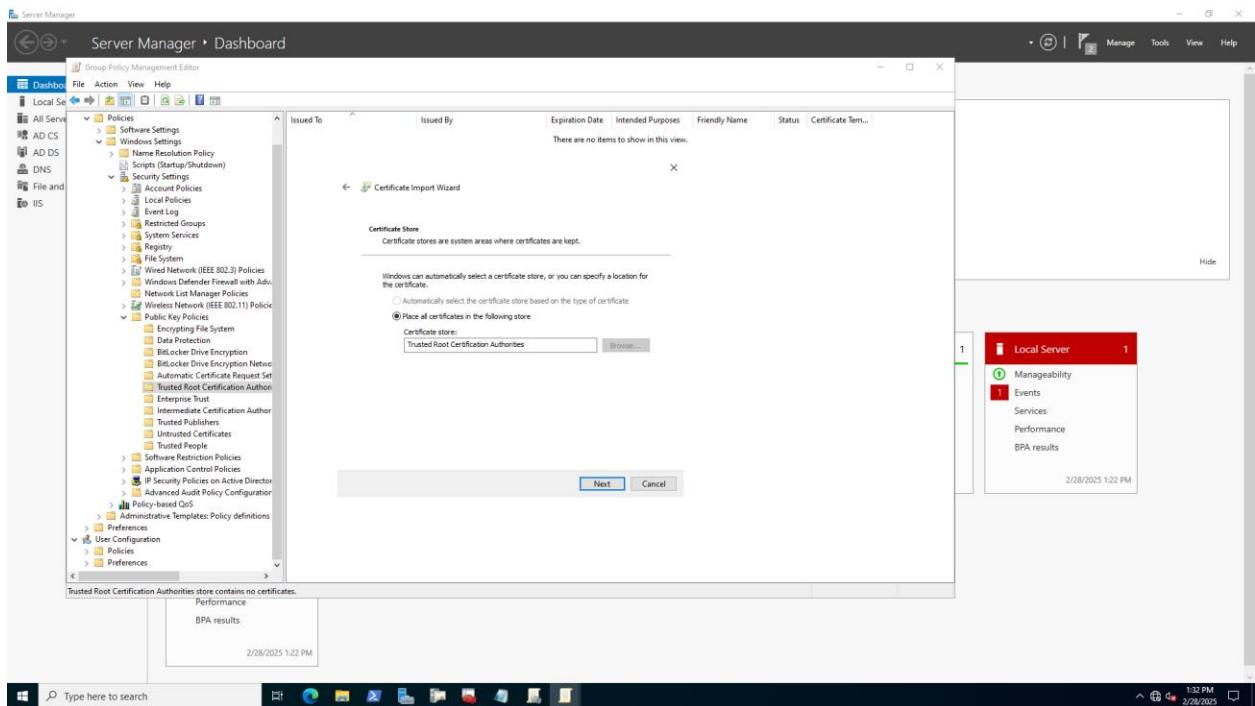


Exchange Installation

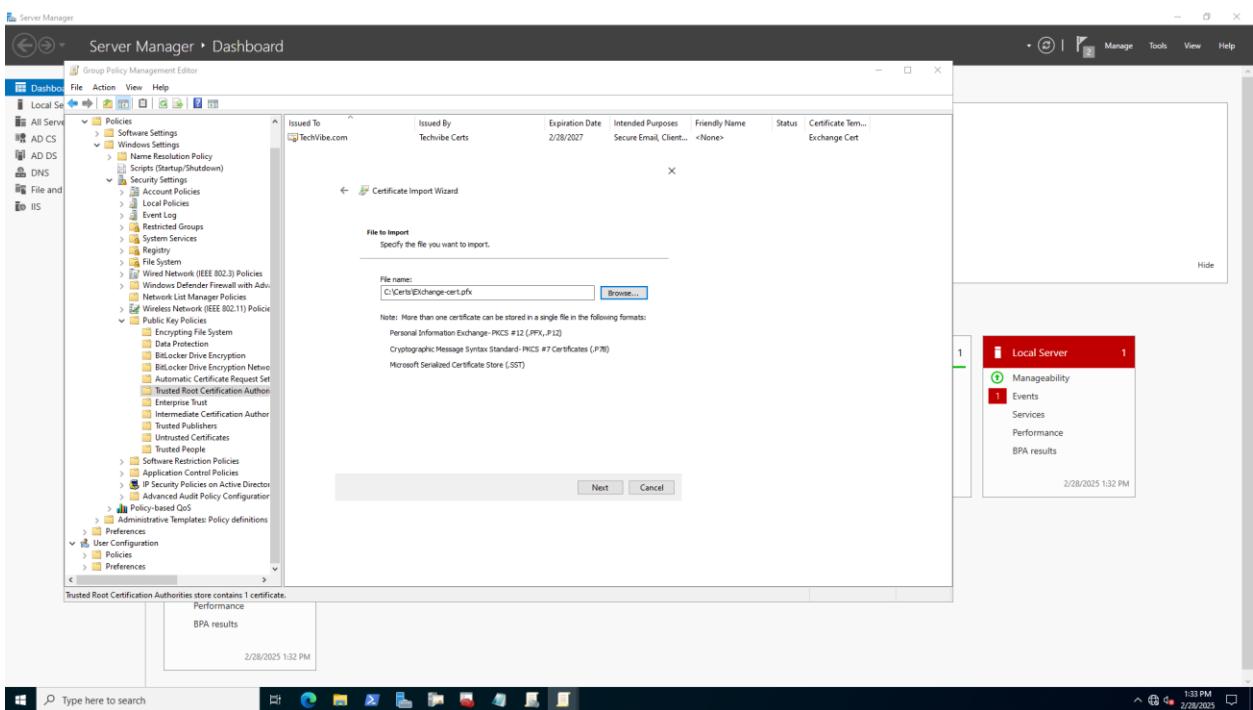
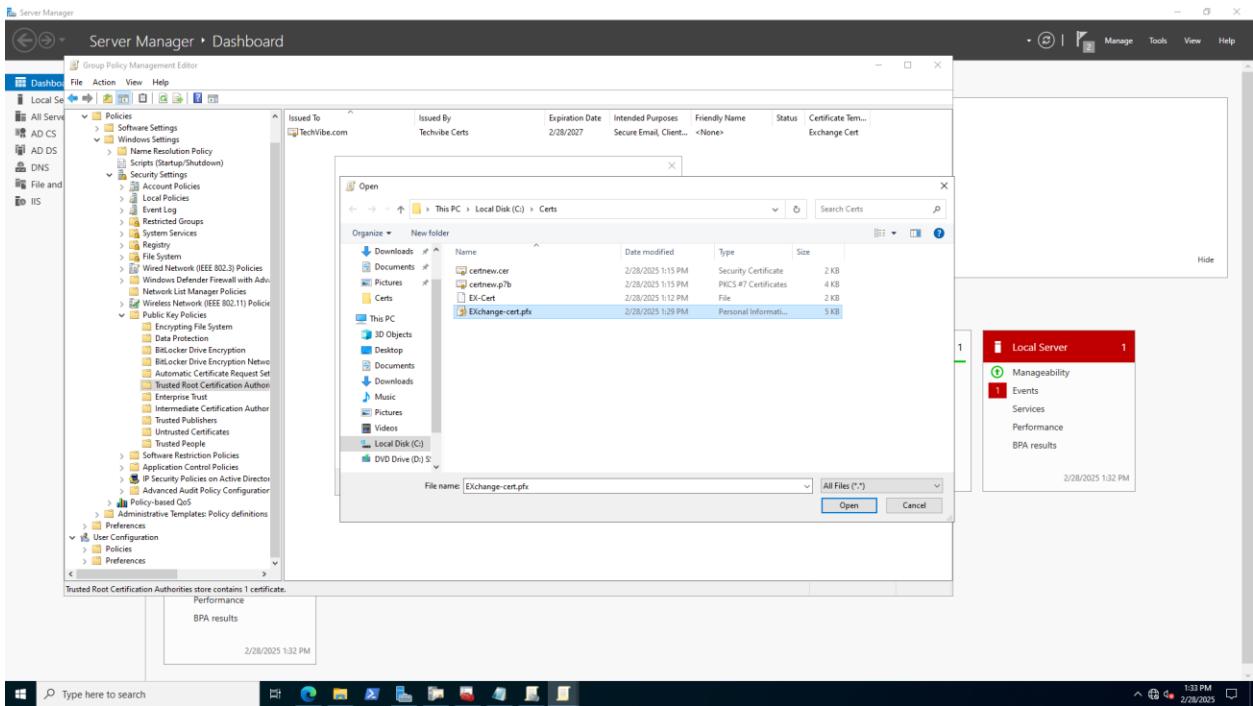
4. Here you will need both .cer and .pfx file. Import them one by one as shown below:



Exchange Installation

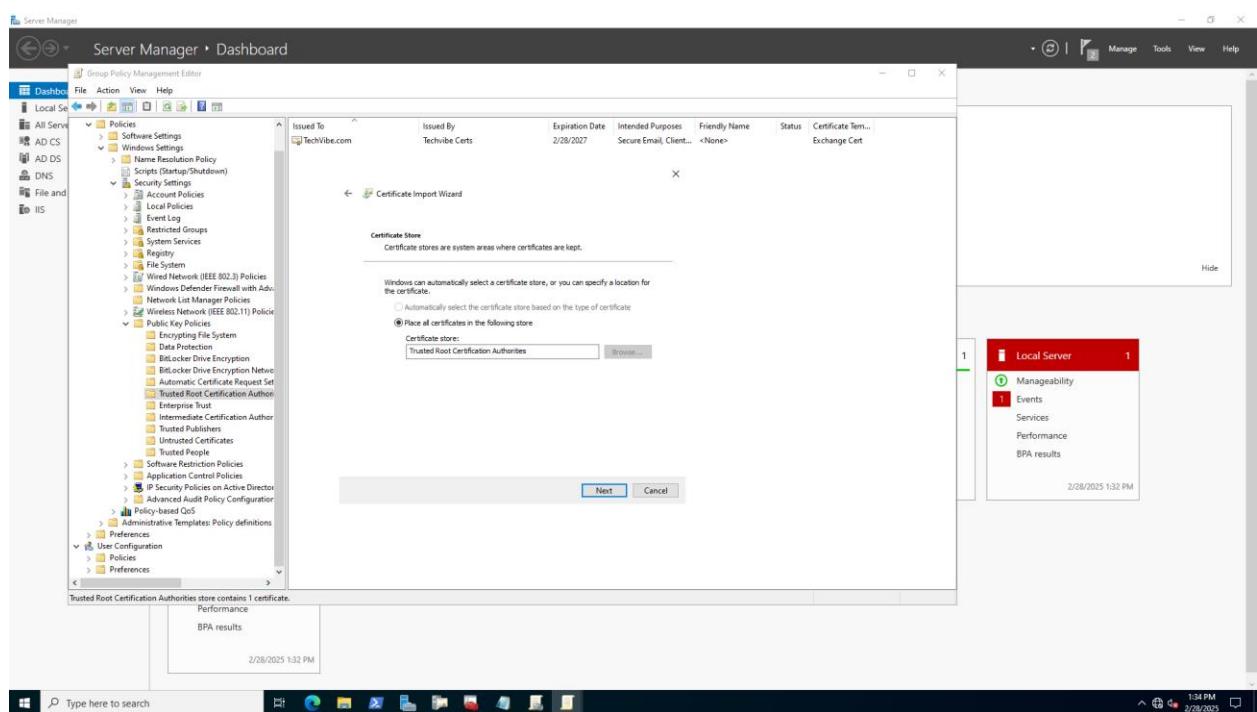
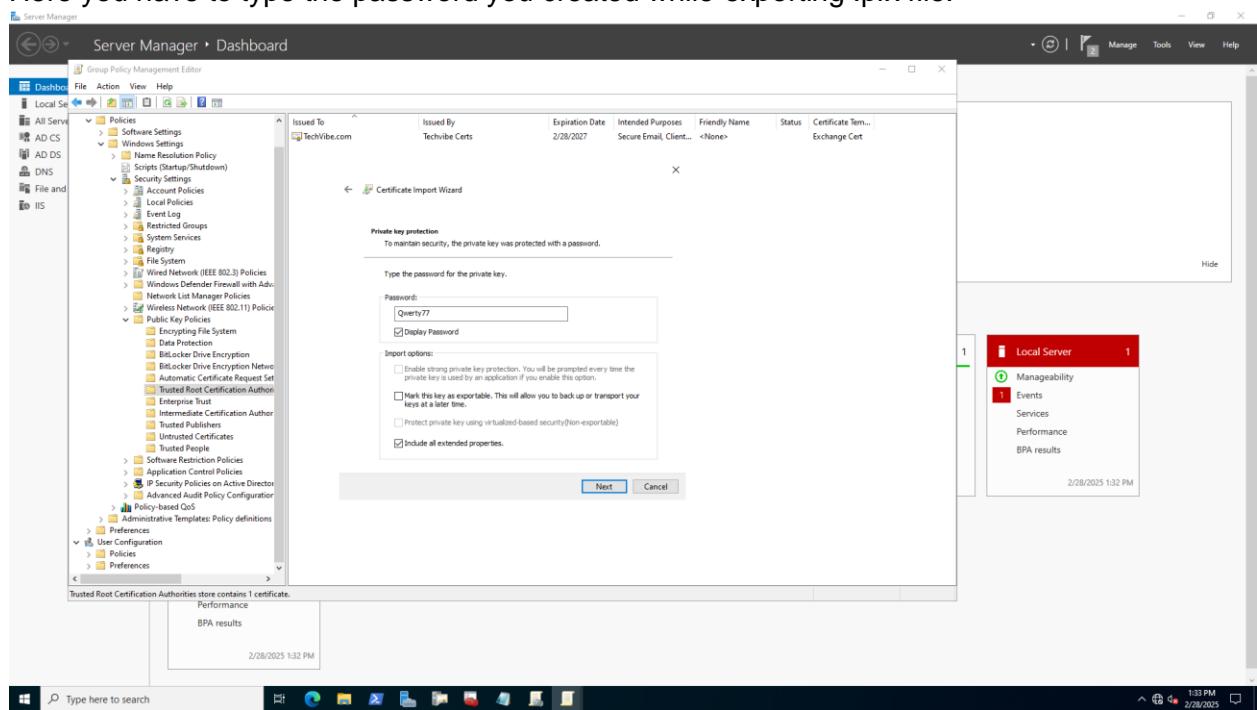


Exchange Installation

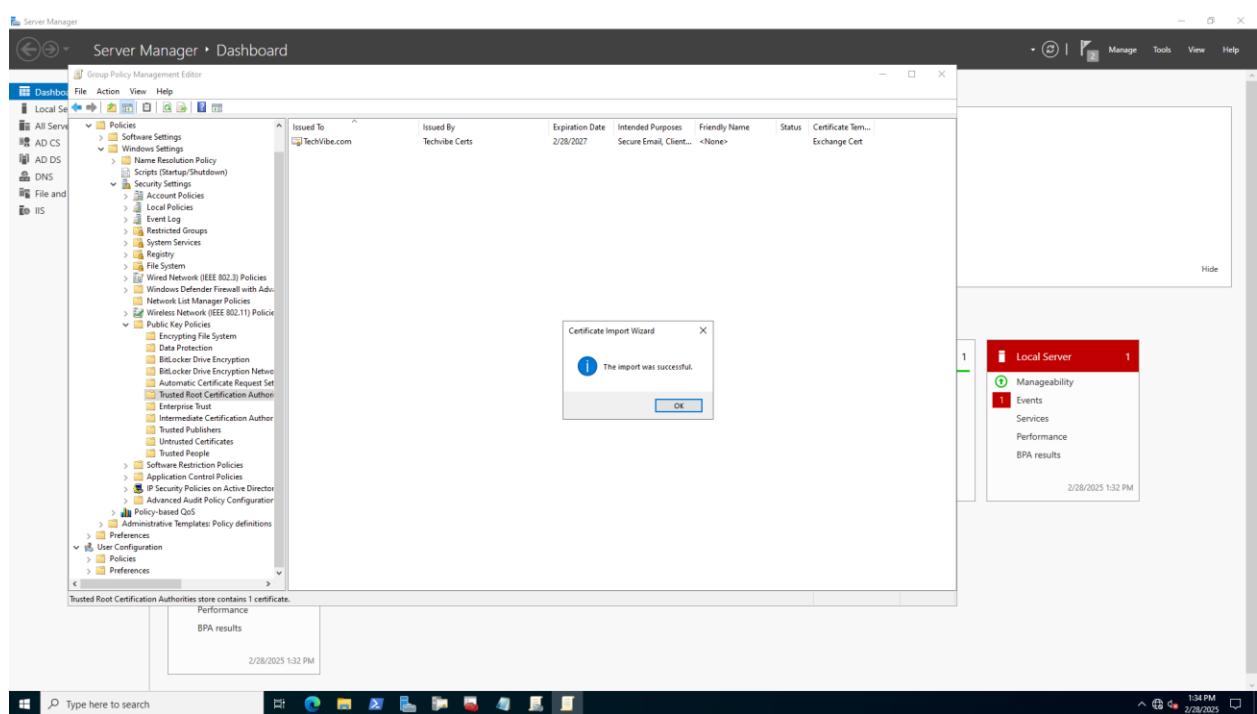
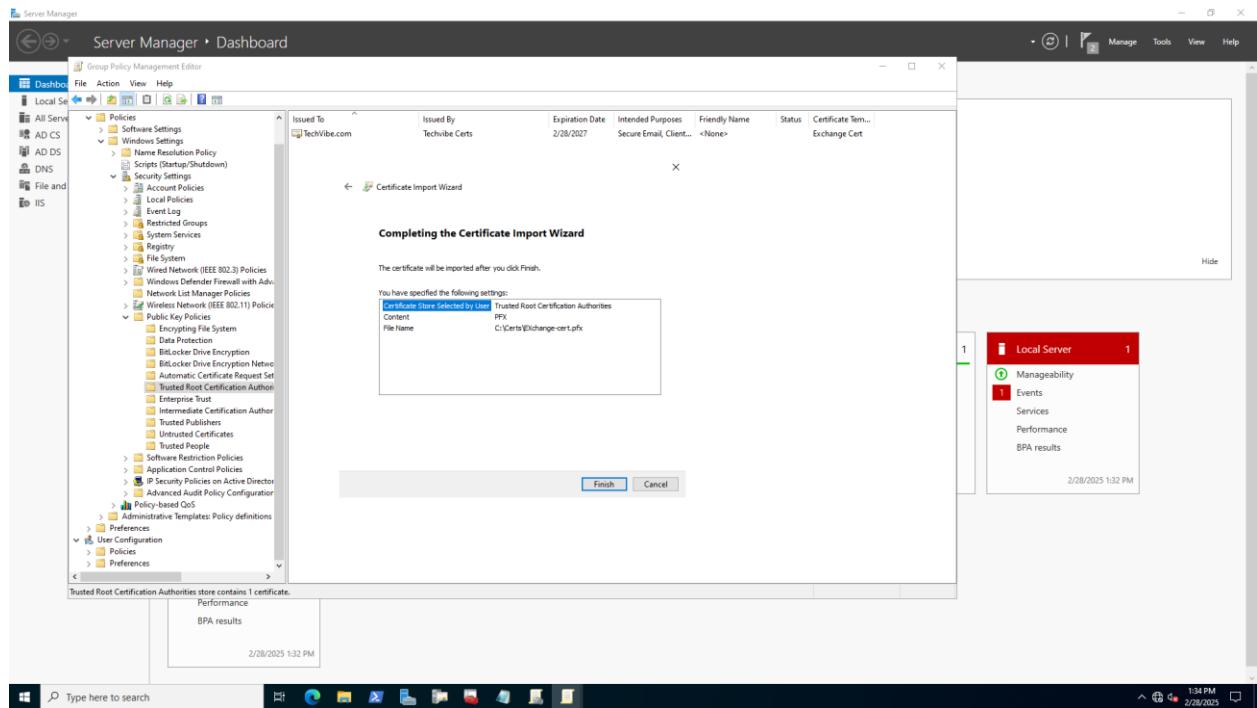


Exchange Installation

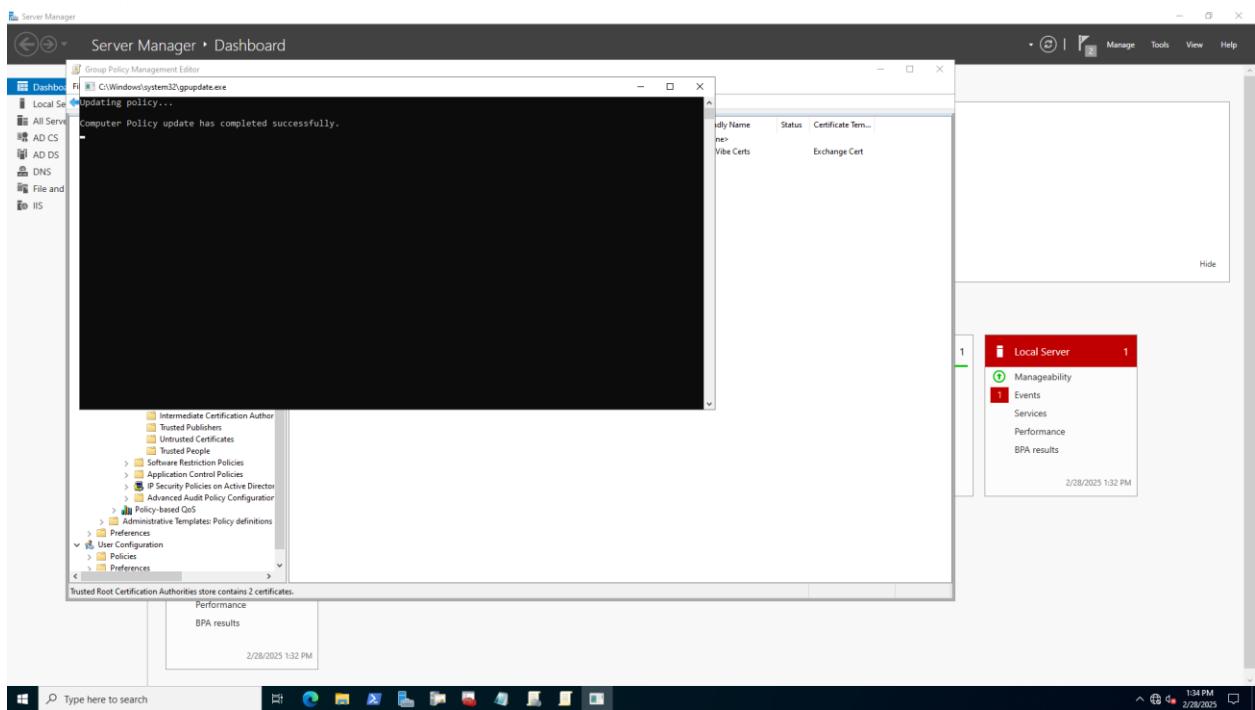
5. Here you have to type the password you created while exporting .pfx file.



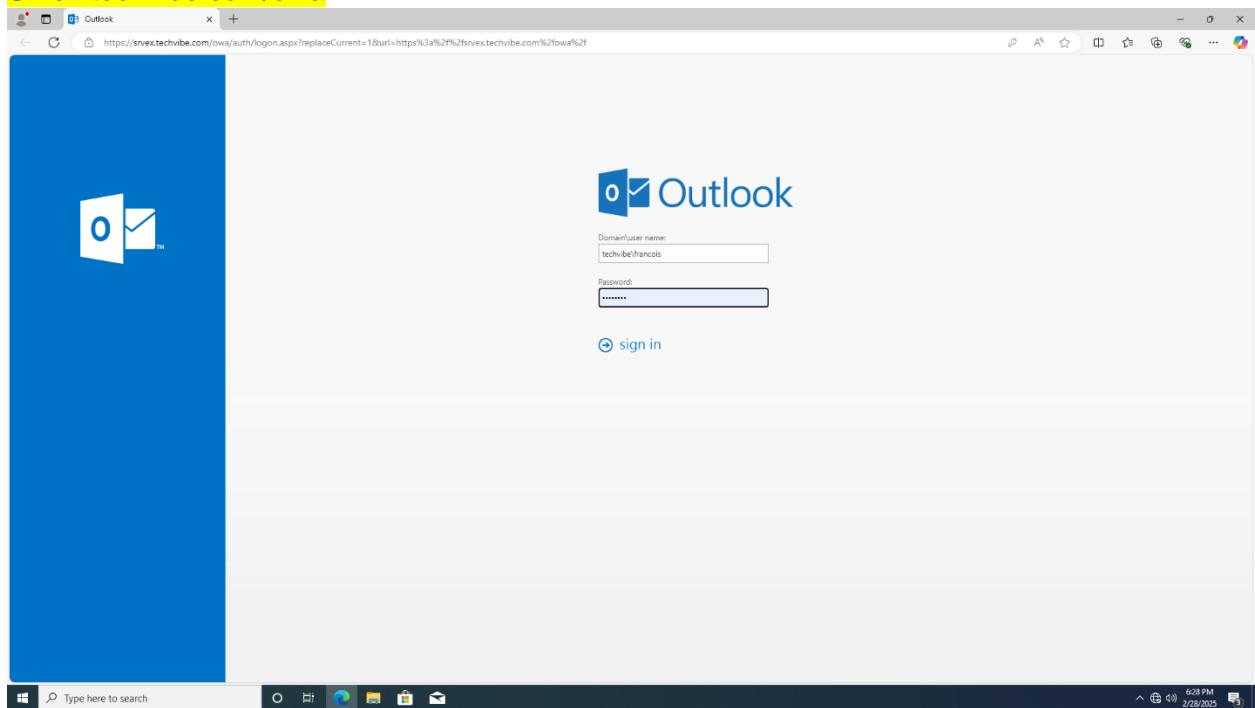
Exchange Installation



6. Force a Group Policy update on both Server and client machines: **gpupdate /force**



4. Verify the installation from client machine by visiting Outlook on web.
Srvex.techvibe.com/owa



• SETTING UP SERVICES USED BY THE CERTIFICATE

1. Go to Exchange Administrative Center>servers>certificates

NAME	STATUS	EXPIRES ON
TechVibe Cert	Valid	2/28/2027
Microsoft Exchange Server Auth Certificate	Valid	1/27/2030
Microsoft Exchange	Valid	2/22/2030
SnvEX	Valid	2/22/2030
Exchange Delegation Federation	Valid	2/28/2030
WMSVC-SHA2	Valid	2/20/2035

TechVibe Certs

Certification authority-signed certificate
Issuer: CN=Techvibe-Certs, DC=Techvibe, DC=com

Status
Valid
Expires on: 2/28/2027
Renew
Please use cmdlets for renewing certificate

Assigned to services
IIS

2. Edit the Techvibe Cert then click services and lastly select all services.



Exchange Installation

The screenshot shows the Exchange Admin Center interface. The left sidebar is collapsed, and the main area displays the 'certificates' page. A specific certificate named 'TechVibe Certs' is selected. A detailed view of this certificate is shown in a modal window.

Certificate Details:

- Name:** TechVibe Certs
- Status:** Valid
- Issuer:** CN=TechVibe Certs, DC=Techvibe, DC=com
- Expires on:** 2/28/2027
- Subject:** CN=TechVibe.com, O=TechVibe Certs, C=CA
- Subject Alternative Names:** TechVibe.com, www.techvibe.com, www.techvibe.com

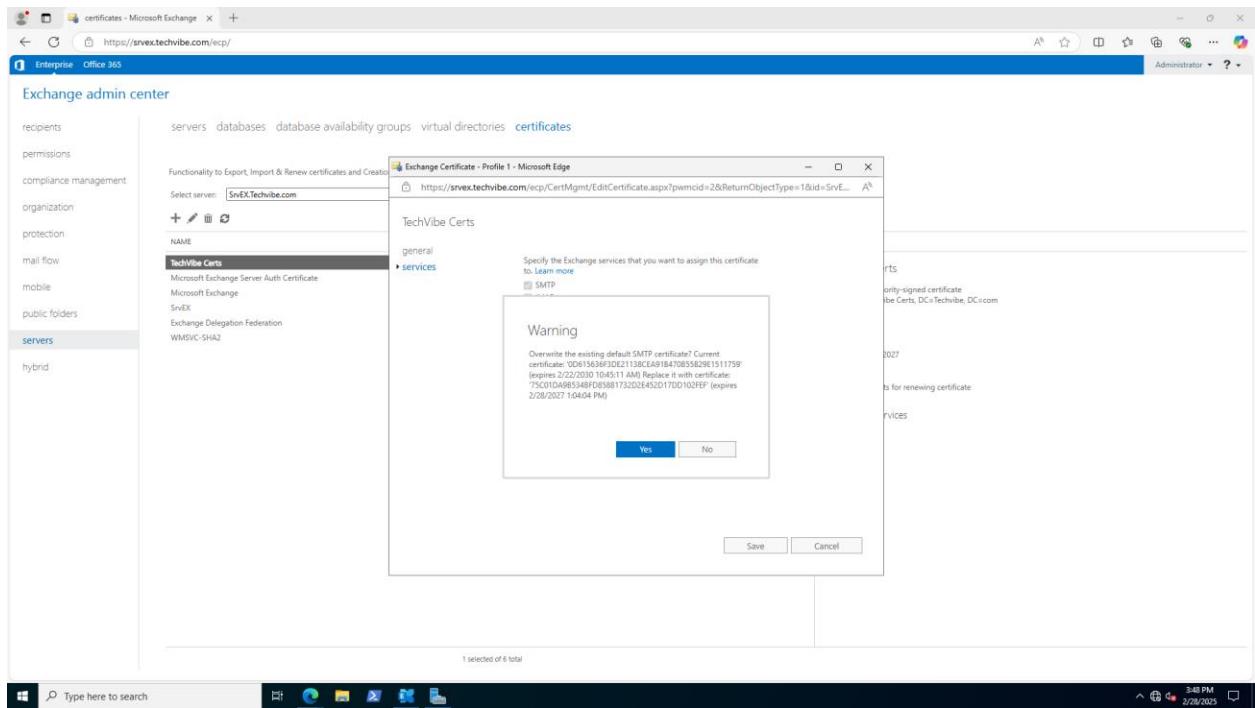
Services Assigned:

- SMTP (checked)
- IMAP (checked)
- POP (checked)
- IIS (unchecked)

Modal Buttons: Save, Cancel



Exchange Installation



PART5: SETTING UP DATABASE AND ISCSI STORAGE

• CREATING DATABASE

1. We will create another database named DB1, but after creating the database we must restart the Microsoft Exchange Information Store Service.



Exchange Installation

The screenshot shows the Exchange Admin Center interface. On the left, a navigation pane lists various management categories: recipients, permissions, compliance management, organization, protection, mail flow, mobile, public folders, servers, and hybrid. The 'servers' category is currently selected. The main content area displays a table titled 'databases - Microsoft Exchange'. The table has columns for NAME, ACTIVE ON SERVER, SERVERS WITH COPIES, STATUS, and BAD COPY COUNT. A single row is visible: 'Mailbox Database 1252339681' is active on 'SRVEX' and has 'SRVEX' listed under 'SERVERS WITH COPIES'. A progress bar at the bottom right indicates 'Please wait...'. At the bottom of the main area, it says '1 selected of 1 total'.

This screenshot shows the 'databases' page in the Exchange Admin Center. The left sidebar shows the 'servers' category is selected. In the center, there's a modal dialog box titled 'Database - Profile 1 - Microsoft Edge'. It contains fields for 'Mailbox database' (set to 'DB1'), 'Server' (set to 'SRVEX'), 'Database file path' (set to 'C:\Program Files\Microsoft\Exchange Server\V15\Mailbox'), and 'Log folder path' (set to 'C:\Program Files\Microsoft\Exchange Server\V15\Mailbox'). A checkbox labeled 'Mount this database' is checked. To the right of the modal, a summary card for 'Mailbox Database 1252339681' is displayed, showing it's active on 'SRVEX' and has 'SRVEX' listed under 'Servers'. It also shows 'Database copies' information: 'Mailbox Database 1252339681|SRVEX', 'Active Mounted', 'Copy queue length: 0', and 'Content index state: NotApplicable'. There's a link to 'View details'. At the bottom of the main area, it says '1 selected of 1 total'.



Exchange Installation

The screenshot shows the Exchange admin center interface for managing databases. On the left, a sidebar lists various management categories like recipients, permissions, compliance management, organization, protection, mail flow, mobile, public folders, servers, and hybrid. The 'servers' category is currently selected. The main pane displays a table of databases, showing one entry: DB1, Active on SERVER SRVEX, and SERVERS WITH COPIES SRVEX. Below the table, a warning message box is displayed:

Warning
Please restart the Microsoft Exchange Information Store service on server SRVEX after adding new mailbox databases.

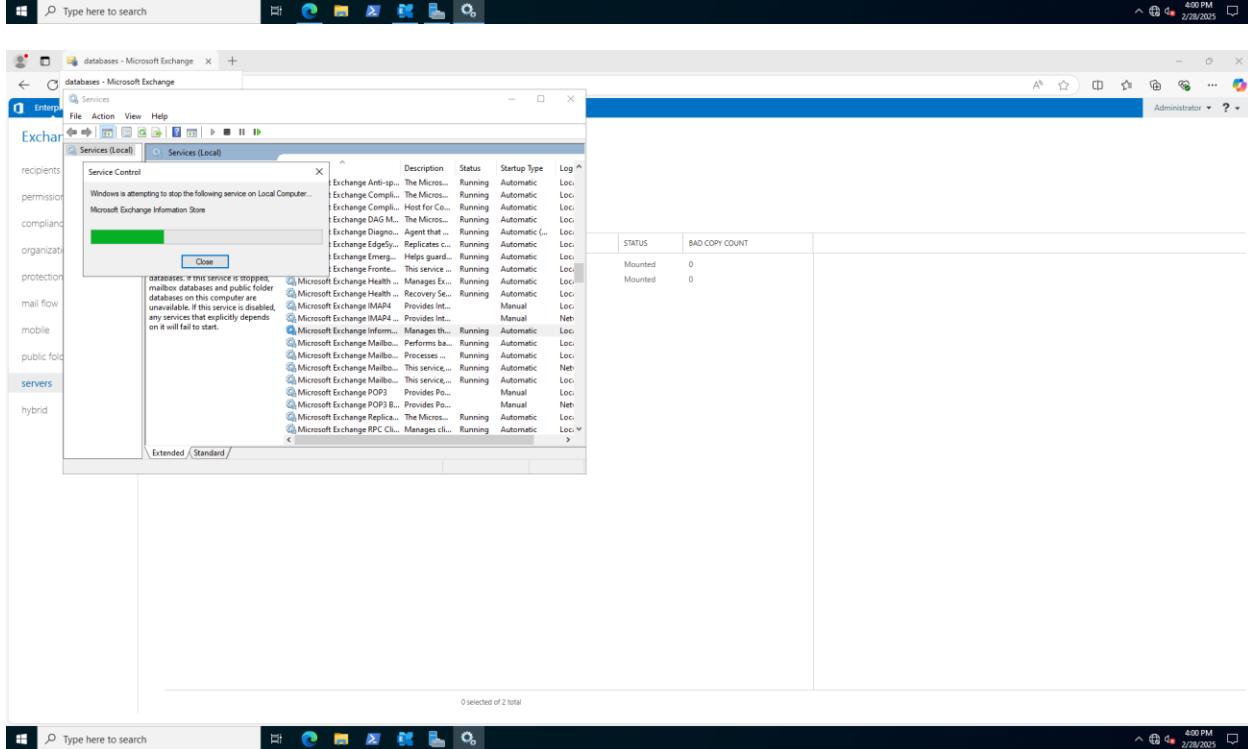
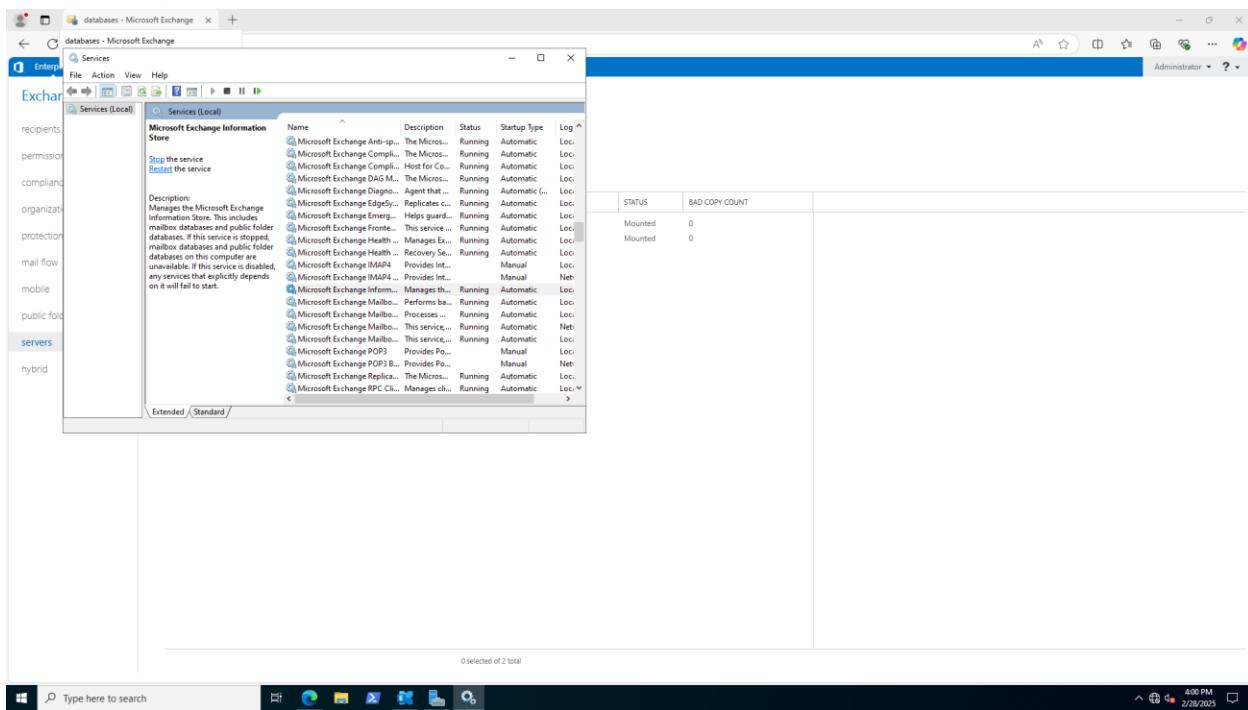
At the bottom of the main pane, there are 'Save' and 'Cancel' buttons. The status bar at the bottom of the screen indicates '1 selected of 2 total'.

The screenshot shows the same Exchange admin center interface after the database creation. The table now includes a second row: Mailbox Database 1252339681, also active on SERVER SRVEX and SERVERS WITH COPIES SRVEX, with a status of 'Mounted'. The status bar at the bottom indicates '0 selected of 2 total'.

The screenshot shows the Windows Run dialog box. The 'Open' field contains 'services.msc'. A note below the field states 'This task will be created with administrative privileges.' At the bottom of the dialog are 'OK', 'Cancel', and 'Browse...' buttons. The status bar at the bottom of the screen indicates '0 selected of 2 total'.



Exchange Installation

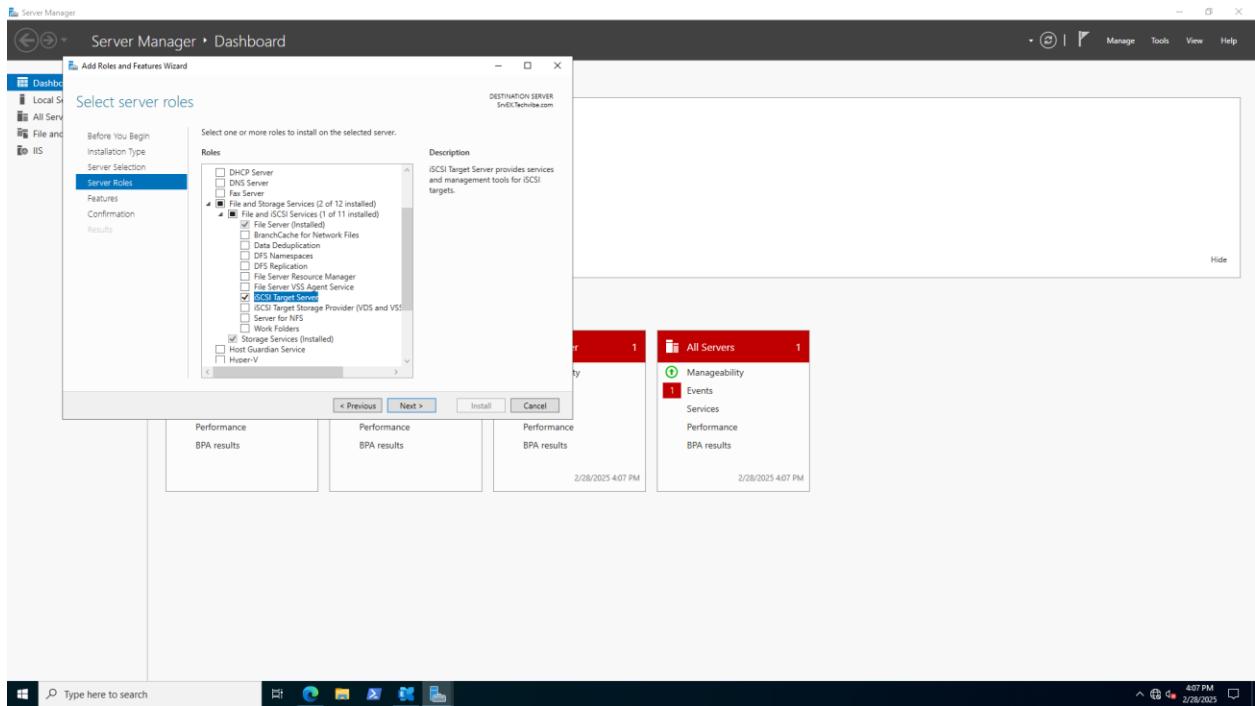


• IMPLEMENTING iSCSI SERVER

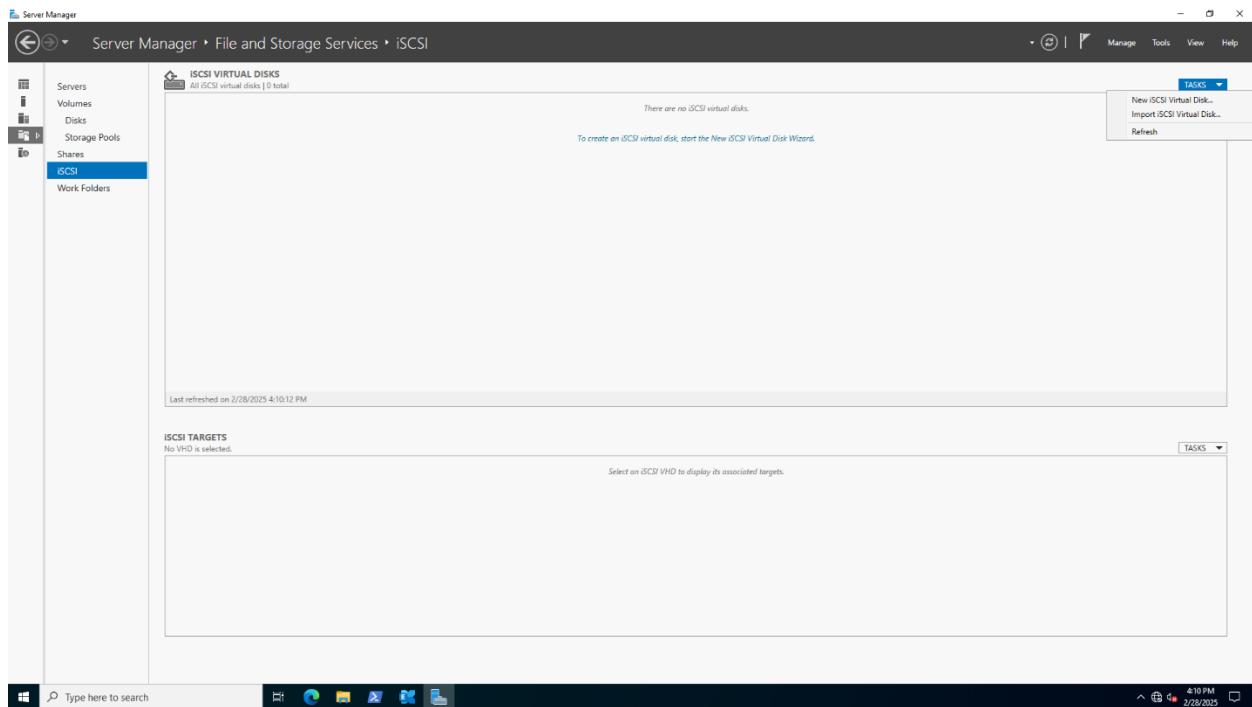
1. Exchange server will function as iSCSI Target.



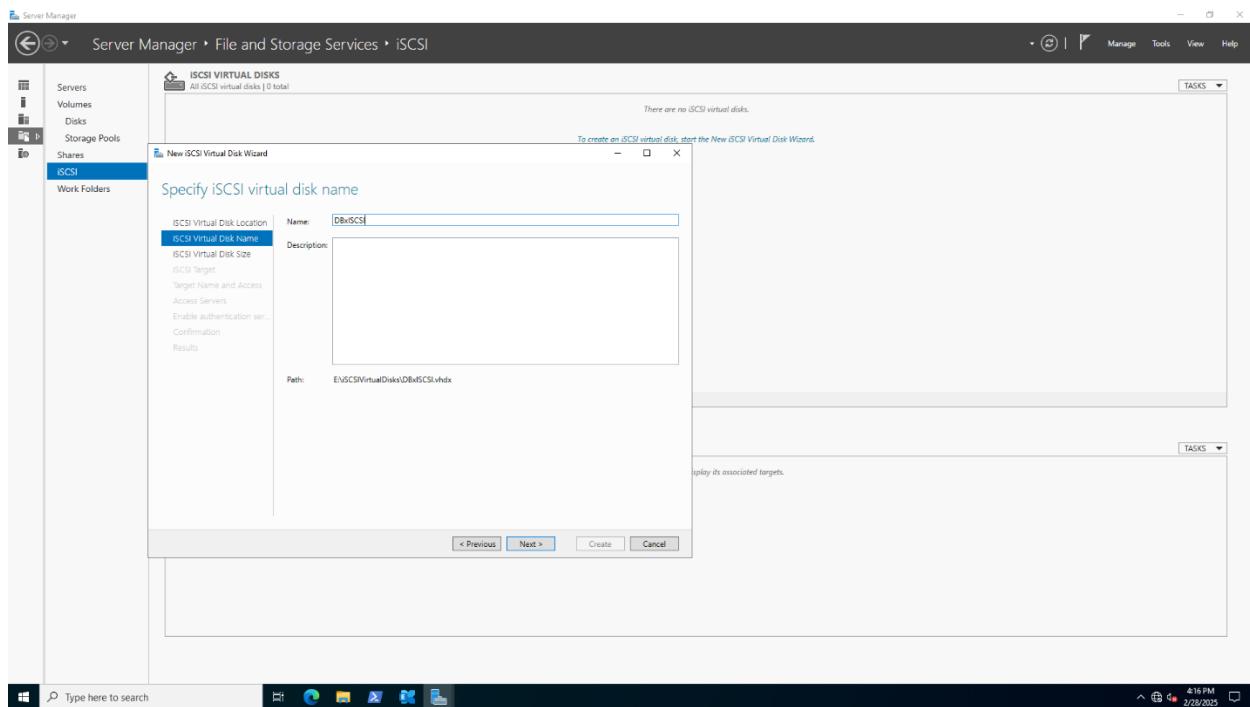
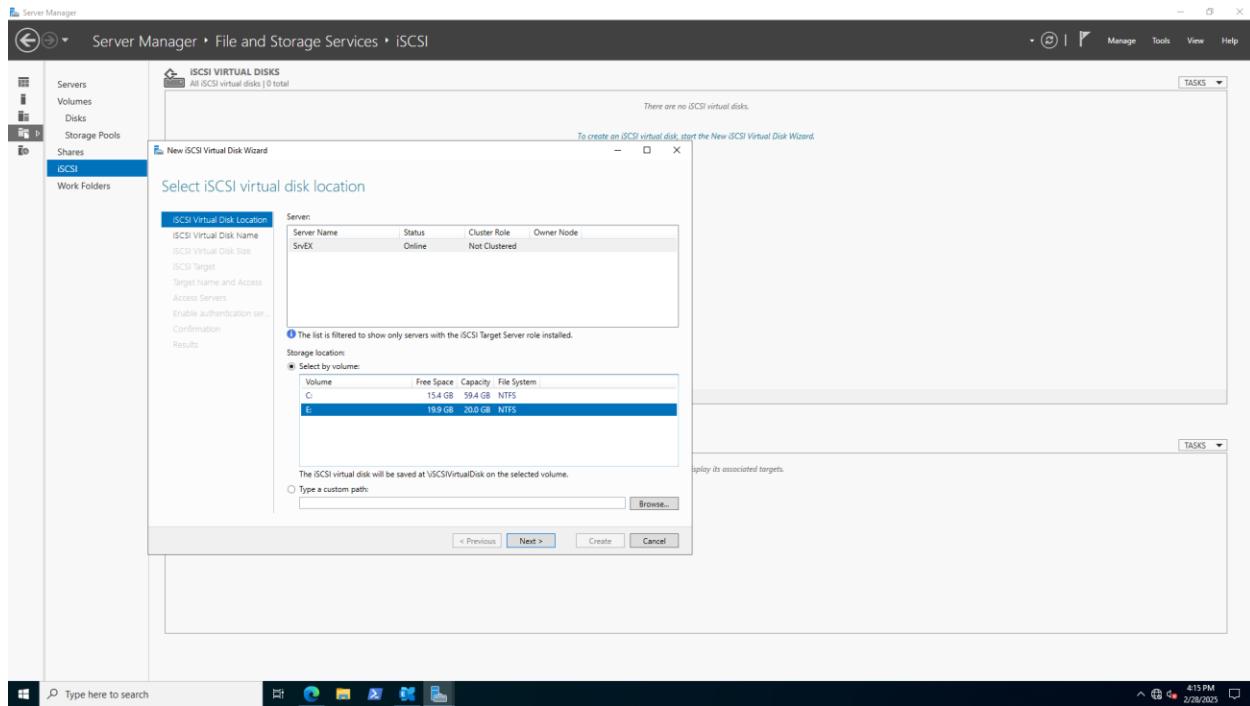
Exchange Installation



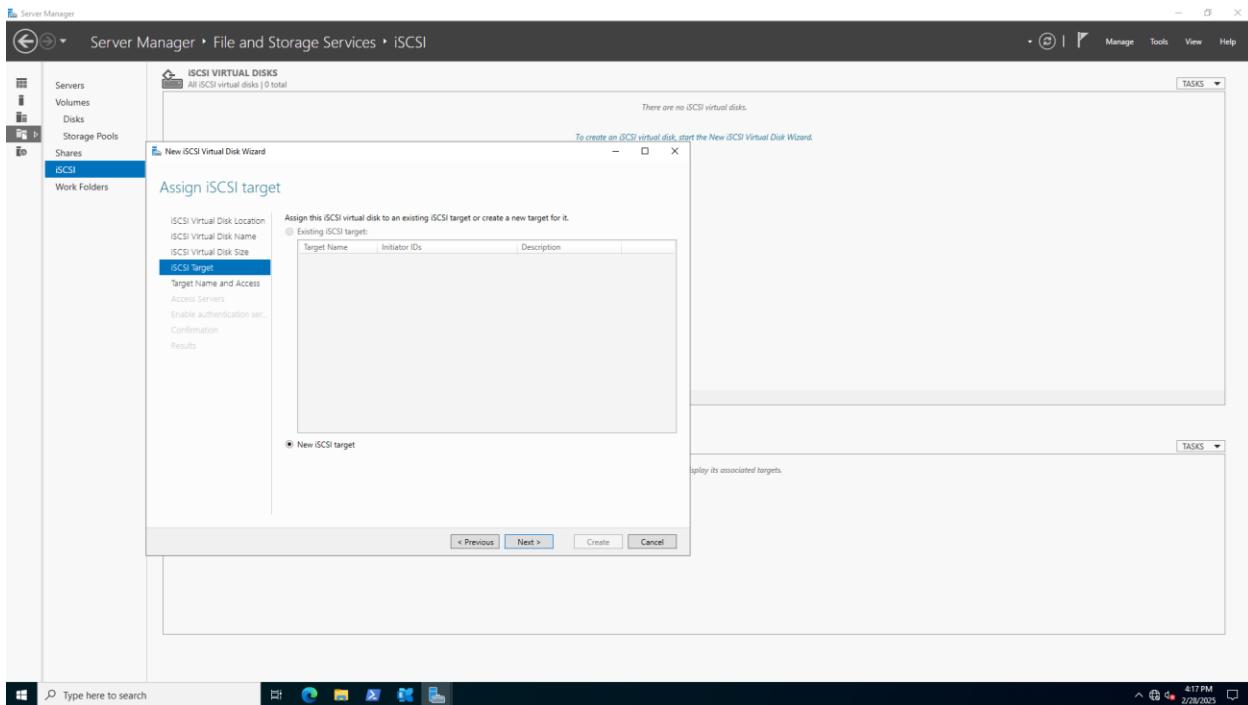
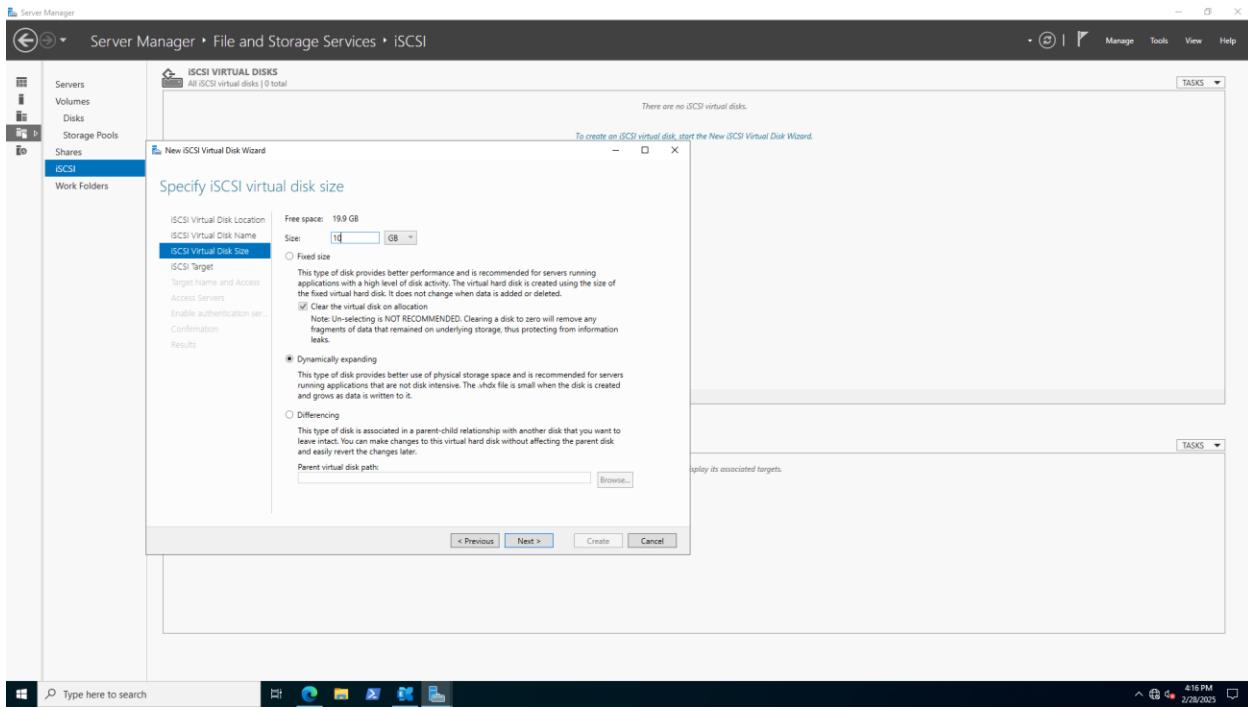
2. Create new iSCSI virtual disk.



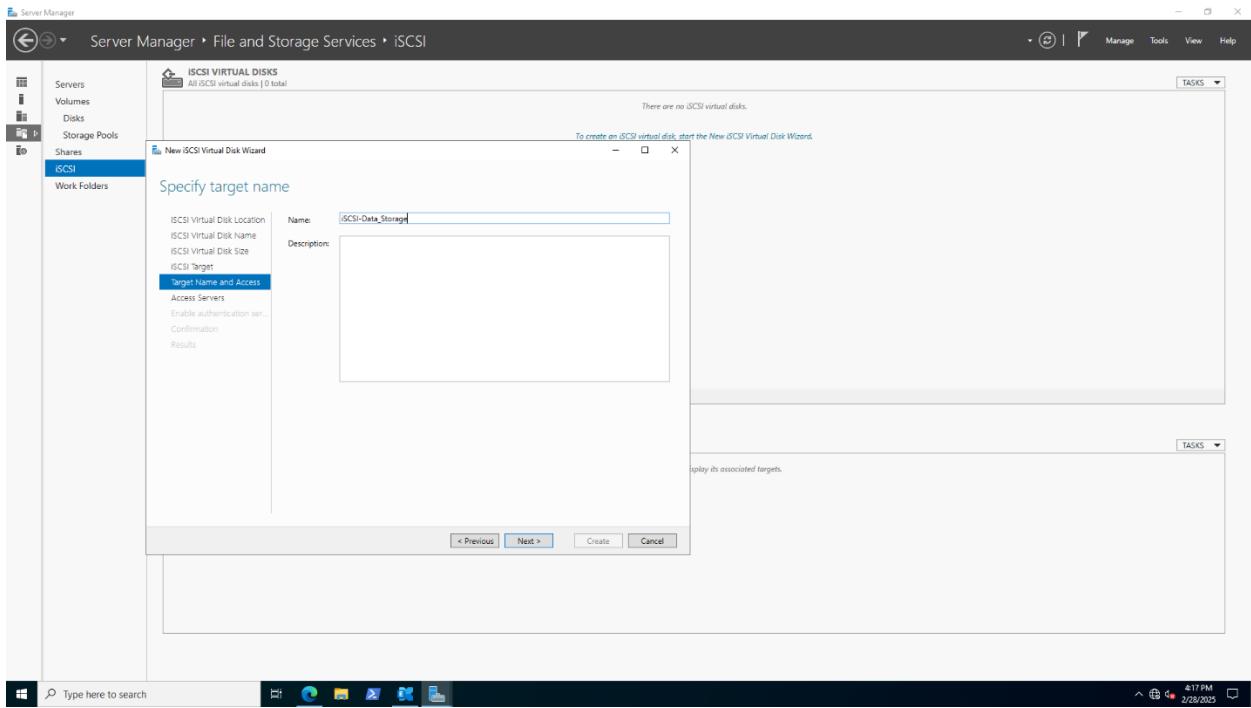
Exchange Installation



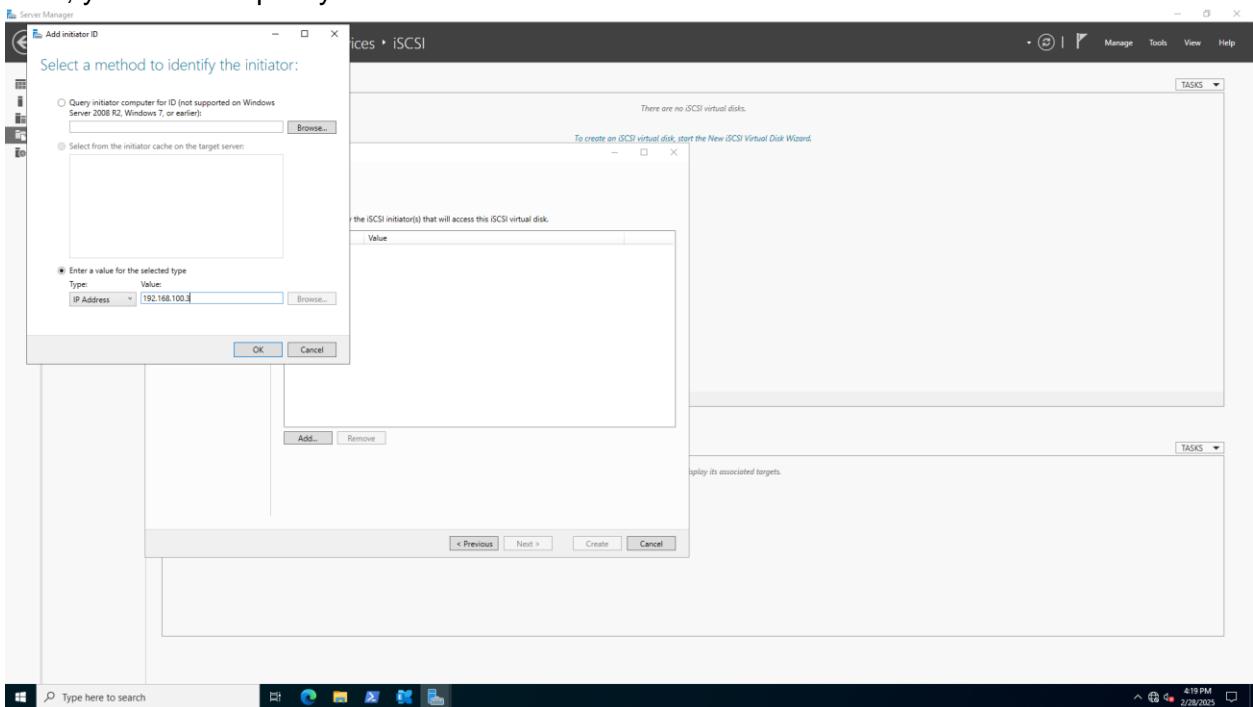
Exchange Installation



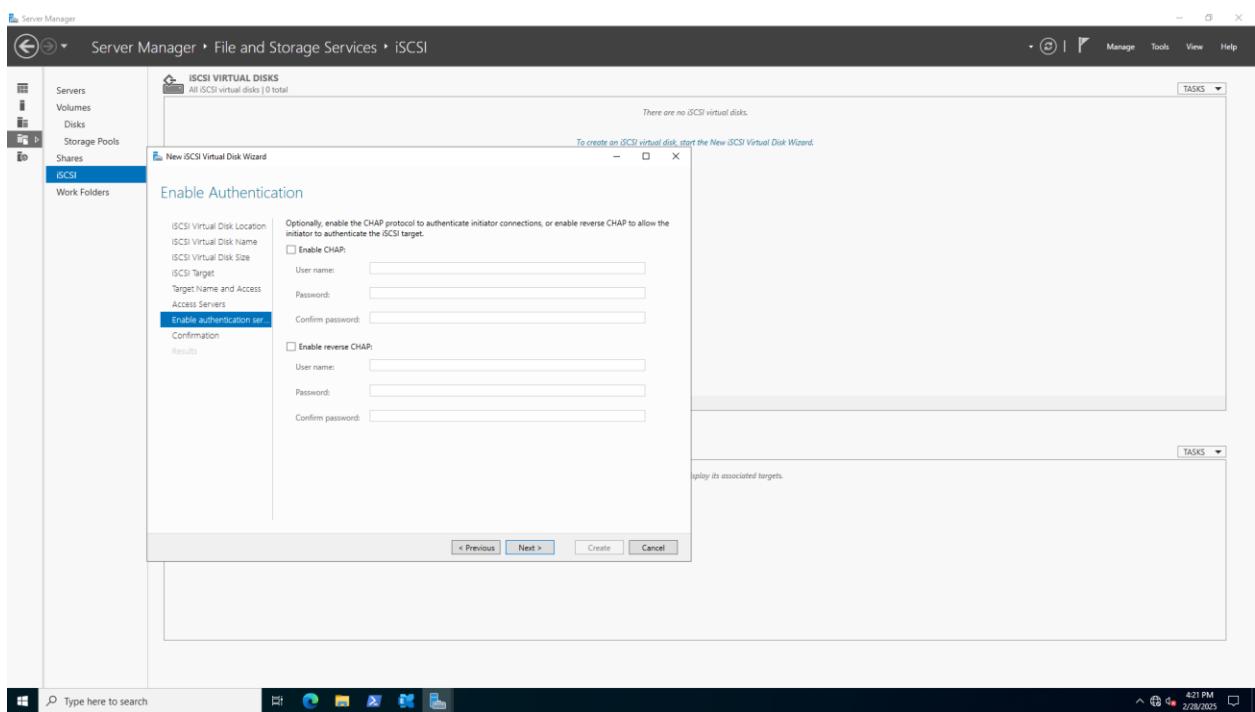
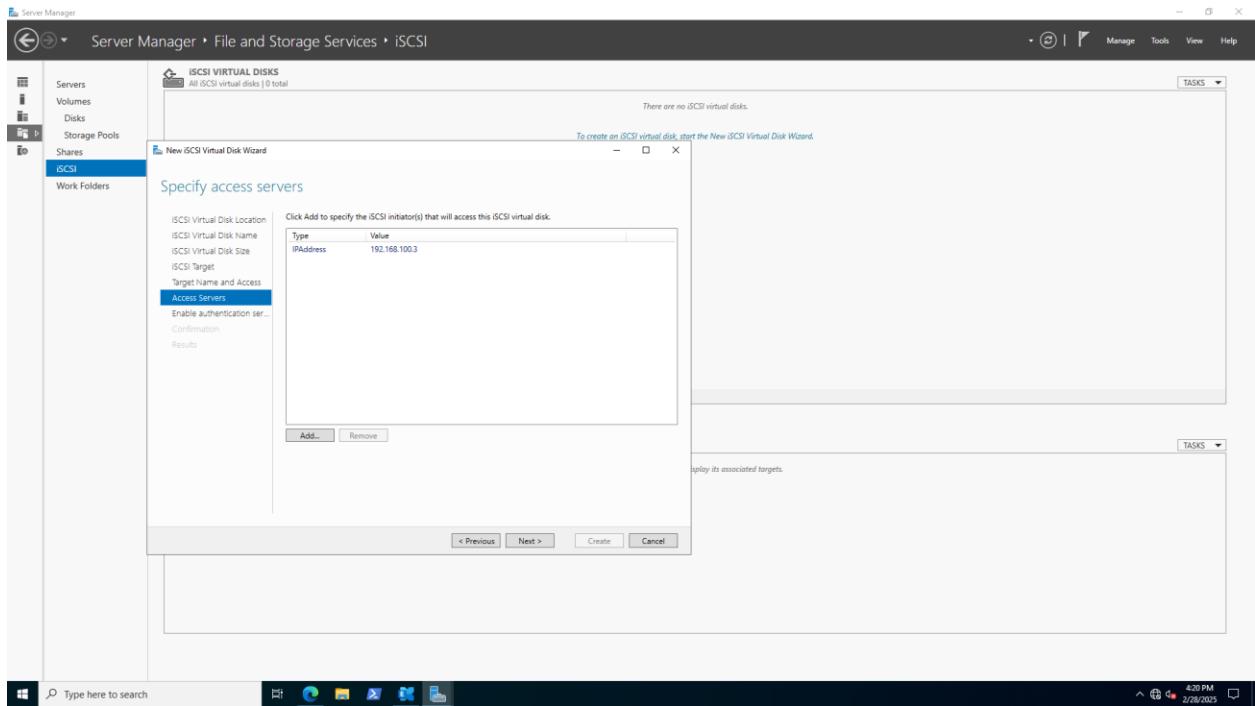
Exchange Installation



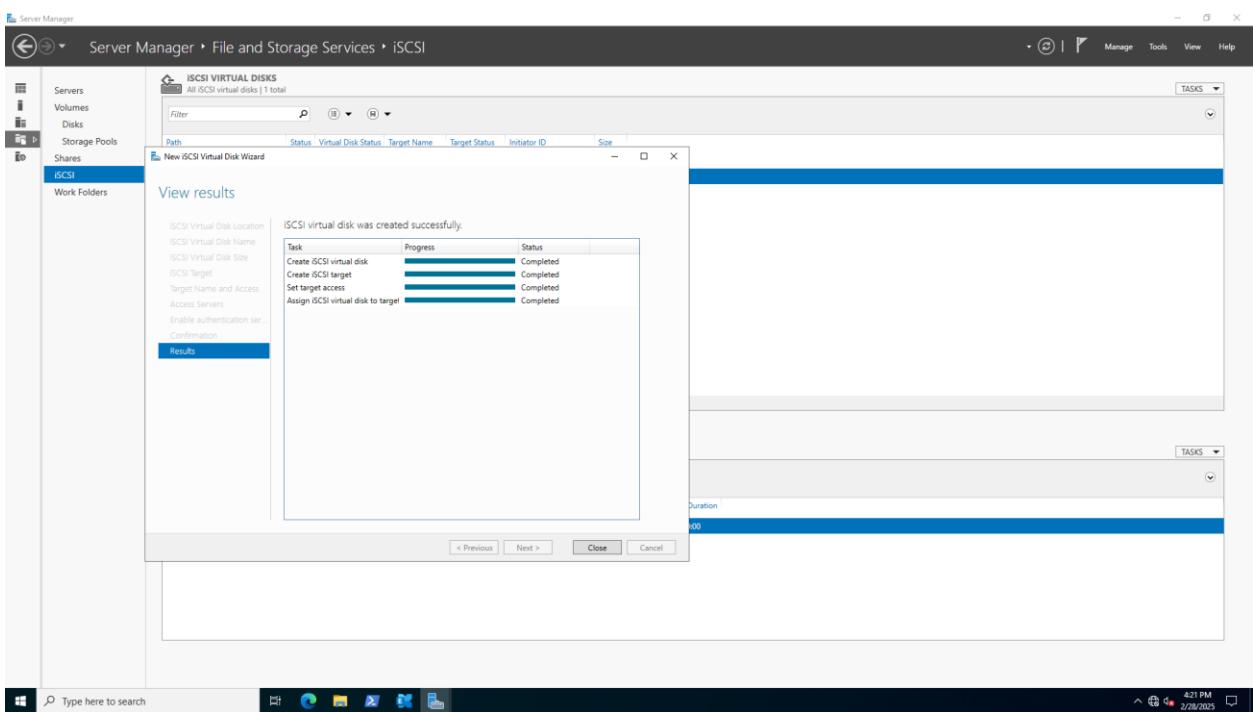
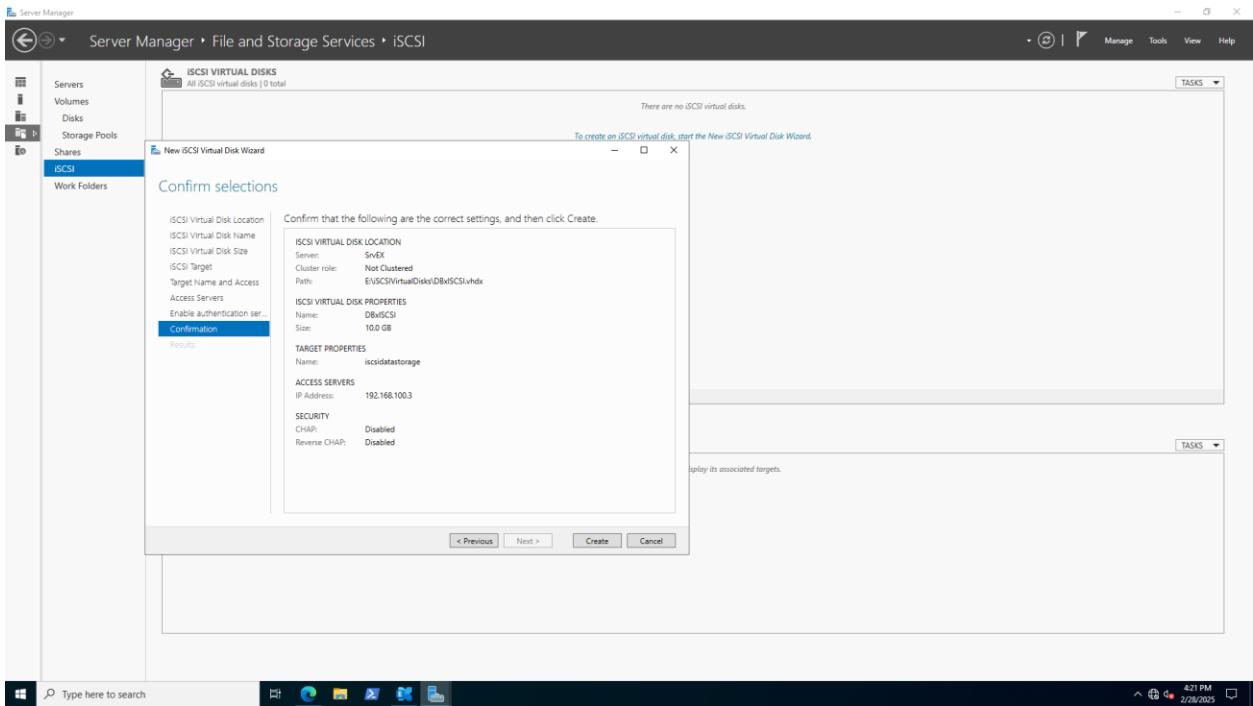
3. Next, you have to specify the IP address of iSCSI Initiator.



Exchange Installation



Exchange Installation



• IMPLEMENTING iSCSI INITIATOR

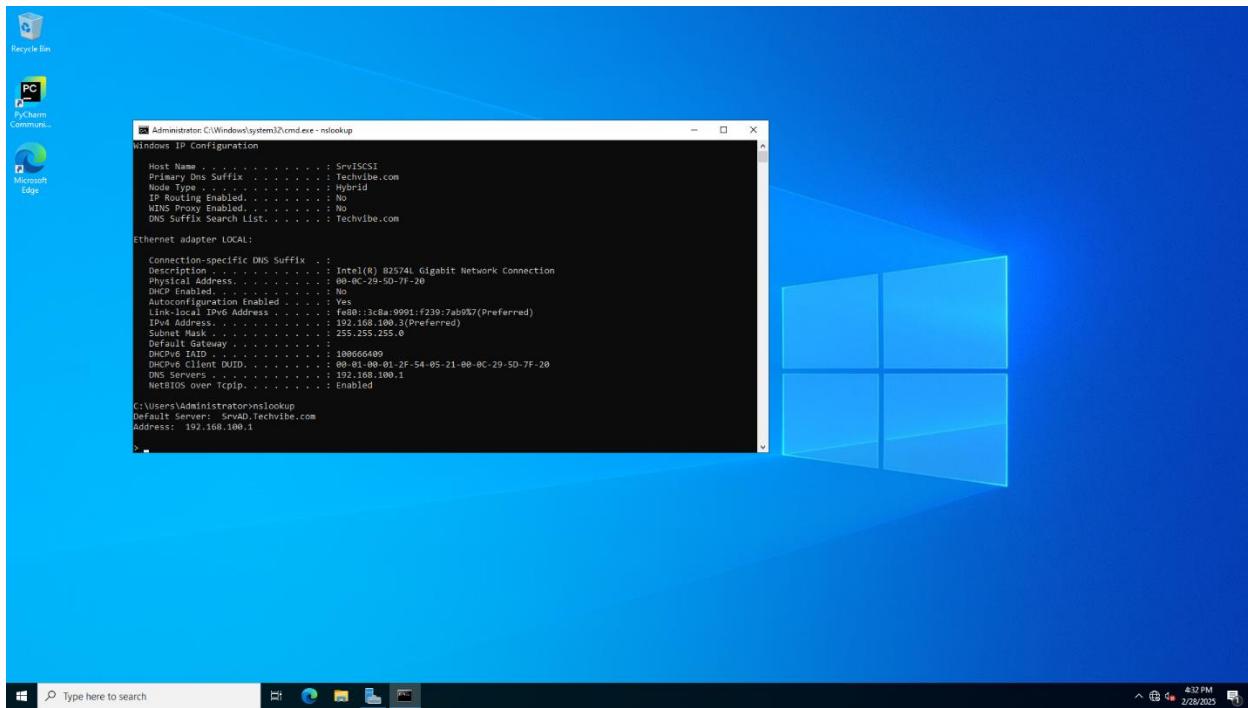
- Configuring a new server as iSCSI initiator. Firstly, we will configure the basic settings of the server, i.e., IP address, server name, disabling firewall and joining to the domain TechVibe.com.

IP Address – 192.168.100.3 (NIC connected to LOCAL network)

Subnet Mask – 255.255.255.0

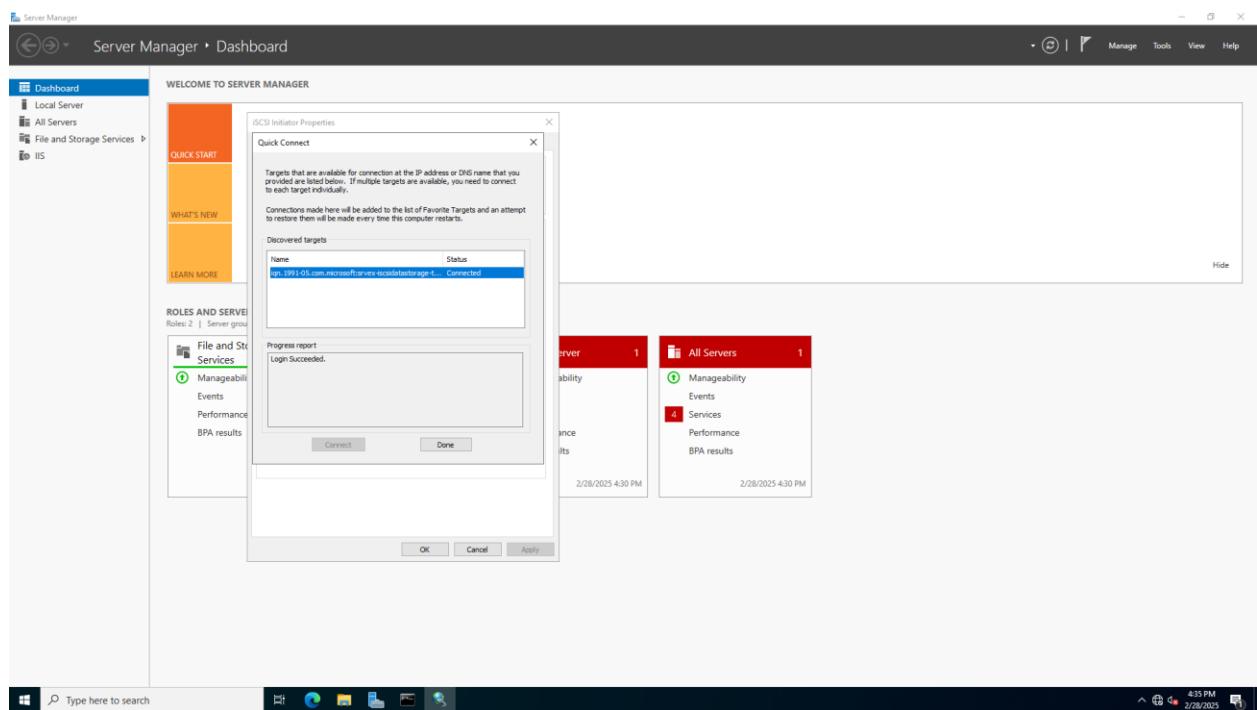
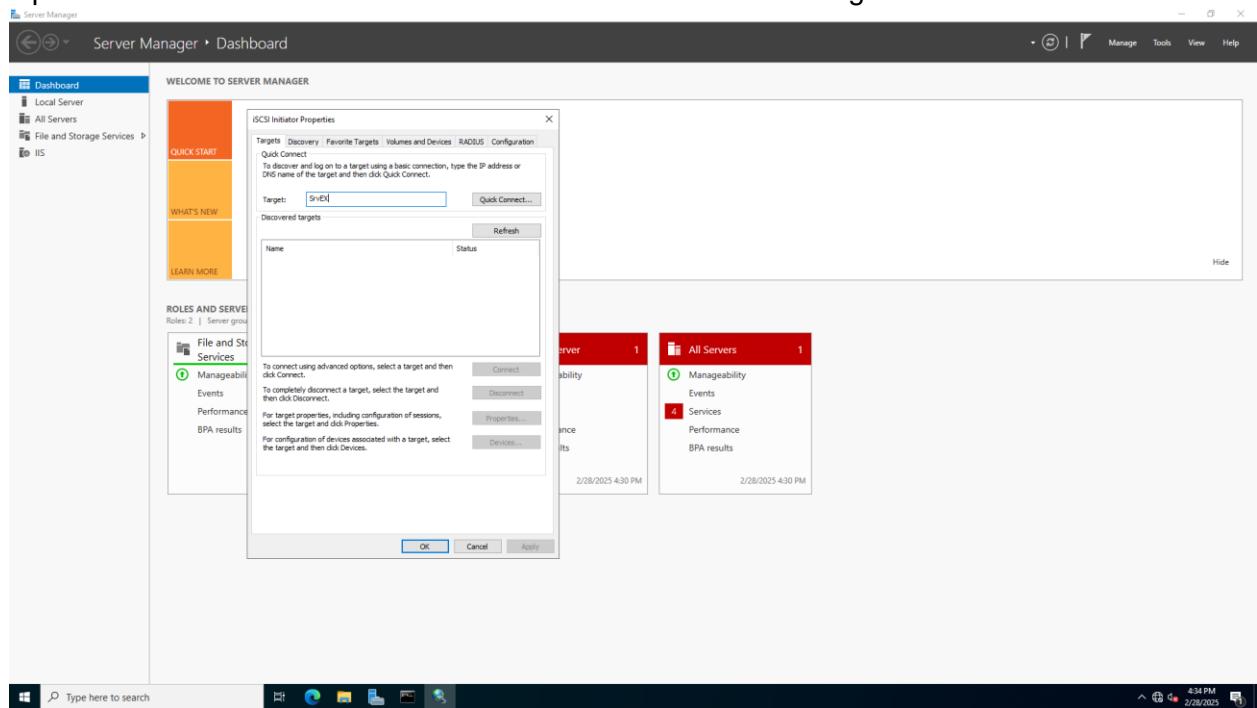
DNS – 192.168.100.1

Server Name – SrvISCSI



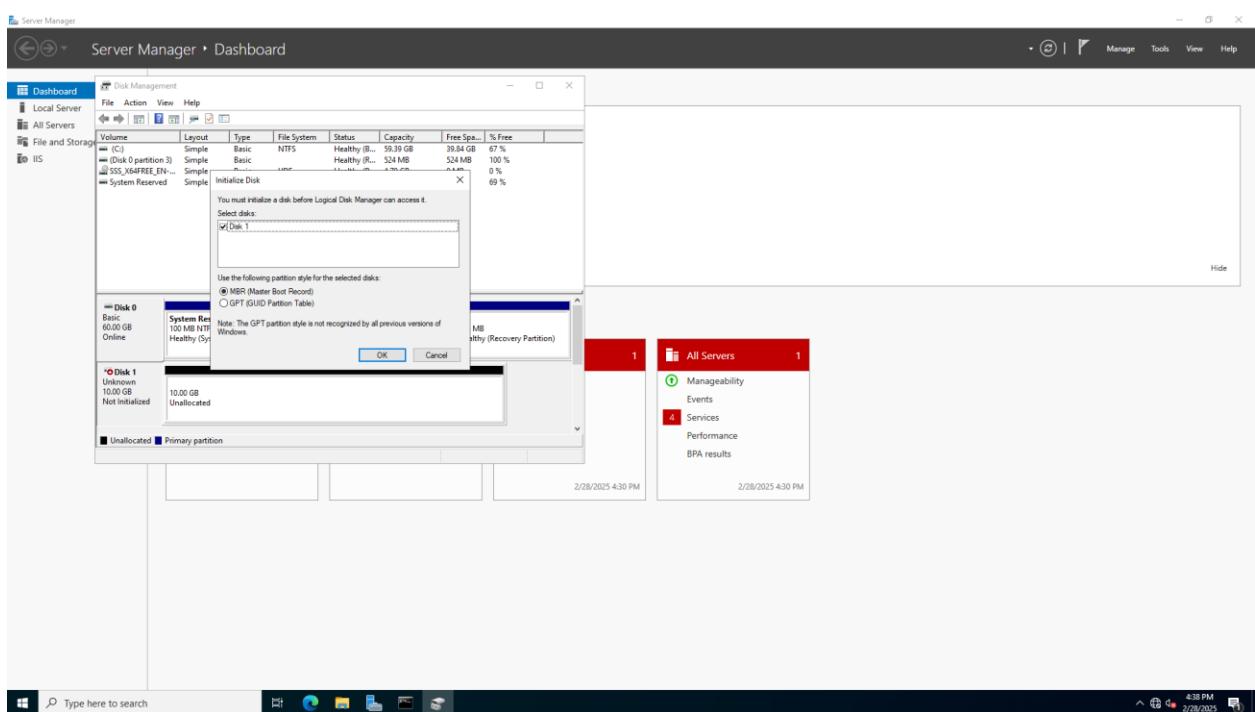
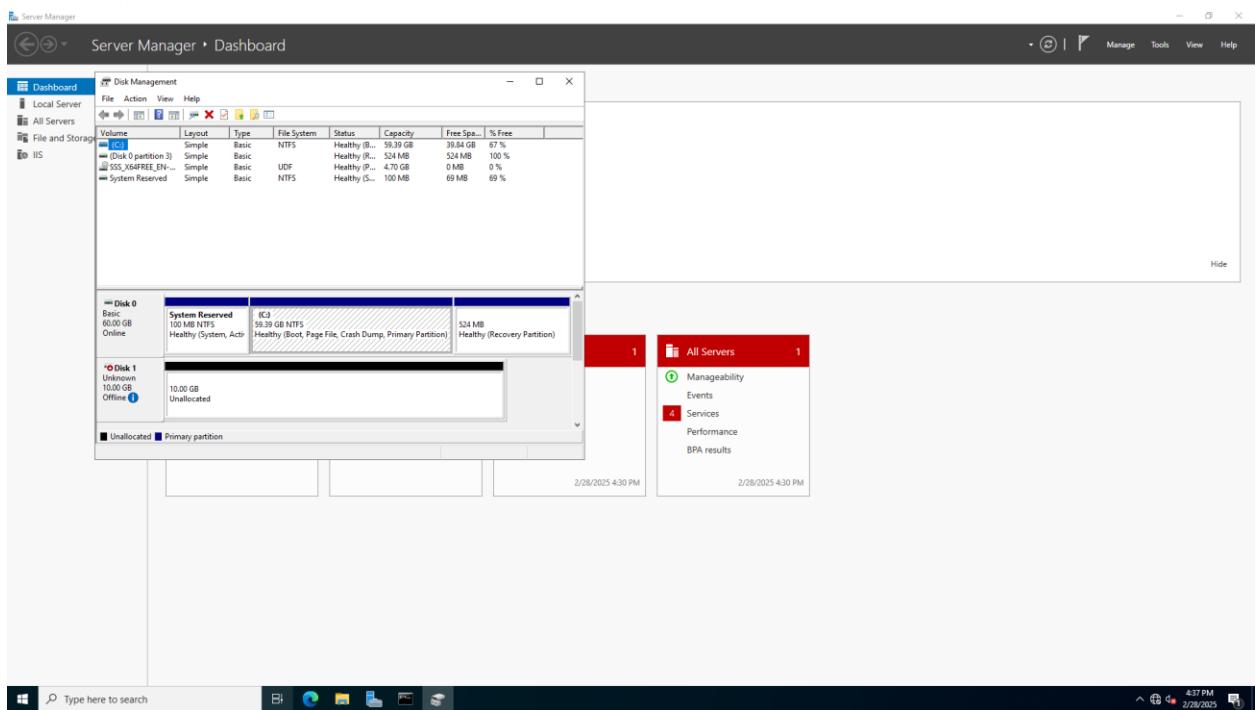
Exchange Installation

2. Open iSCSI initiator service from tools and connect it with the target.

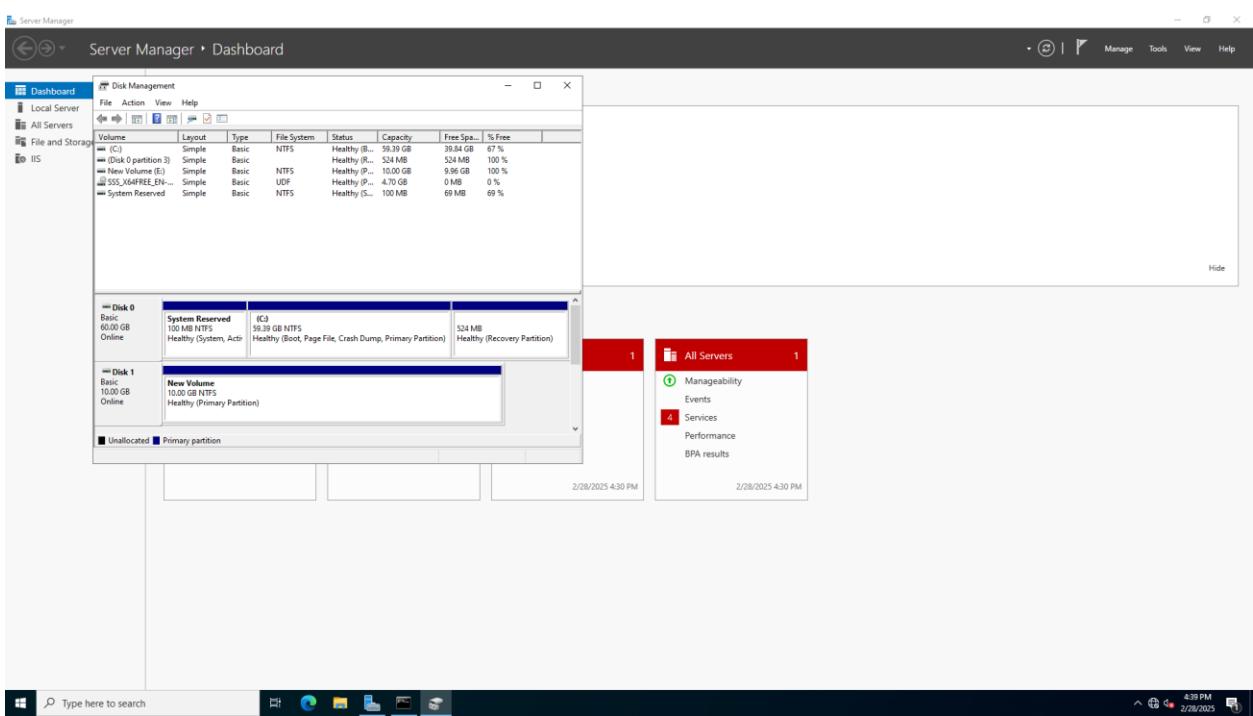
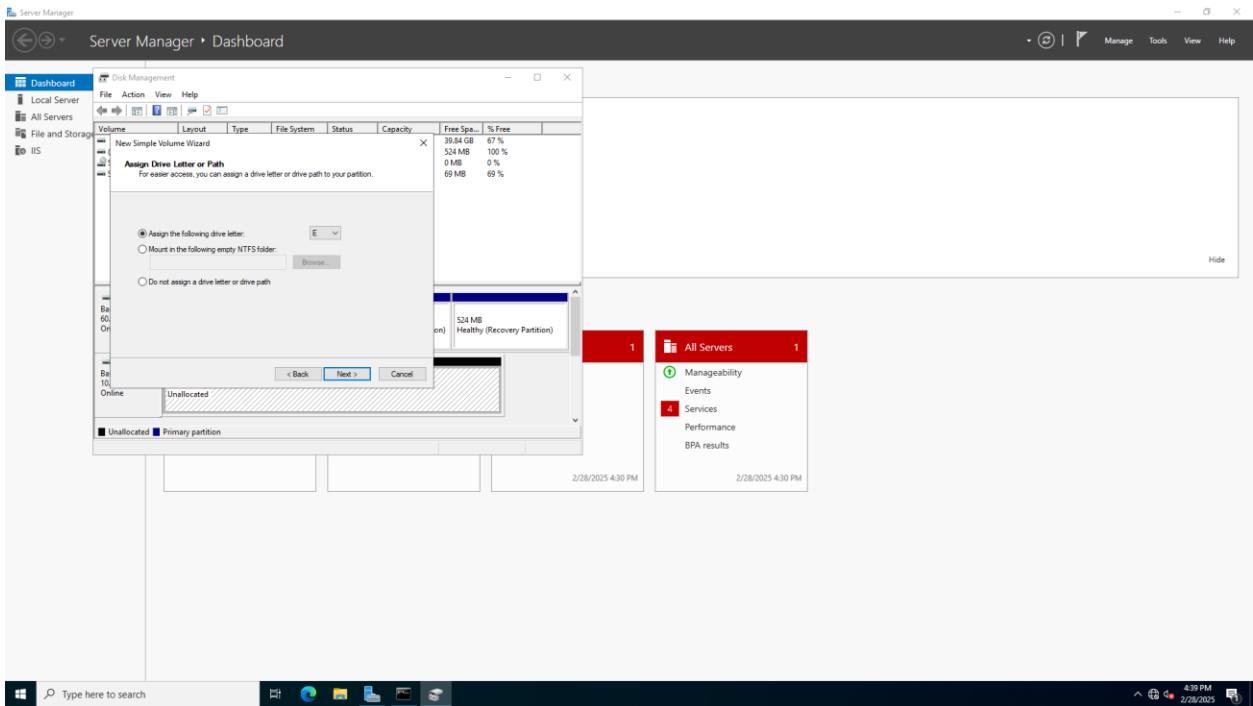


Exchange Installation

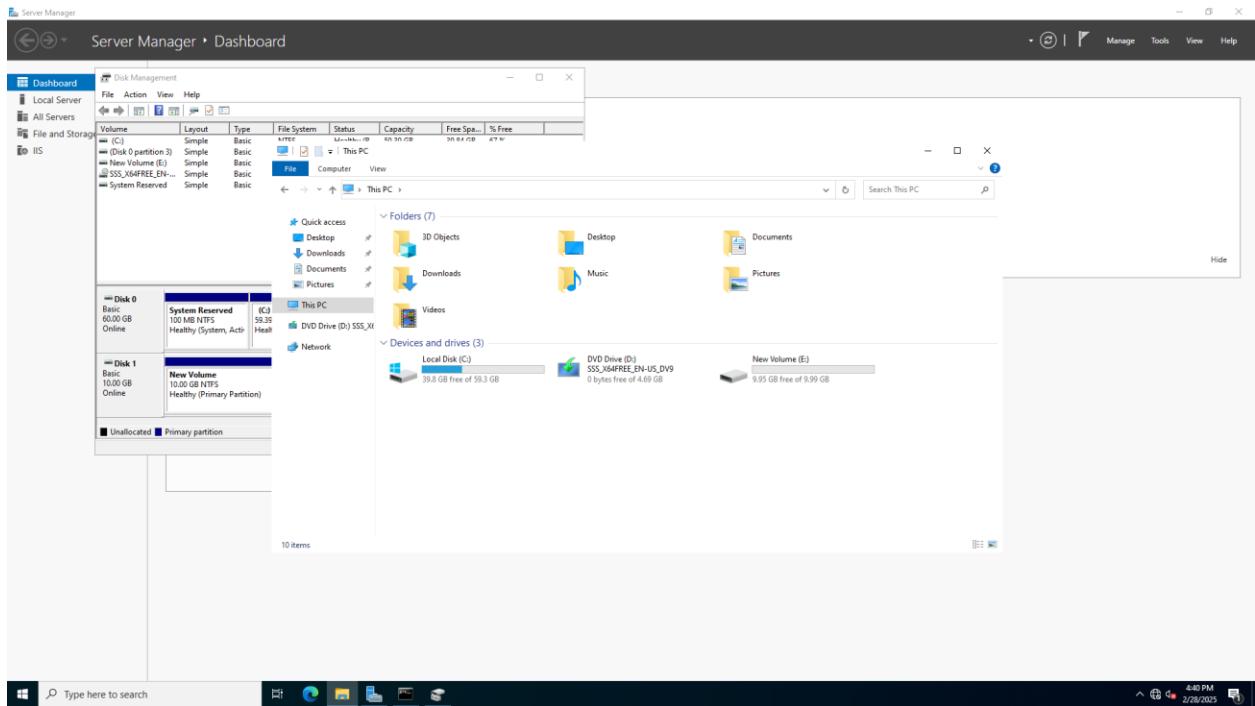
3. Open Disk Management and initialize the disk and create a volume.



Exchange Installation



Exchange Installation

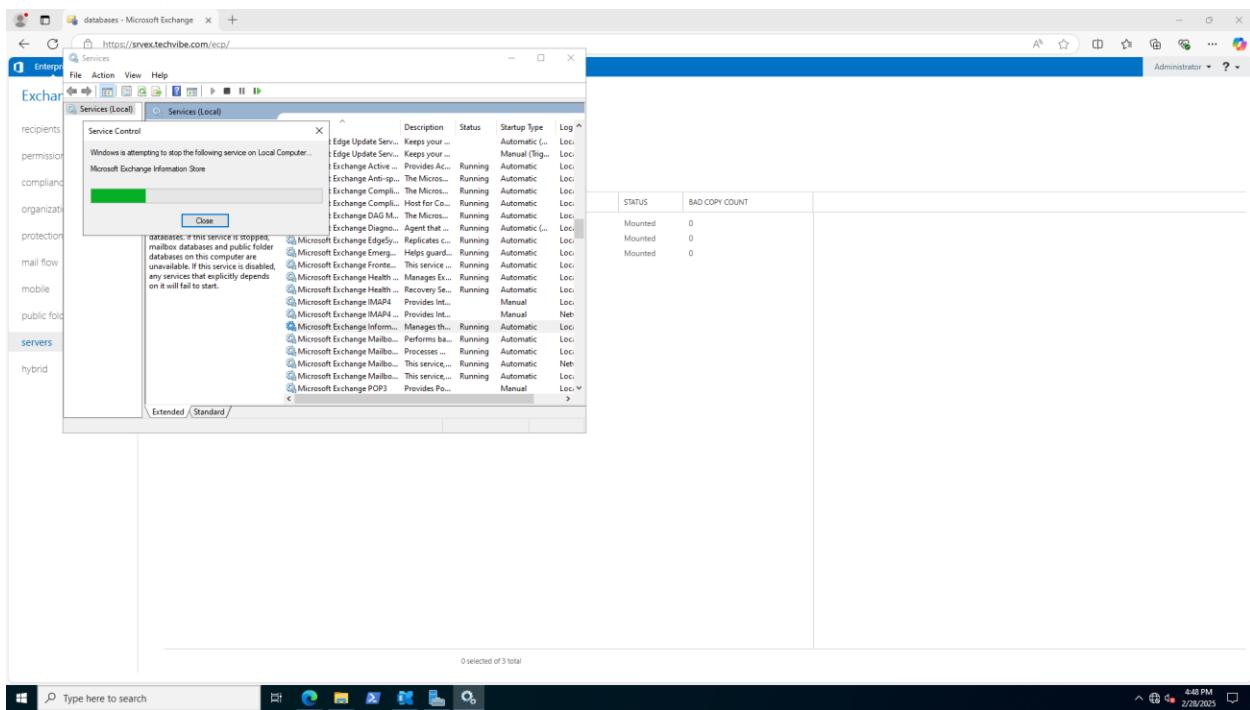


• CREATING NEW DATABASE IN iSCSI VOLUME

The screenshot shows the Exchange Admin Center in a browser window. The left sidebar is collapsed. The top navigation bar shows 'Enterprise' and 'Office 365'. The main area is titled 'databases - Microsoft Exchange'. A sub-menu bar below it includes 'servers', 'databases', 'database availability groups', 'virtual directories', and 'certificates'. The 'databases' tab is selected. In the center, a table lists databases: 'DB-iSCSI' on 'SRVEK' with 'Mailbox Database 1252339681'. To the right, a modal dialog box titled 'DB-iSCSI' shows the configuration for the database. It includes fields for 'Name' (DB-iSCSI), 'Database path' (E:\DB\iSCSI\DB\iSCSIdb), 'Status' (Mounted), and 'Master' (SRVEK). At the bottom of the dialog are 'Save' and 'Cancel' buttons.



Exchange Installation



We can have access to the database from iSCSI Initiator.

