

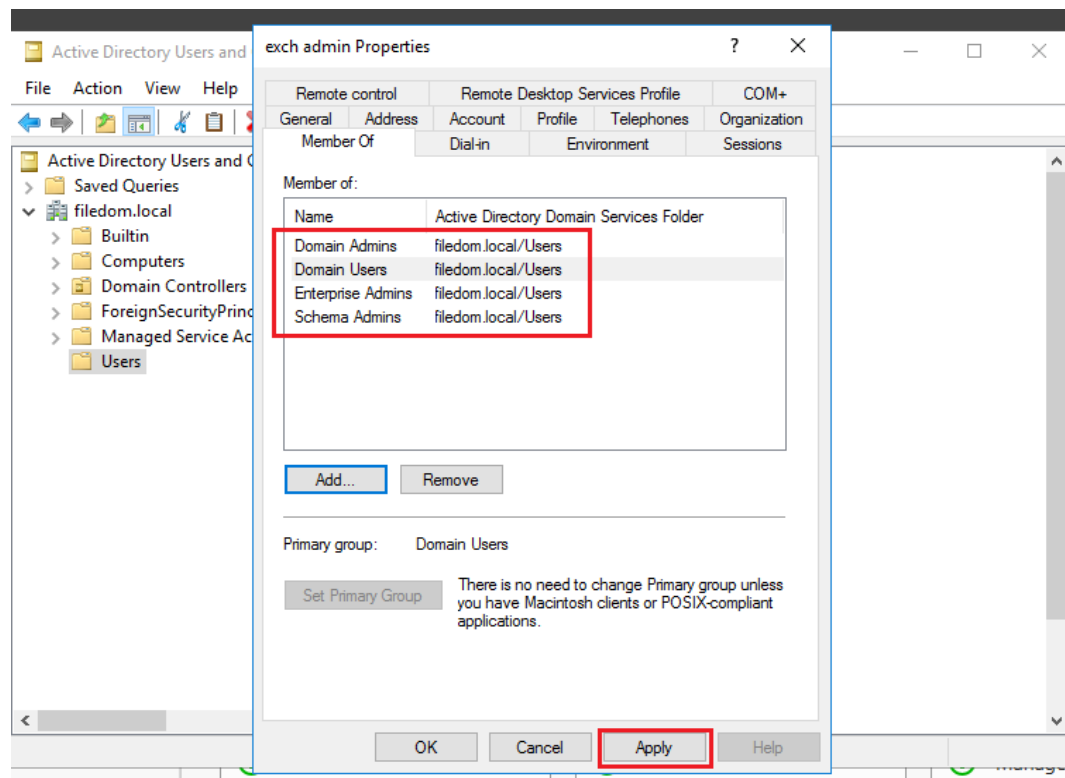
NOVASOL PROJECT PRESENTATION

SECTION A (EXCHANGE SERVER)

Prerequisite Requirement

Before installation of Exchange Services, ensure the following are configured:

- i. The server name for unique identification on the network
- ii. A fixed IP address (IPv4)
- iii. The server for the exchange should be joined to the domain
- iv. Account logged into the server must be a member of Domain Admin, Schema Admin and Enterprise Admins

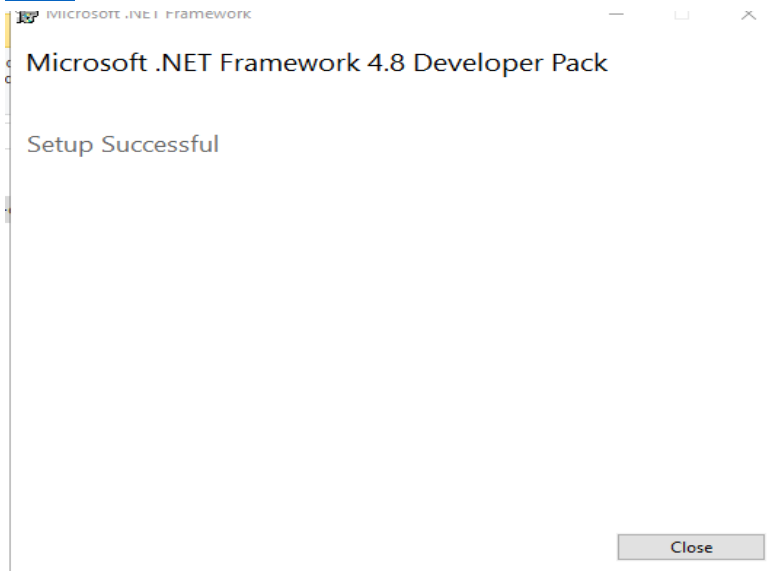


Exchange Services is demands intensive use of hardware resources to function properly a minimum of 4 GB of memory and 60 GB of storage for smooth running of the services.

To install Exchange Server, certain components are needed to meet the pre-requisites for the set-up. These components include:

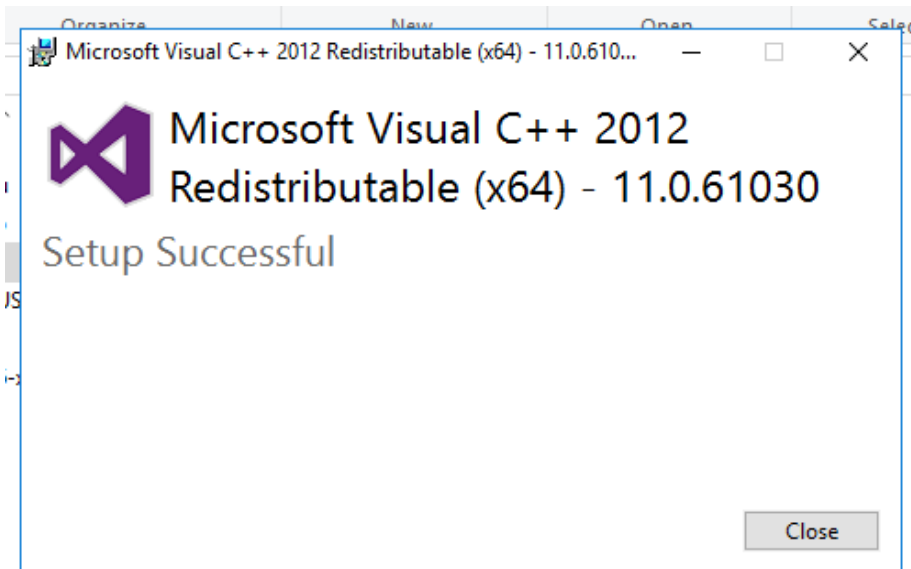
1. Latest version of .NET Framework

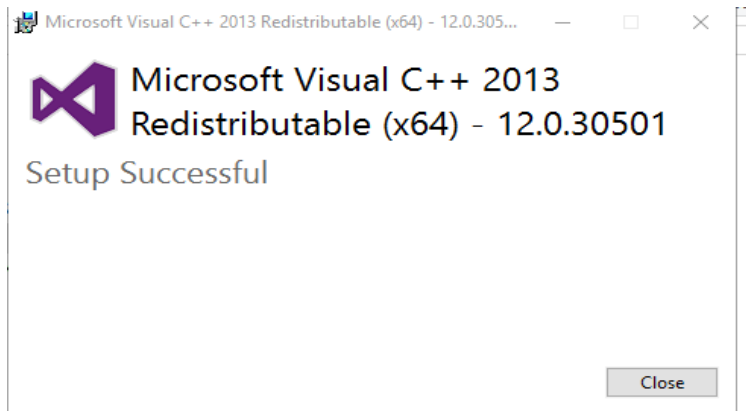
Ensure to Download and run the application as Administrator [Download here](#)



2. Install Visual C++ Redistributable Package

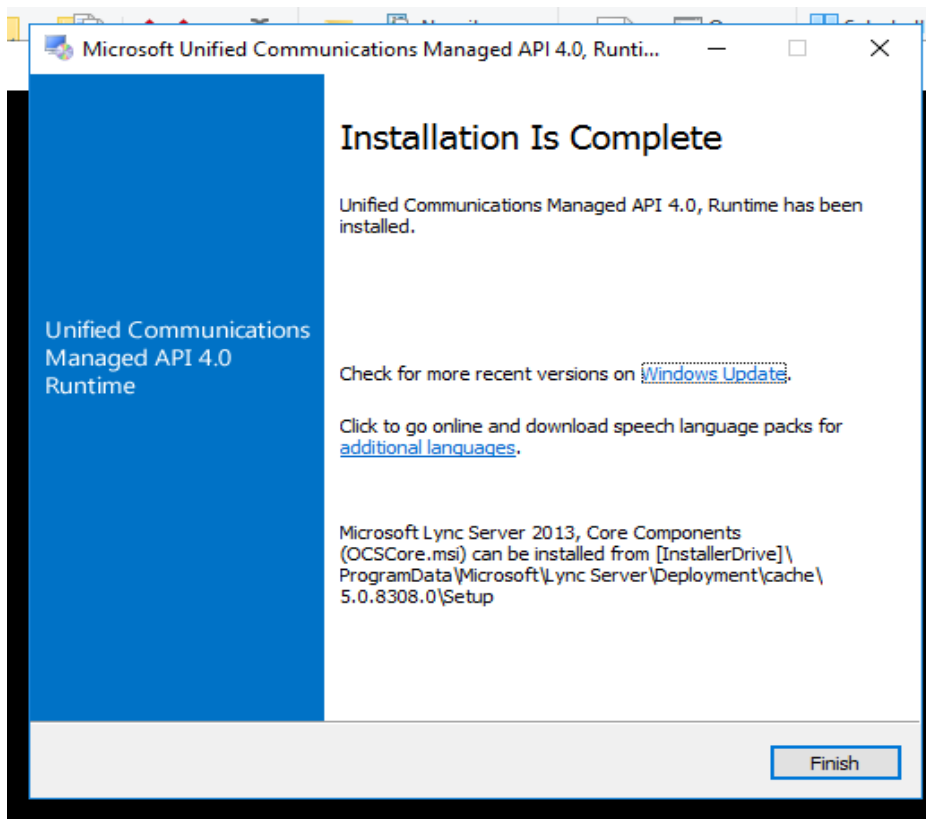
Download Visual C++ Redistributable Package for [Visual Studio 2012](#) and [Visual Studio 2013](#) and install it as administrator on your Server.





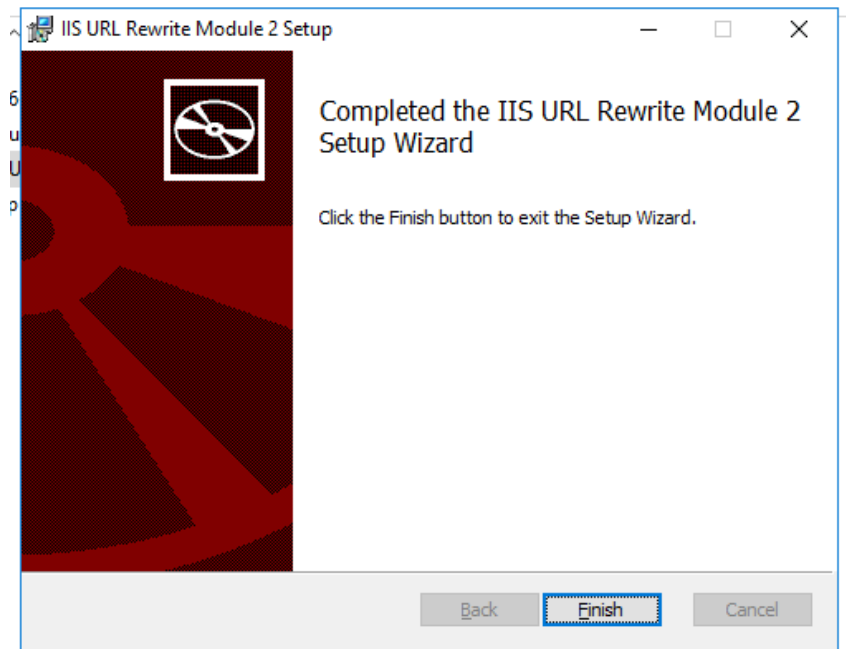
3. Install Unified Communications Managed API 4.0

Download and Install [Unified Communications Managed API 4.0](#) on your system.



4. Install IIS Rewrite Module

Download and install the IIS Rewrite Module on your [IIS Rewrite Module](#)
After successful installation, Restarting the server is required



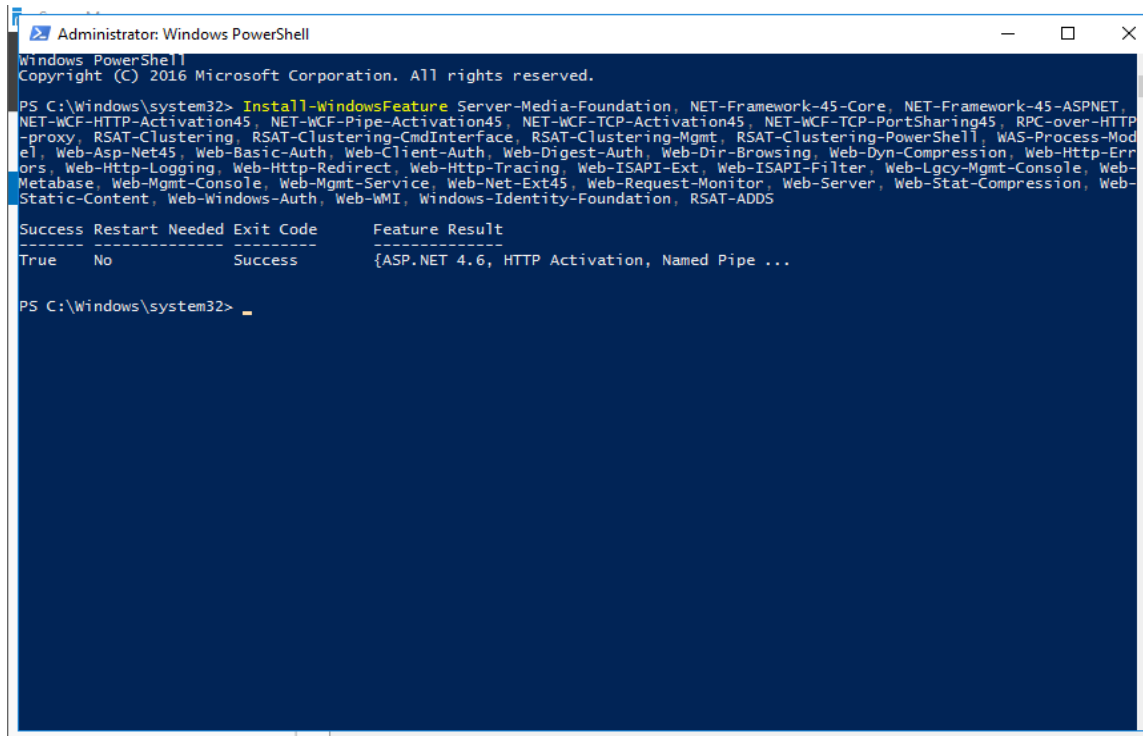
Additional features for exchange

Install Server Media Foundation (using powershell)

Install-WindowsFeature Server-Media-Foundation

Install Remote Server Administration Toolkit

Install-WindowsFeature NET-Framework-45-Features, RSAT-ADDS, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, Web-Mgmt-Console, 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



```
Administrator: Windows PowerShell
Windows PowerShell
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PS C:\Windows\system32> Install-WindowsFeature Server-Media-Foundation, NET-Framework-45-Core, NET-Framework-45-ASPNET,
NET-WCF-HTTP-Activation45, NET-WCF-Pipe-Activation45, NET-WCF-TCP-Activation45, NET-WCF-TCP-PortSharing45, RPC-over-HTTP
-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, WAS-Process-Mod
el, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Err
ors, 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

Success Restart Needed Exit Code      Feature Result
-----
True      No              Success      {ASP.NET 4.6, HTTP Activation, Named Pipe ...

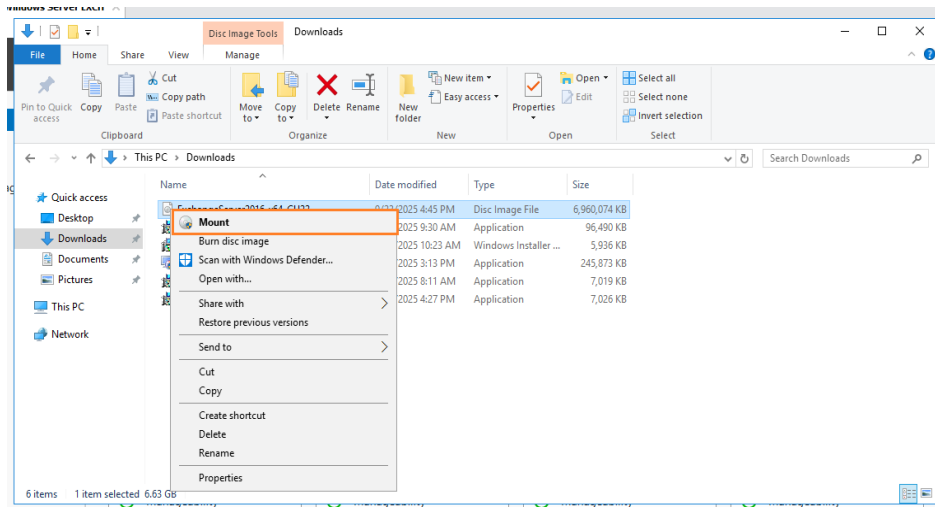
PS C:\Windows\system32>
```

The powershell command includes server additional features required for the exchange server to work

Restarting the server is required after installing the features

Steps to Install Exchange Server 2019

First you need to download the Exchange server 2019 setup file if you do not have it. Once downloaded, mount the setup file.



Prepare Active Directory Schema

Run the below command in the windows PowerShell.

<Drive Letter>\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataOn /PrepareSchema

```
Administrator: Command Prompt - Setup.exe /PrepareAD /OrganizationName:"Filedom Local" /IAcceptExchangeServerLicenseTerms_DiagnosticDataOn
You need to accept the license terms to install Microsoft Exchange Server 2016. To read the license agreement, visit http://go.microsoft.com/fwlink/p/?LinkId=156127. To
accept the license agreement, add the /IAcceptExchangeServerLicenseTerms_DiagnosticDataOn or /IAcceptExchangeServerLicenseTerms_DiagnosticDataOff parameter to the comm
and you're running. For more information, run setup /?.

::>Setup.exe /PrepareAD /OrganizationName:"Filedom Local" /IAcceptExchangeServerLicenseTerms_DiagnosticDataOn

Microsoft Exchange Server 2016 Cumulative Update 22 Unattended Setup

Copying Files...
File copy complete. Setup will now collect additional information needed for installation.

Performing Microsoft Exchange Server Prerequisite Check

Prerequisite Analysis 100%

Setup will prepare the organization for Exchange Server 2016 by using 'Setup /PrepareAD'. No Exchange Server 2013 roles
have been detected in this topology. After this operation, you will not be able to install any Exchange Server 2013
roles.
For more information, visit: https://docs.microsoft.com/Exchange/plan-and-deploy/deployment-ref/readiness-checks?view=exchserver-2016

Setup will prepare the organization for Exchange Server 2016 by using 'Setup /PrepareAD'. No Exchange Server 2010 roles
have been detected in this topology. After this operation, you will not be able to install any Exchange Server 2010
roles.
For more information, visit: https://docs.microsoft.com/Exchange/plan-and-deploy/deployment-ref/readiness-checks?view=exchserver-2016

Configuring Microsoft Exchange Server

Organization Preparation 27%

28%
```

Prepare Active Directory

Using Windows PowerShell, run the below command.

<Drive Letter>: \Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataOn

/PrepareDomain: <server name>

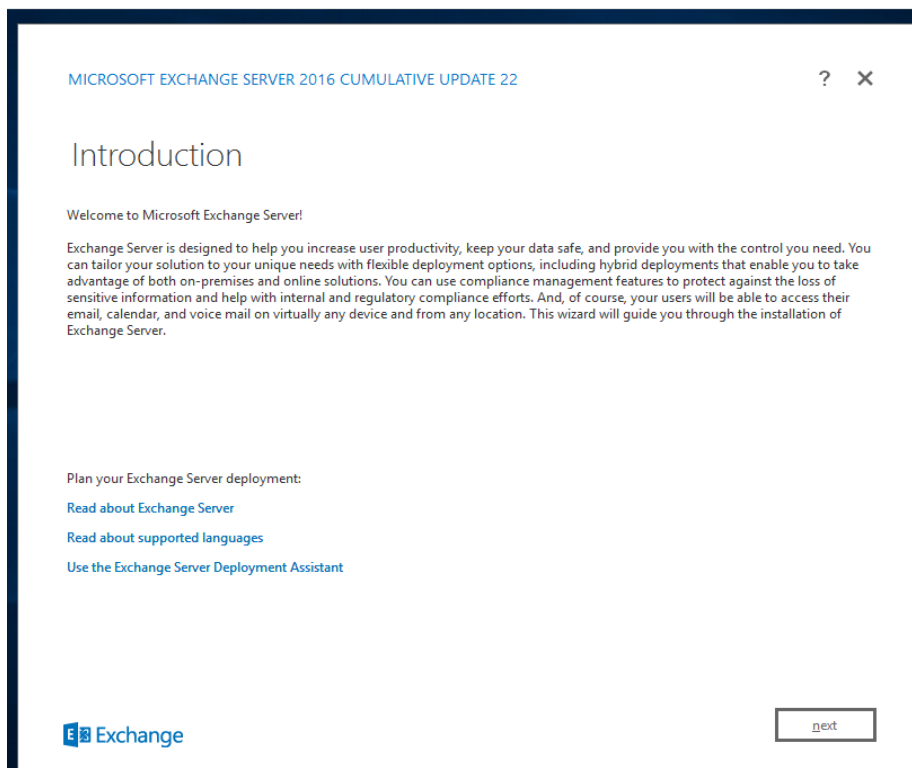
```
Administrator: Command Prompt - Setup.exe /PrepareAllDomains /AcceptExchangeServerLicenseTerms_DiagnosticDataOff
Copying Files...
File copy complete. Setup will now collect additional information needed for installation.

Performing Microsoft Exchange Server Prerequisite Check
Prerequisite Analysis 100%
Setup will prepare the organization for Exchange Server 2016 by using 'Setup /PrepareAD'. No Exchange Server 2013 roles
have been detected in this topology. After this operation, you will not be able to install any Exchange Server 2013
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For more information, visit: https://docs.microsoft.com/Exchange/plan-and-deploy/deployment-ref/readiness-checks?view=exchserver-2016
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For more information, visit: https://docs.microsoft.com/Exchange/plan-and-deploy/deployment-ref/readiness-checks?view=exchserver-2016

Configuring Microsoft Exchange Server
Organization Preparation 27%
The Exchange Server setup operation completed successfully.
COMPLETED
E:\>Setup.exe /PrepareAllDomains /IAcceptExchangeServerLicenseTerms_DiagnosticDataOff
Microsoft Exchange Server 2016 Cumulative Update 22 Unattended Setup
Copying Files...
File copy complete. Setup will now collect additional information needed for installation.
```




Install Exchange Server 2016

Right click on the downloaded .iso image of the exchange server and select mount
this creates a partition for the exchange server only and then click open ensure
the installed application compatible with exchange server version



Accept the license agreement and click next

MICROSOFT EXCHANGE SERVER 2016 CUMULATIVE UPDATE 22



License Agreement

Please read and accept the Exchange Server license agreement.

MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT EXCHANGE SERVER 2016 STANDARD, ENTERPRISE, TRIAL AND HYBRID
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft


- updates,
- supplements,
- Internet-based services, and
- support services

for this software unless other terms accompany those items. If so, those terms apply. Your use of this software may be subject to the additional agreements Microsoft has with you or your organization.

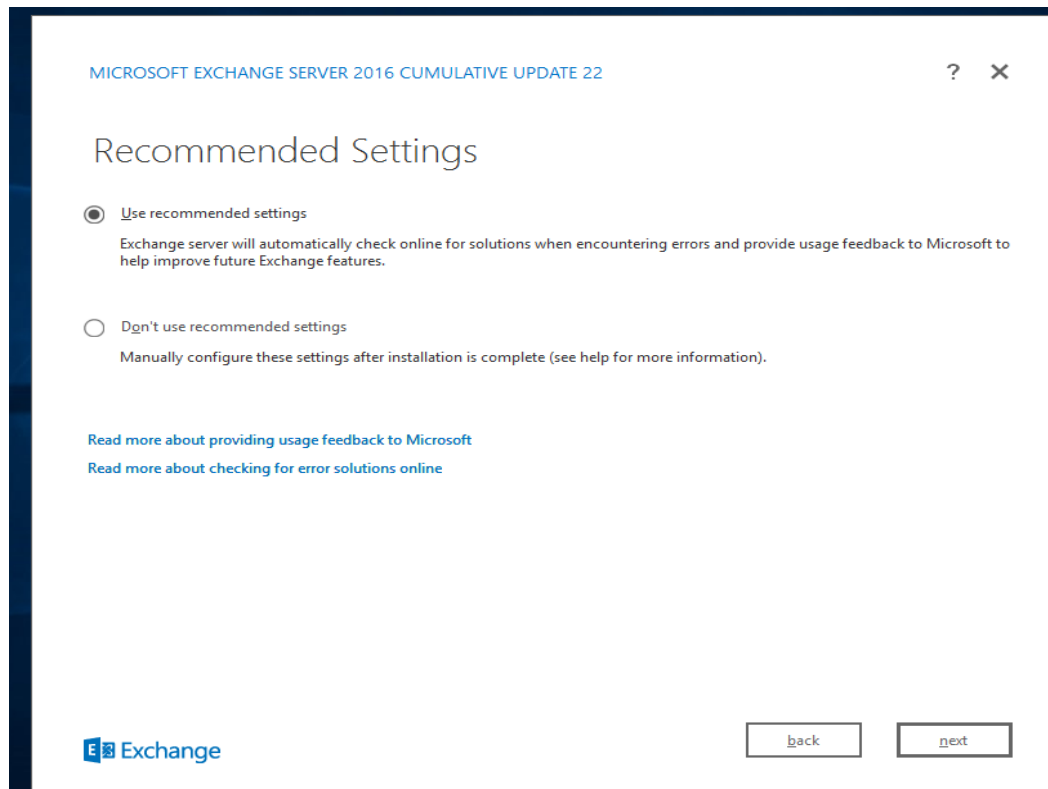
☒ I accept the license agreement and will share diagnostic data with Microsoft (recommended).[Learn more](#)

☐ I accept the license agreement, but I'm not ready to share diagnostic data with Microsoft.

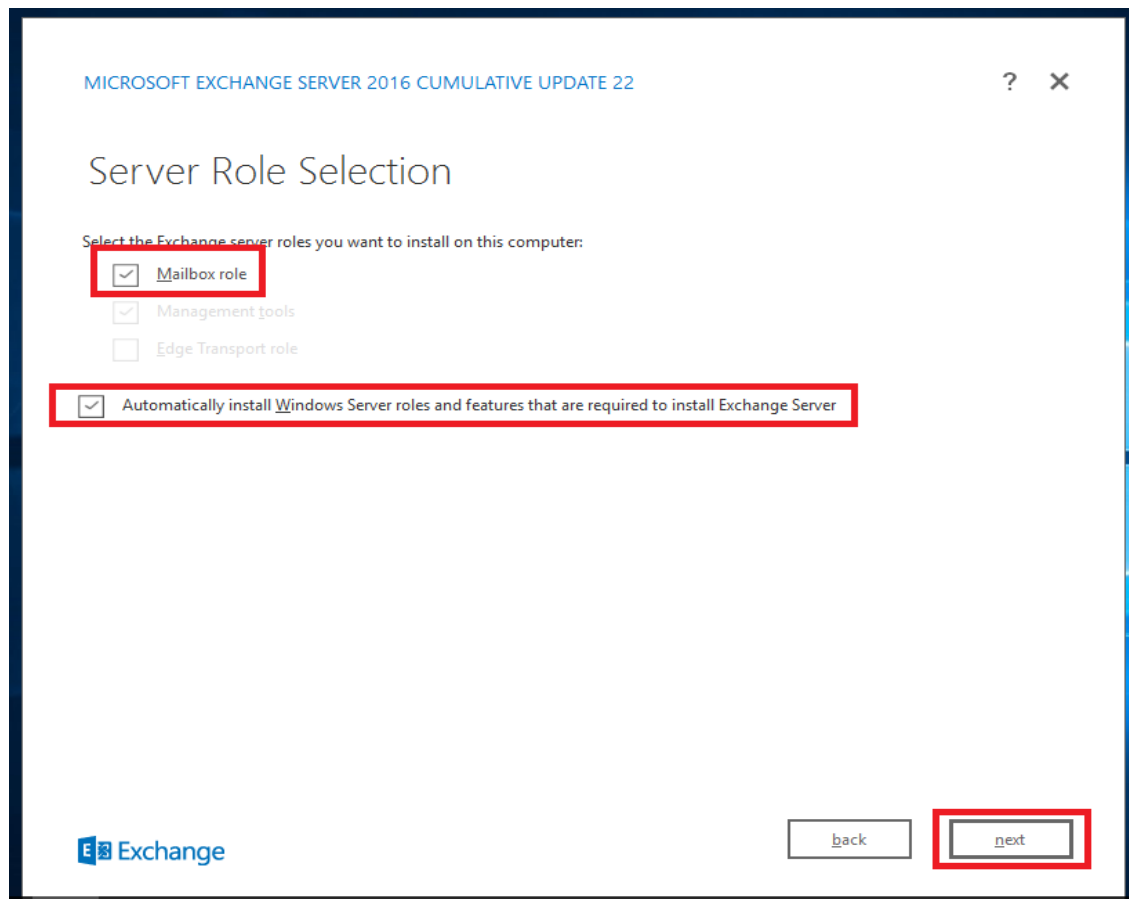
☐ I do not accept the license agreement.

next

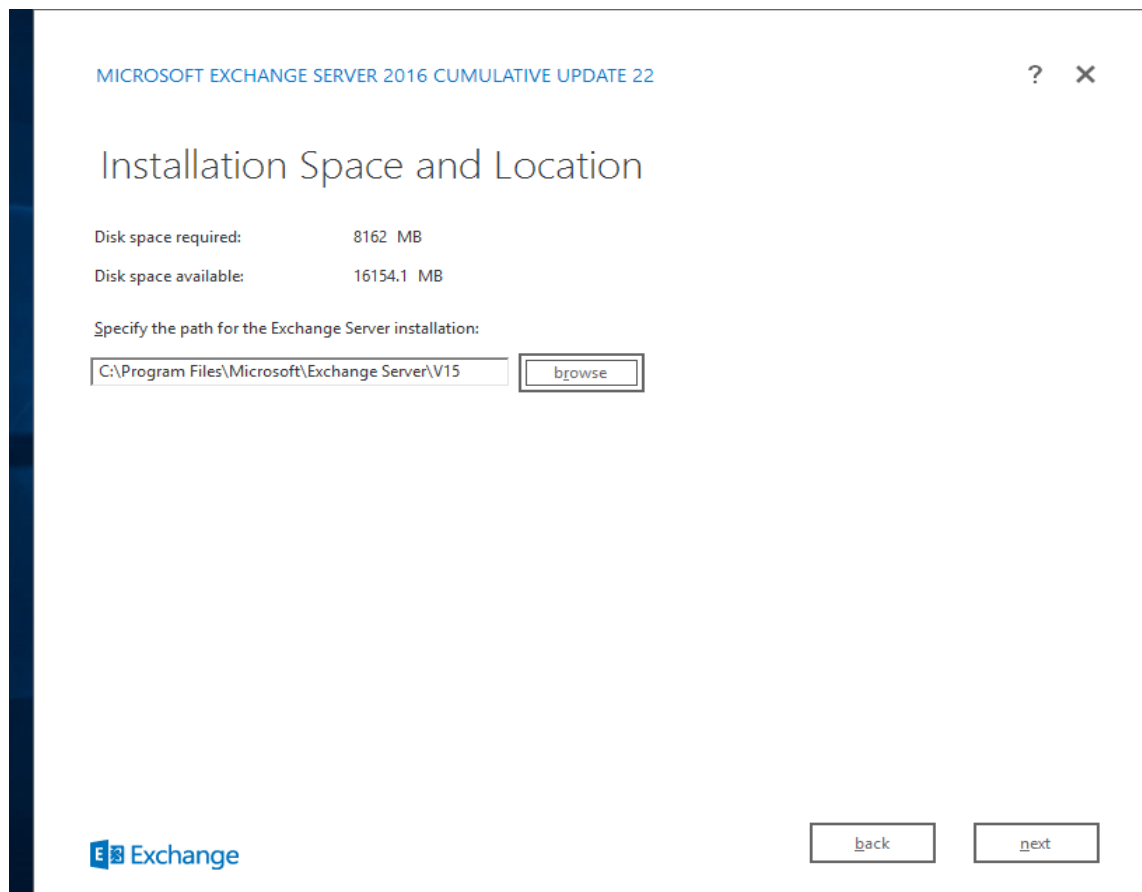
Choose use recommended settings and click on the next button.



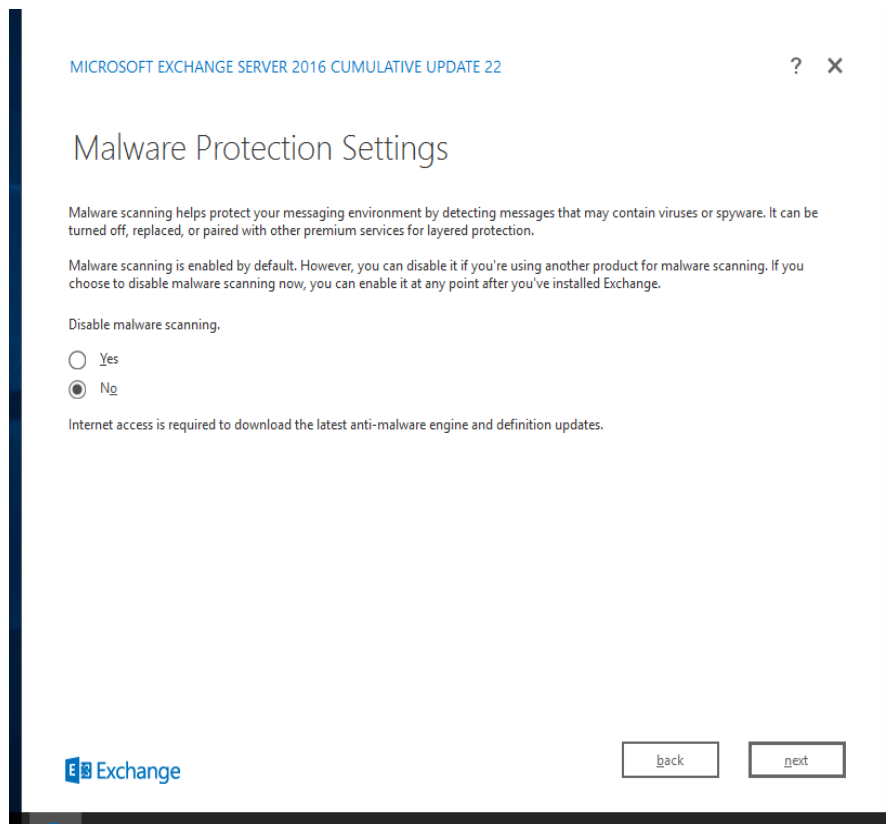
In the server role selection window, choose Mailbox role and also check on automatically install windows server roles and features. Once done, click on the next button.



On installation space and location window, specify the path for Exchange Server 2019 installation and click next.



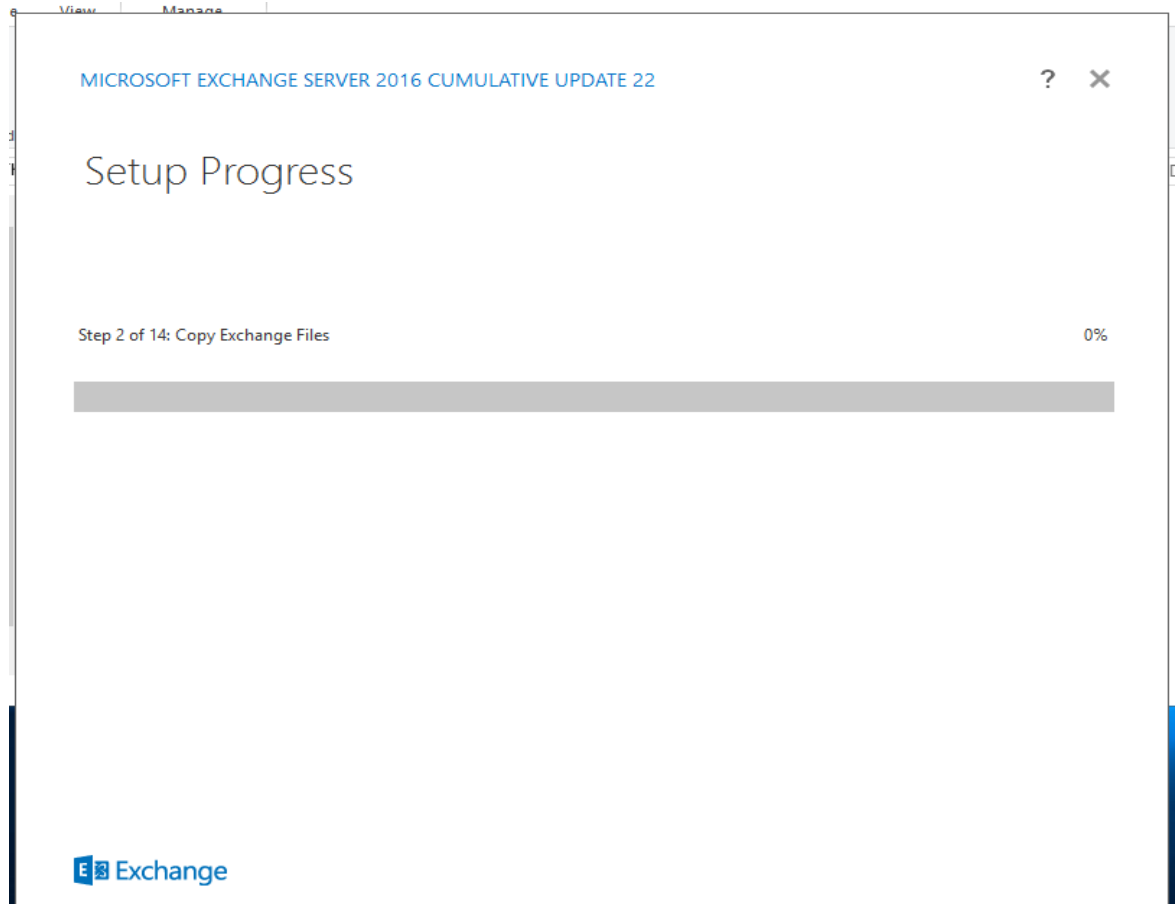
In the malware protection setting window, choose the No option and click on the next button.



In the Exchange Organization name put the NETBIOS name of the server for easy identification

It will check for the prerequisite needed to Install Exchange Server 2019 has been installed or not. If not, it will provide you with errors that you need to resolve. Once the analysis has been completed successfully, you need to click on the Install button.

On the Readiness Checks page, ensure all readiness checks have completed successfully. To install Exchange Server 2016, click Install.



Restart the virtual machine after successful installation

After the installation, check if any security updates are available for the installed CU. Install them to patch the Exchange Server and protect against malicious attacks.

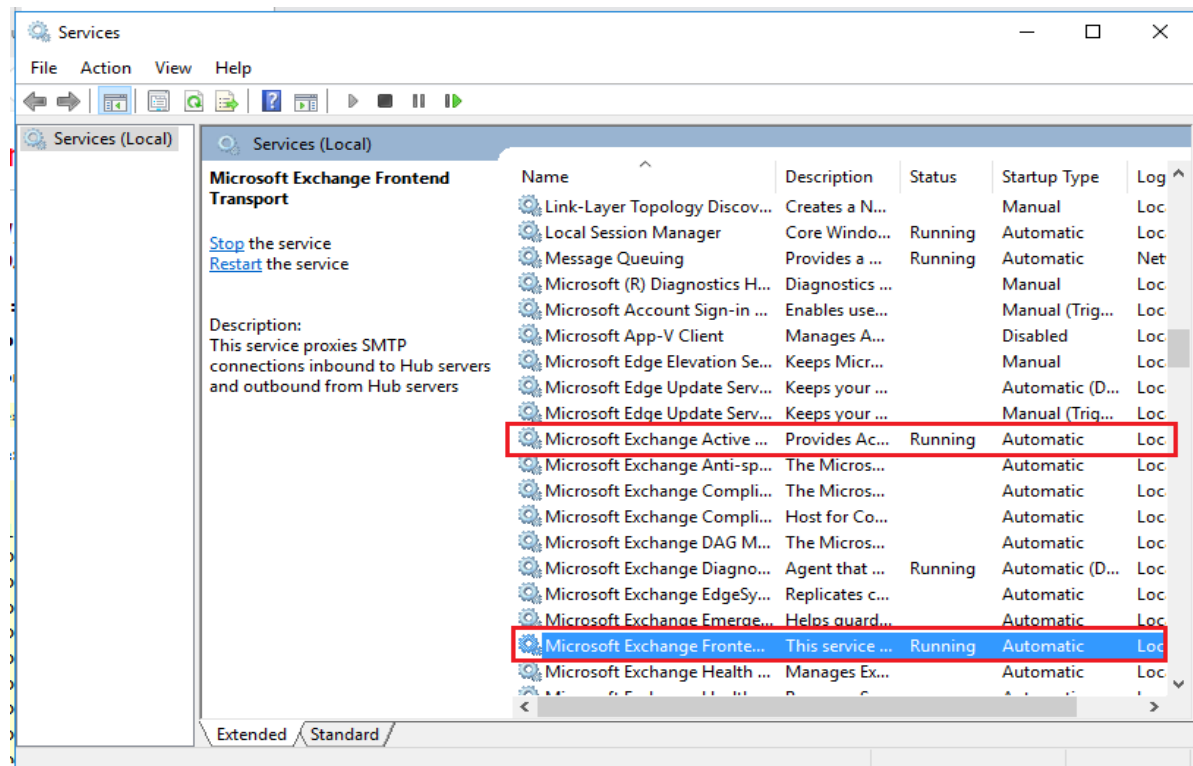
Post-Installation Configuration Tasks

1. Verify the running Exchange Services

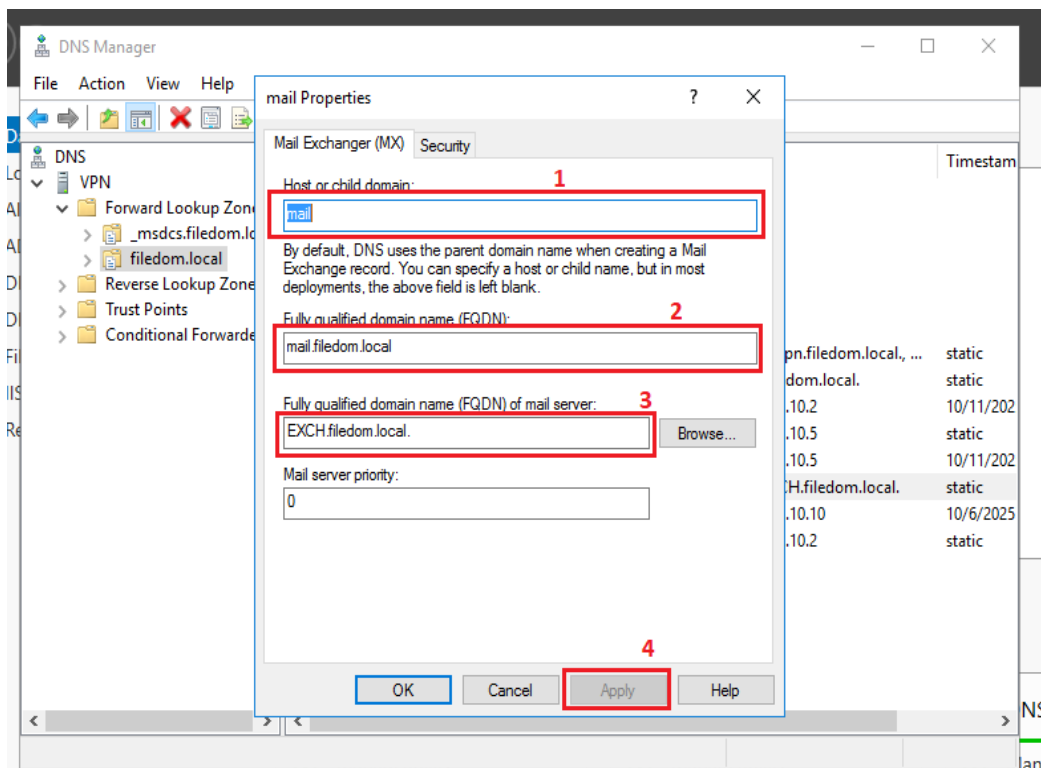
For Microsoft exchange to function properly, certain essential services need to be running properly. If the services are not running, they can be started

- MSExchangeADTopology
- MSExchangeTransport
- MSExchangeDelivery

- MSExchangeSubmission
- MSExchangeFrontEndTransport
- MSExchangeIS

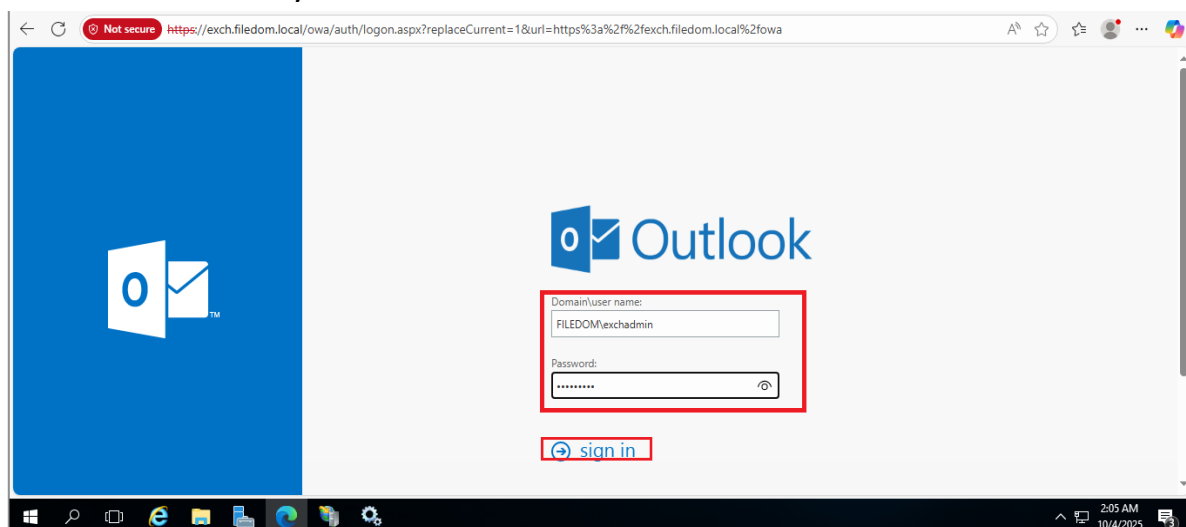


2. Create a MX record for the exchange server on Domain Controller

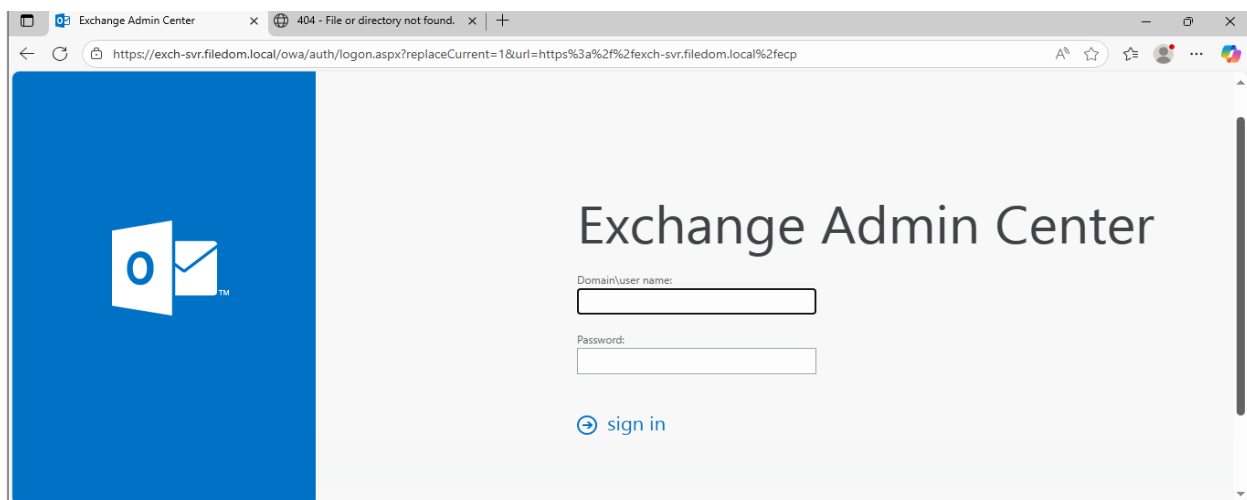


Open and login to the Exchange Admin Center for configuration of the Mail Services and Online Web App for send and receiving of mails.

This can be done by <https://<fqdn of the exchange server>.ecp> for the admin center and .owa for the web app which opens a sign in portal with the Active Directory credentials.



Open the Exchange Admin Center after installation. This opens a sign in portal for initial mailbox configuration. Sign in with an account with sufficient permissions (Schema, Domain and Enterprise Admin) privileges to configure



To set up Outlook , login to Exchange Admin Center (EAC) and click servers.

Create Database for users

In EAC > servers > databases.

Rename the default database name

- Move its database path/log path to a more desirable path

Select the database > click mount if not already mounted. (it is usually unmounted by default)

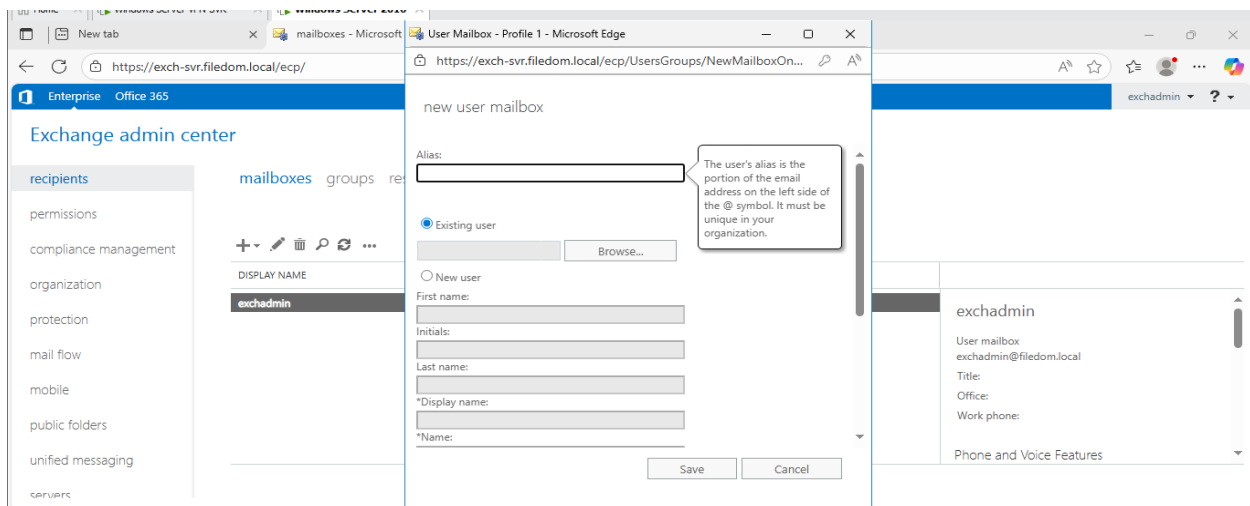
Go to recipients → mailboxes.

Click + (Add) → choose:

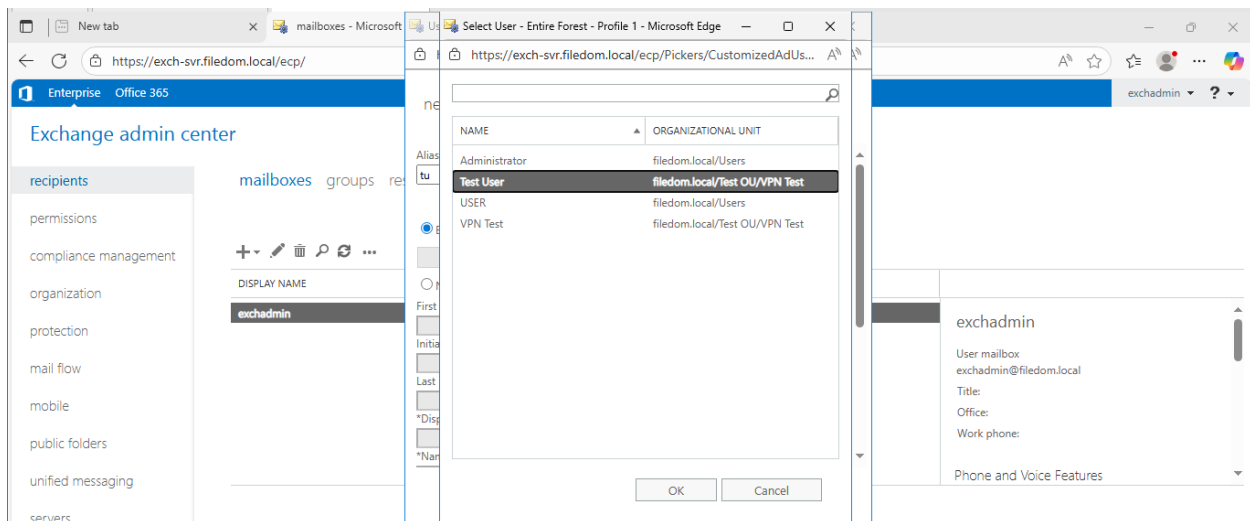
- User mailbox (creates new AD user + mailbox.) or
- Existing user (enable mailbox for an existing AD account using the existing active directory information)

Fill in details: name, UPN (email), password.

Select the mailbox database created earlier.



The Existing users option was selected and the users are grouped by the Ous existing in the AD. Select the users and click OK



Creating Send and Receive Connectors

Send Connectors: They are used to send outgoing emails from Exchange to the internet or another mail system on other devices.

Receive Connectors: They are used to receive incoming emails from the internet, internal clients, or applications.

Send Connectors

Navigate to: Mail Flow -> Send Connectors

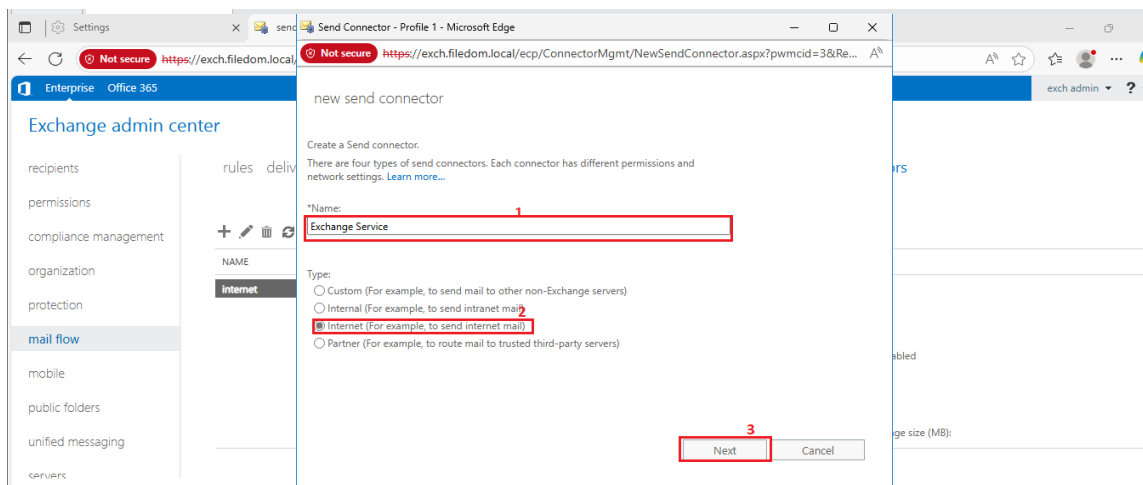
Click + (Add) to open the setup wizard

Name the Connector to use, then Choose the connector type select Internet Send connector to allow connector to send to external domains.

Use Domain Name System MX record to route mail automatically. For the Source Server, select the Exchange Server

Add Address Space: Click Add (+) and Type * to all ranges of IP Address

Click Save to create the connector



Receive Connectors

Navigate to: Mail Flow -> Receive Connectors

Click + (Add) to open the setup wizard

Name the Connector to use, then Choose the connector type select Internal Receive connector to allow connector to receive from external domains.

Select Role:

-Frontend Transport

-Hub Transport

Type : Choose Custom or Internet

Network Adapter Bindings: Bind to the IP Address of the Server specify the port to use to receive preferably port 25 (smtp)

Define which IP ranges to send mail via the connector. Allow Exchange Users permissions to access the connector

Save the configuration

