

EXCHANGE 2016 INSTALLATION STEP BY STEP FOR ANYONE

Riaz Javed Butt

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Exchange 2016 Installation Step by Step

At Ignite 2015, Microsoft showcase some of the features and capabilities of Exchange 2016 that makes it better than the existing 2013 version. On July 22, 2015 Microsoft announced the [public preview availability](#) of Exchange 2016. Here, we'll look at exchange 2016 Installation step by step guide for anyone who would like to install [exchange 2016](#) to a new infrastructure.

Warning: Microsoft doesn't support the installation of Exchange 2016 preview in production environment.
!!!

Before we start to look at exchange 2016 installation step by step, let's take a look at some of the prerequisites for Exchange 2016 and comparability requirements.

Exchange 2016 does include Office Web App server but currently only available to members of the Exchange On-Premises Technology Adoption Program (TAP). If you're not a member of the Exchange TAP program, you can still install Exchange 2016. However, the features enabled by "Office Web Apps vNext" won't be available.

Exchange 2016 Compatibility Requirements:

- Exchange 2016 doesn't support coexistence with Exchange 2007 or earlier versions of Microsoft exchange.
- Exchange 2013 CU8 and higher version are supported with Exchange 2016 coexistence.
- Exchange 2010 SP3 RU9 and higher versions are supported for exchange 2016 coexistence with 2010.
- Exchange 2016 hybrid is only supported with new upgraded office 365 tenant.
- IPv6 is supported with coexistence of IPv4.
- Outlook 2010 and 2013 clients are supported with Exchange 2016. I always recommend to patch the outlook client for best end user experience.

Exchange 2016 Installation Prerequisites:

- Minimum forest functional level for exchange 2016 is Windows Server 2008.
- Windows Server 2012 or 2012 R2 Operating System is required for Exchange 2016 installation. You cannot install Exchange 2016 on Windows 2012 core or essentials edition.

Exchange 2016 Installation Step by Step:

Exchange 2016 support three possible installations at the moment with preview edition.

- **Mailbox Server Role:** It's a mandatory server role for exchange 2016 and the only mandatory role in 2016.
- **Management Tools:** Requires for admin purpose on admin machine.
- **Edge Transport Role:** Optional role and we can't install it on the same server that has mailbox role installed.

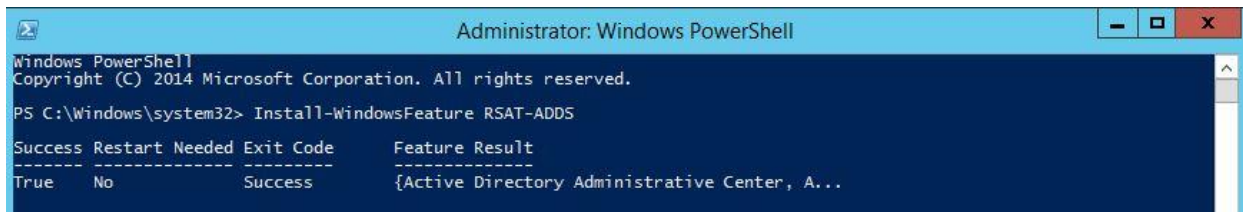
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You must have Enterprise Admin, Schema Admin and Domain admin rights before you start the installation of Exchange 2016.

In my lab, I've installed the mailbox server and management tools on the same box and here are the steps to perform.

On exchange 2016 server member server, run the following cmdlet to install the exchange 2016 per-requisites. Make sure you run the powershell as administrator.

Install RSAT-ADDS by running the cmdlet Add-WindowsFeature RSAT-ADDS



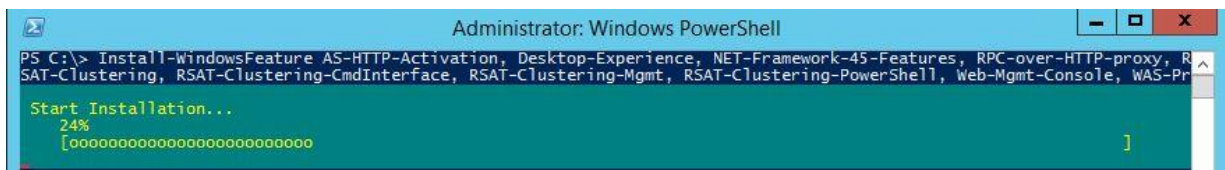
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2014 Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> Install-WindowsFeature RSAT-ADDS

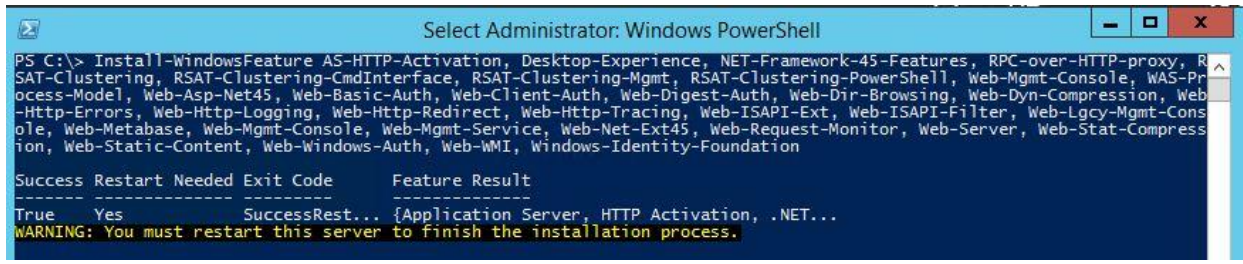
Success Restart Needed Exit Code      Feature Result
-----
True     No                Success      {Active Directory Administrative Center, A...
```

Installation of RSAT-ADDS allows exchange setup to extend AD Schema and prepare the domain for exchange installation. You can also extend your schema and domain by running the cmdlet.

Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, 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
PS C:\> Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, Web-Mgmt-Console, WAS-Pr
Start Installation...
24%
[ooooooooooooooooooooooooooooo]
```



```
Select Administrator: Windows PowerShell
PS C:\> Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, Web-Mgmt-Console, WAS-Pr
Success Restart Needed Exit Code      Feature Result
-----
True     Yes                SuccessRest... {Application Server, HTTP Activation, .NET...}
WARNING: You must restart this server to finish the installation process.
```

Note: You need to reboot the machine after the roles and features per-requisites installation is completed.

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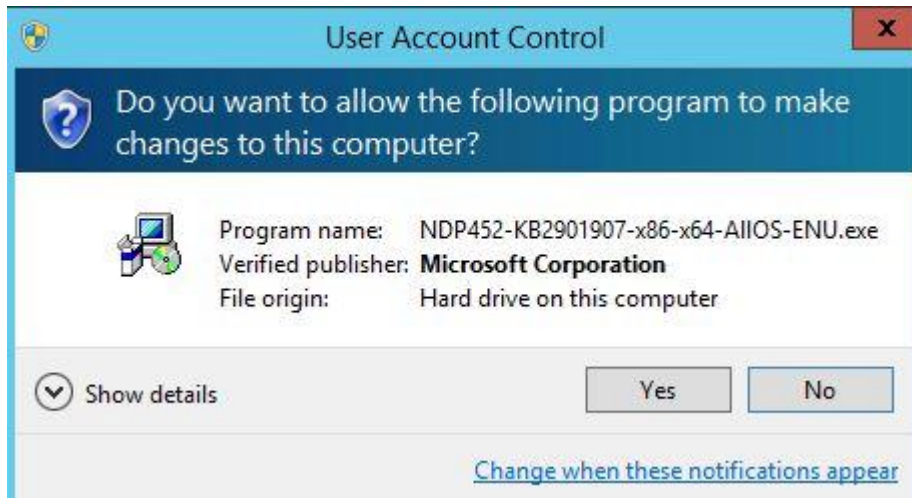
Blog: www.msexperttalk.com

After rebooting the machine. Download and install the following in order.

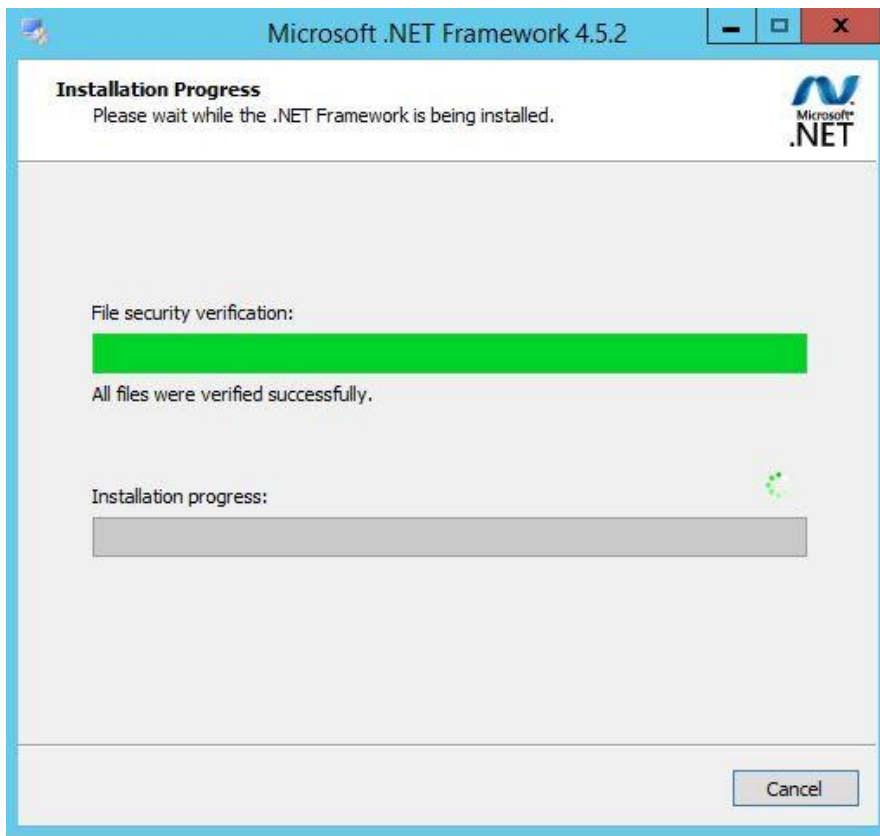
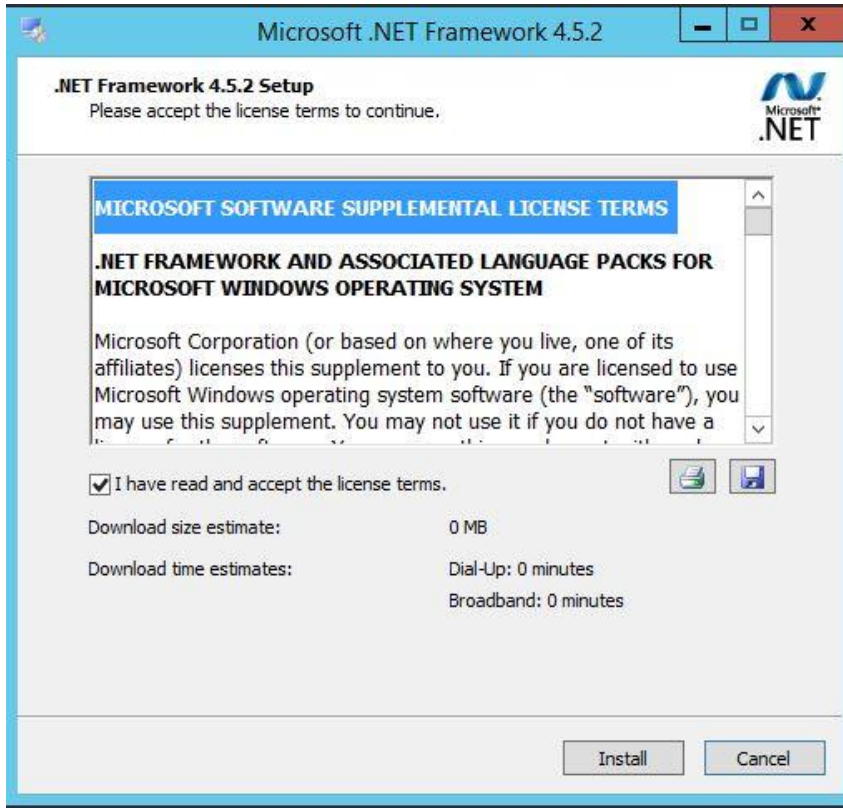
1. [.NET Framework 4.5.2](#)
2. [Microsoft Unified Communications Managed API 4.0, Core Runtime 64-bit](#)

.Net Framework Installation

After downloading the file, double click the setup and follow the instructions.

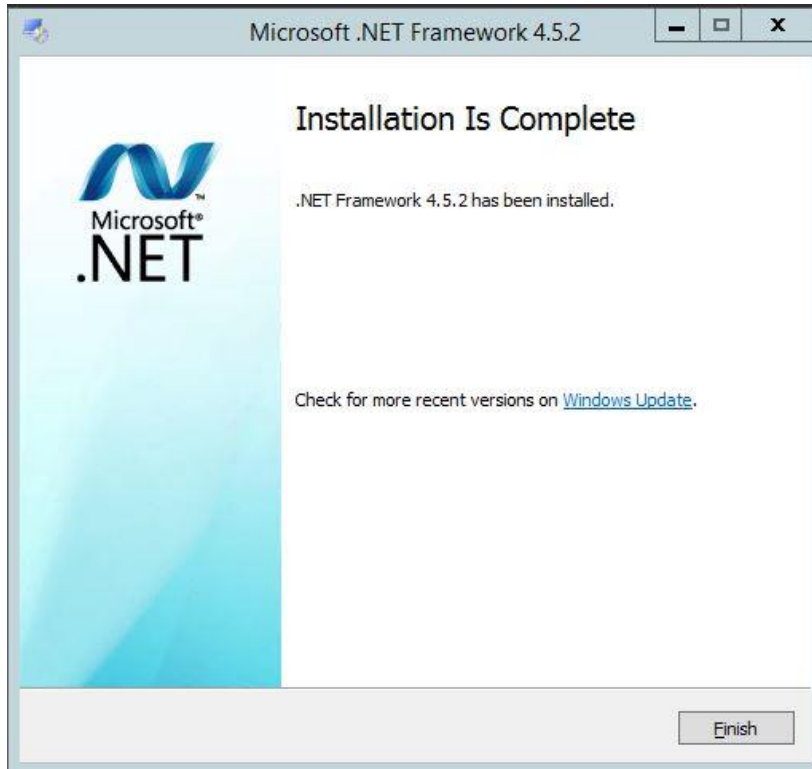


Accept the license terms and click Install.

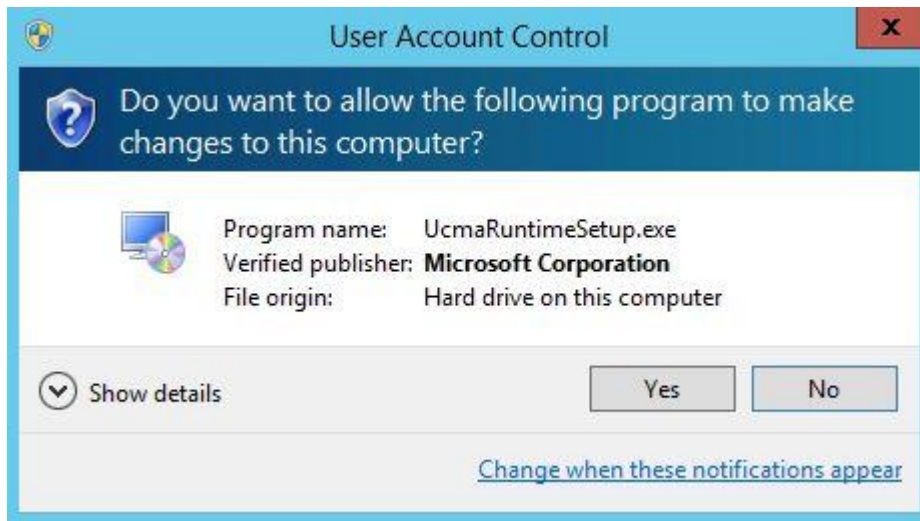


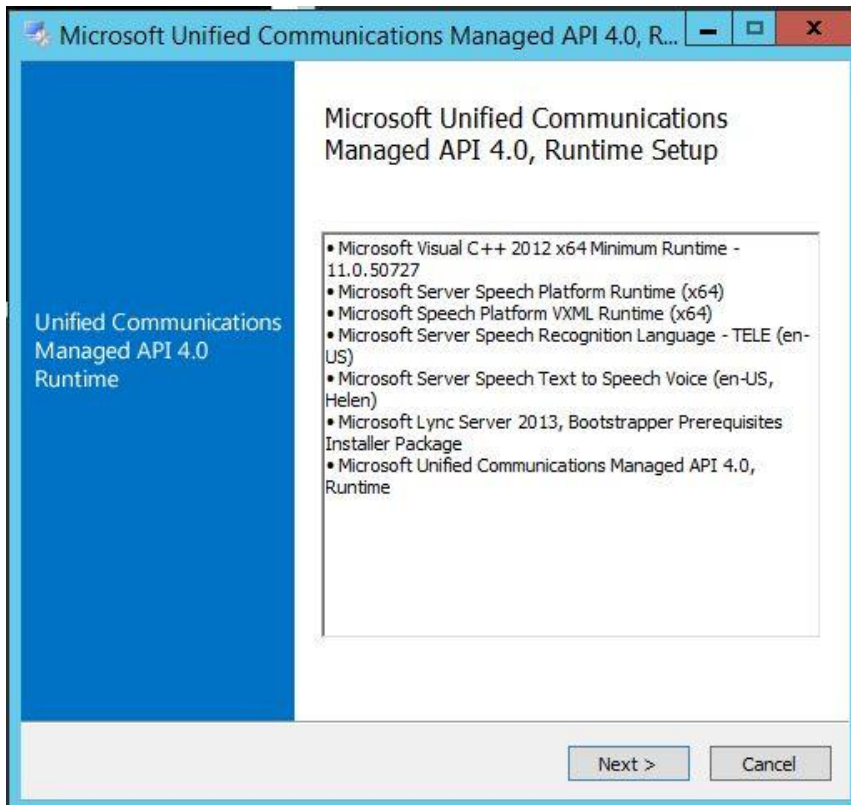
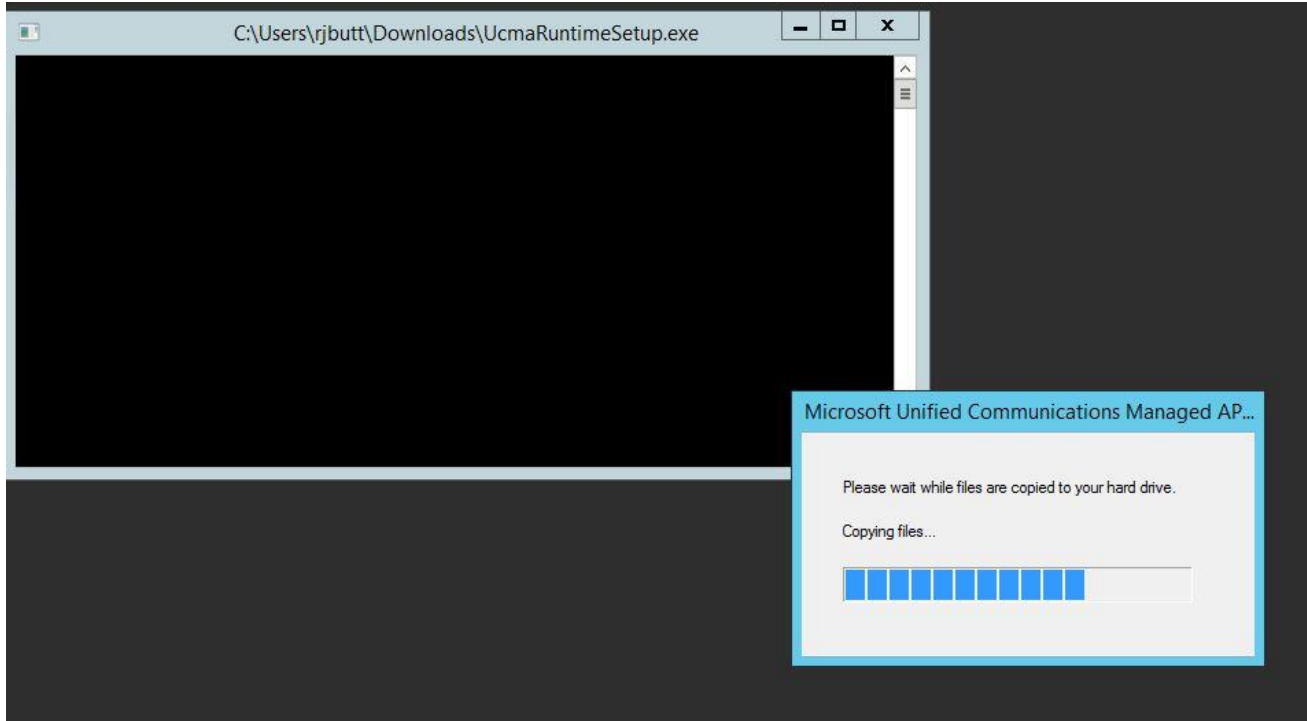
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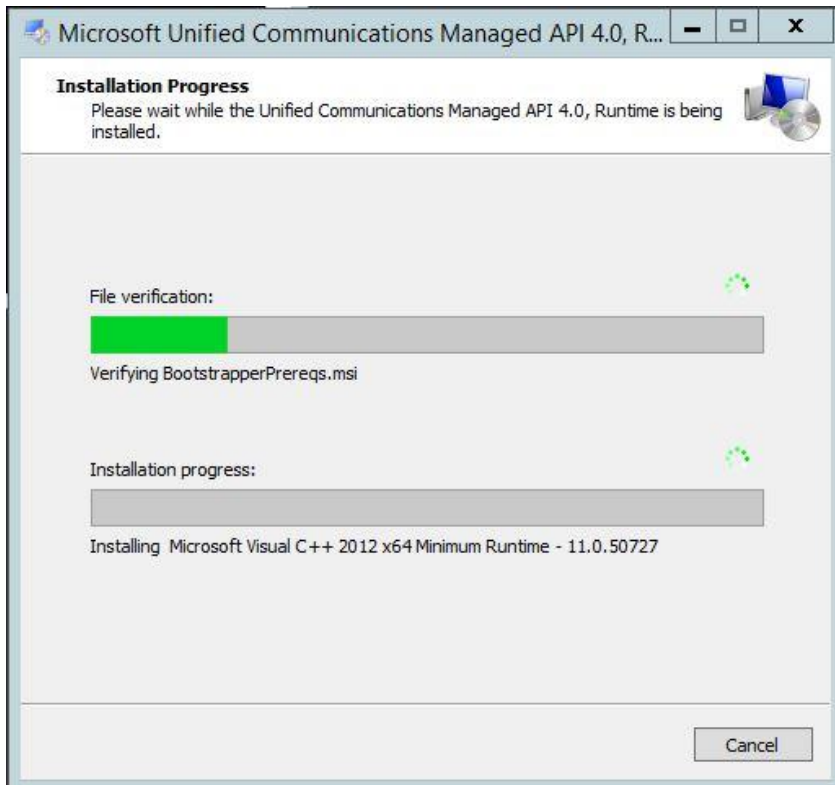
After 5-10 minutes, .Net framework installation will be completed.



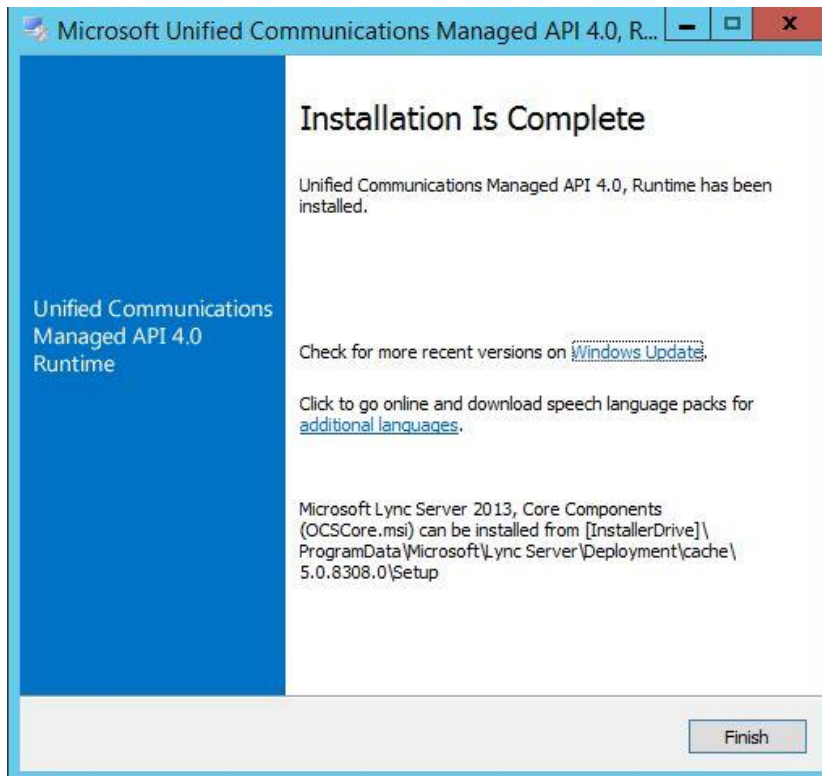
Microsoft Unified Communications Managed API 4.0







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Exchange 2016 Installation

Double click on Exchange 2016 Setup and follow the instructions.

Microsoft recommend to always check for updates before you start the installation and Click Next.

Check for Updates?

You can have Setup download Exchange Server 2016 updates from the Internet before you install Exchange. If updates are available, they'll be downloaded and used by Setup. By downloading updates now, you'll have the latest security and product updates. If you don't want to check for updates right now, or if you don't have access to the Internet, skip this step. If you skip this step, be sure to download and install any available updates after you've completed Setup.

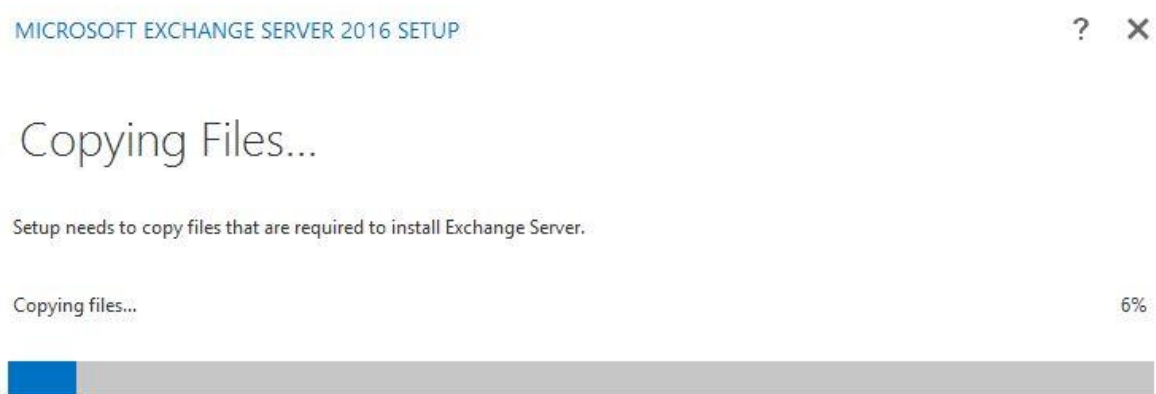
Select one of the following options:

- Connect to the Internet and check for updates
- Don't check for updates right now



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Once you check for updates and install the required updates if required, Setup will start the process of copying Exchange setup files.



Once the files are copied, Setup will start the process of initialization for Exchange installation.

Exchange 2016 coexistence with Exchange 2007 server isn't supported. You cannot install Exchange 2016 in Exchange 2007 Organization. You need to Uninstall Exchange 2007 before you can install Exchange 2016

Initializing Setup...

Setup is preparing the necessary resources before it can continue to the next step.



Introduction

Welcome to Microsoft Exchange Server 2016!

Exchange Server is designed to help you increase user productivity, keep your data safe, and provide you with the control you need. You can tailor your solution to your unique needs with flexible deployment options, including hybrid deployments that enable you to take advantage of both on-premises and online solutions. You can use compliance management features to protect against the loss of sensitive information and help with internal and regulatory compliance efforts. And, of course, your users will be able to access their email, calendar, and voice mail on virtually any device and from any location. This wizard will guide you through the installation of Exchange Server 2016.

Plan your Exchange Server 2016 deployment:

[Read about Exchange Server 2016](#)

[Read about supported languages](#)

[Use the Exchange Server Deployment Assistant](#)



next

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Click Next to Start the installation process.

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License Agreement

Please read and accept the Exchange Server 2016 license agreement.

MICROSOFT PRE-RELEASE SOFTWARE LICENSE TERMS

MICROSOFT EXCHANGE SERVER 2016 UPDATES

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 pre-release 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.

By using the software, you accept these terms. If you do not accept them, do not use the software.

- I accept the terms in the license agreement
- I do not accept the terms in the license agreement.



next

Accept the license agreement and click on Next.

Recommended Settings

Use recommended settings

Exchange server will automatically check online for solutions when encountering errors and provide usage feedback to Microsoft to help improve future Exchange features.

Don't use recommended settings

Manually configure these settings after installation is complete (see help for more information).

[Read more about providing usage feedback to Microsoft](#)

[Read more about checking for error solutions online](#)



back

next

Always use Recommended Settings and click Next.

Server Role Selection

Select the Exchange server roles you want to install on this computer:

- Mailbox role
- Management tools
- Edge Transport role

Automatically install Windows Server roles and features that are required to install Exchange Server



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next

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Select the server role that you would like to install. I've selected the Mailbox and Management Role as It's the first Exchange server deployment in my lab.

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Installation Space and Location

Disk space required: 8688.1 MB

Disk space available: 108585.5 MB

Specify the path for the Exchange Server installation:



Provide the path for Exchange Installation directory and click Next.

Exchange Organization

Specify the name for this Exchange organization:

MSCloudTalks

Apply Active Directory split permissions security model to the Exchange organization

The Active Directory split permissions security model is typically used by large organizations that completely separate the responsibility for the management of Exchange and Active Directory among different groups of people. Applying this security model removes the ability for Exchange servers and administrators to create Active Directory objects such as users, groups, and contacts. The ability to manage non-Exchange attributes on those objects is also removed.

You shouldn't apply this security model if the same person or group manages both Exchange and Active Directory. Click '?' for more information.



back

next

Provide the name to your messaging organization. I've provided the name of "*MSCloudTalks*". If you've split permissions model and have different administrator for Active Directory then select the check box

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for split permissions.

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? X

Malware Protection Settings

Malware scanning helps protect your messaging environment by detecting messages that may contain viruses or spyware. It can be turned off, replaced, or paired with other premium services for layered protection.

Malware scanning is enabled by default. However, you can disable it if you're using another product for malware scanning. If you choose to disable malware scanning now, you can enable it at any point after you've installed Exchange.

Disable malware scanning.

Yes

No

Internet access is required to download the latest anti-malware engine and definition updates.



back

next

It's recommended that you shouldn't disable malware scanning on your exchange server. We stick with the default option of No and click next.

Readiness Checks

The computer will be checked to verify that setup can continue.

Prerequisite Analysis

100%

Warning:

Setup will prepare the organization for Exchange Server 2016 by using 'Setup /PrepareAD'. No Exchange Server 2007 roles have been detected in this topology. After this operation, you will not be able to install any Exchange Server 2007 roles.

For more information, visit: [http://technet.microsoft.com/library\(EXCHG.150\)/ms.exch.setupreadiness.NoE12ServerWarning.aspx](http://technet.microsoft.com/library(EXCHG.150)/ms.exch.setupreadiness.NoE12ServerWarning.aspx)

Warning:

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: [http://technet.microsoft.com/library\(EXCHG.150\)/ms.exch.setupreadiness.NoE14ServerWarning.aspx](http://technet.microsoft.com/library(EXCHG.150)/ms.exch.setupreadiness.NoE14ServerWarning.aspx)



install

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Read the warnings and make sure you don't have any error message and click on Install.

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? X

Setup Progress

Step 1 of 15: Organization Preparation

1%



During the Installation process, Exchange server will perform the following 15 steps.

- Organization Preparation
- Stopping Services
- Copy Exchange Files
- Language Files
- Restoring Services
- Languages
- Management Tools
- Mailbox Role: Transport Service
- Mailbox Role: Client Access Service
- Mailbox Role: Unified Messaging Service
- Mailbox Role: Mailbox Service
- Mailbox Role: Front End Transport Service
- Mailbox Role: Client Access Front End Service
- Finalizing Setup

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After all above steps are completed, you're done with the installation of your first Exchange 2016 in your organization.

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? X

Setup Completed

Congratulations! Setup has finished successfully. To complete the installation of Exchange Server 2016, reboot the computer.

You can view additional post-installation tasks online by clicking the link: <http://go.microsoft.com/fwlink/p/?LinkId=255372>. You can also start the Exchange Administration Center after Setup is finished.

Launch Exchange Administration Center after finishing Exchange setup.

 Exchange

finish

You need to reboot your exchange server before you start the administration and configuration of your exchange server.

Verify Exchange Installation

After rebooting the server, Go to Exchange Management Shell and run the following Cmdlet to verify the exchange version.

```
[PS] C:\Windows\system32>Get-ExchangeServer | ft Name, ServerRole, Edition, AdminDisplayVersion
Name                                     ServerRole                               Edition  AdminDisplayVersion
-----
AZURE-EXCH16-01                         Mailbox, ClientAccess                   StandardEvaluation Version 15.1 (Build 225.17)
```

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It's recommended that you read the setup logs to confirm that there is no issue with the installation.

Exchange 2016 Post Installation Tasks

Once the exchange 2016 is installed. We need to perform post installation tasks to make it functional as per our organizational requirements. Exchange 2016 Post Installation tasks are as below.

1. Assign Public SSL Certificate to Exchange Services
2. Assign License to Exchange 2016
3. Configure Exchange Virtual Directories
4. Rename Default Database
5. Create/Modify Email Address Policy

Note: You can perform Post Installation tasks in any order

Exchange 2016 SSL Certificate

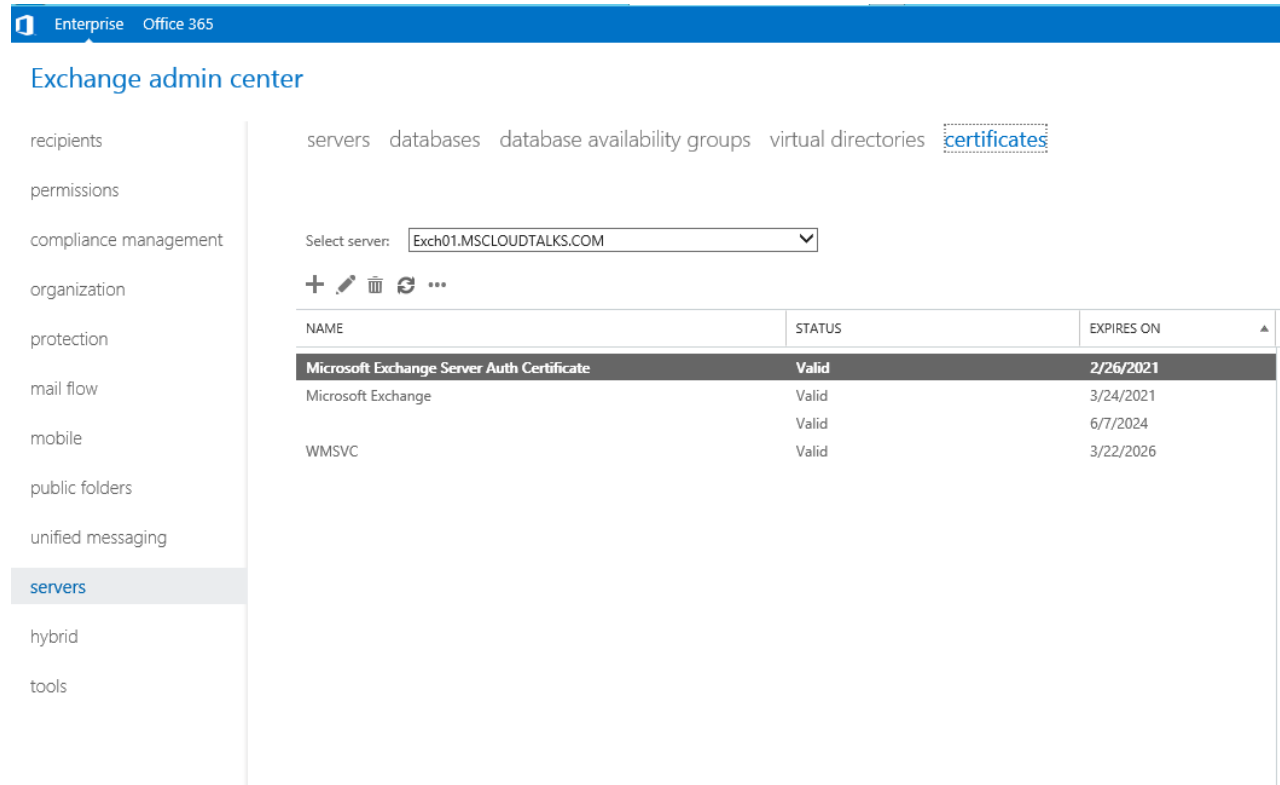
To Assign SSL certificate to Exchange Services, we need to perform following Steps.

1. Create SSL Certificate Request
2. Assign SSL Certificate

Create SSL Certificate Request

To create a SSL Certificate Request in Exchange 2016, Follow the following Instructions.

- Login to Exchange Admin Center as **Organization Administrator** Account
- Navigate to the following path
 - Exchange Admin Center → Servers → Certificates
- Click on + icon to create a certificate Request



Enterprise Office 365

Exchange admin center

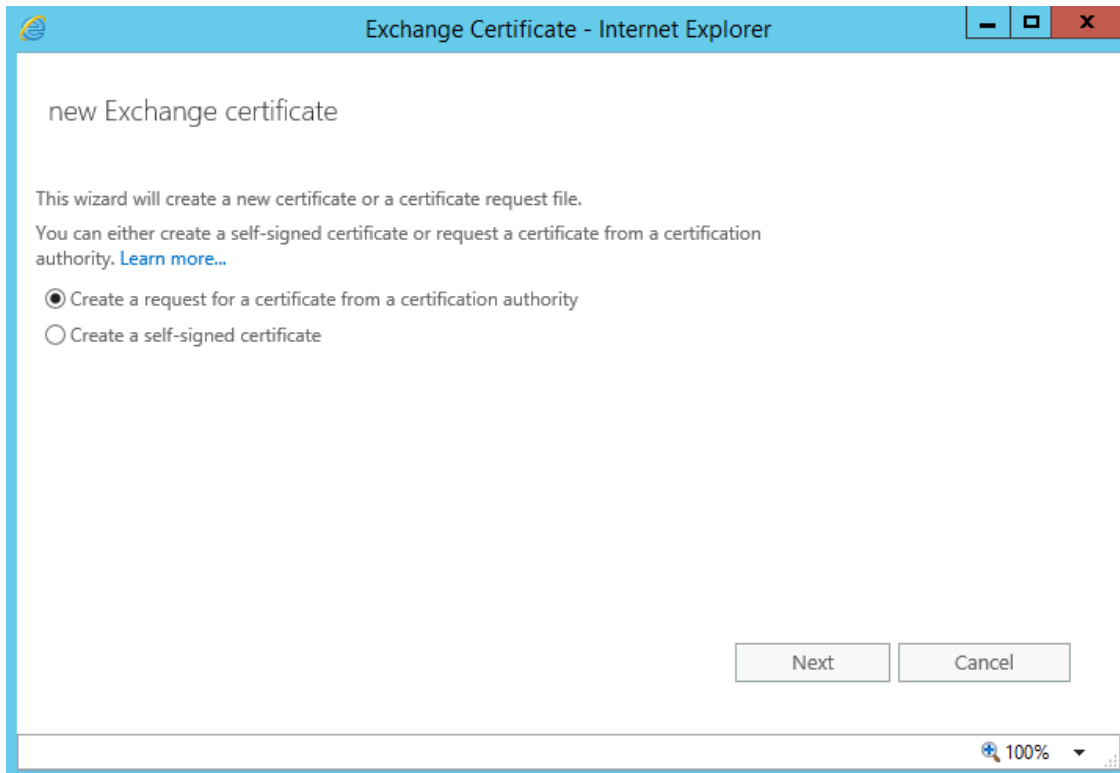
recipients permissions compliance management organization protection mail flow mobile public folders unified messaging **servers** hybrid tools

servers databases database availability groups virtual directories **certificates**

Select server: Exch01.MSCLOUDTALKS.COM

NAME	STATUS	EXPIRES ON
Microsoft Exchange Server Auth Certificate	Valid	2/26/2021
Microsoft Exchange	Valid	3/24/2021
WMSVC	Valid	3/22/2026

- Select “Create a request for a Certificate from a Certification Authority” and click **Next**



Exchange Certificate - Internet Explorer

new Exchange certificate

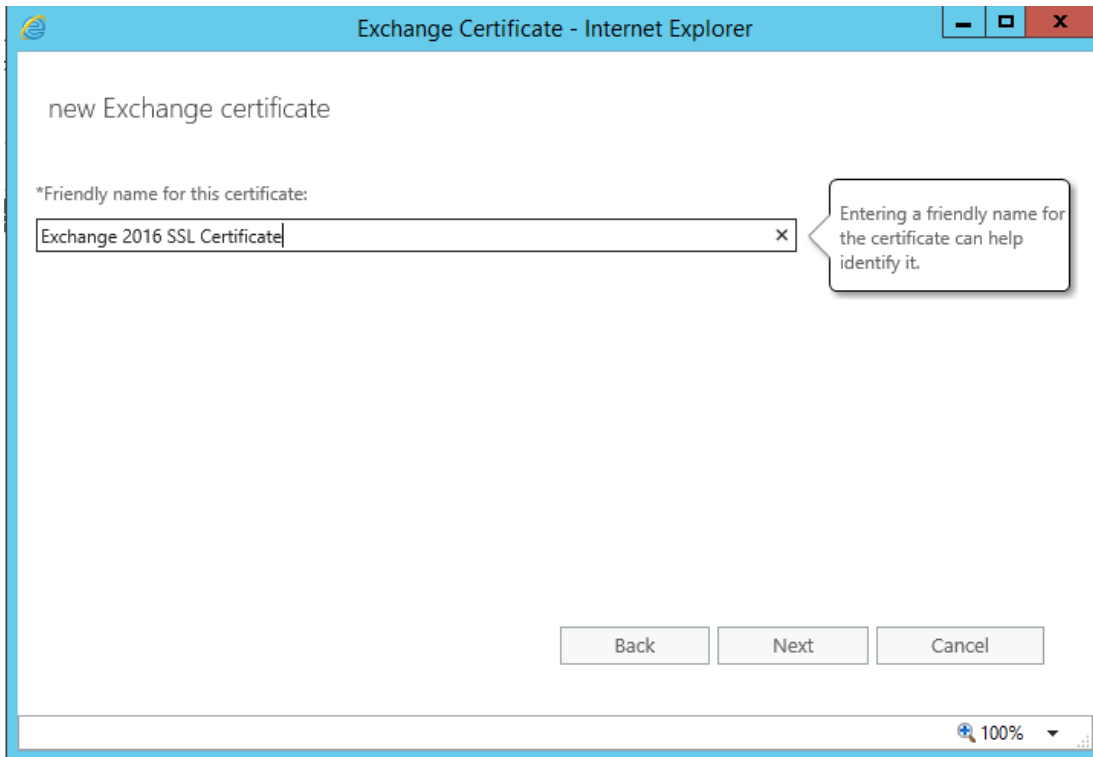
This wizard will create a new certificate or a certificate request file.
You can either create a self-signed certificate or request a certificate from a certification authority. [Learn more...](#)

Create a request for a certificate from a certification authority
 Create a self-signed certificate

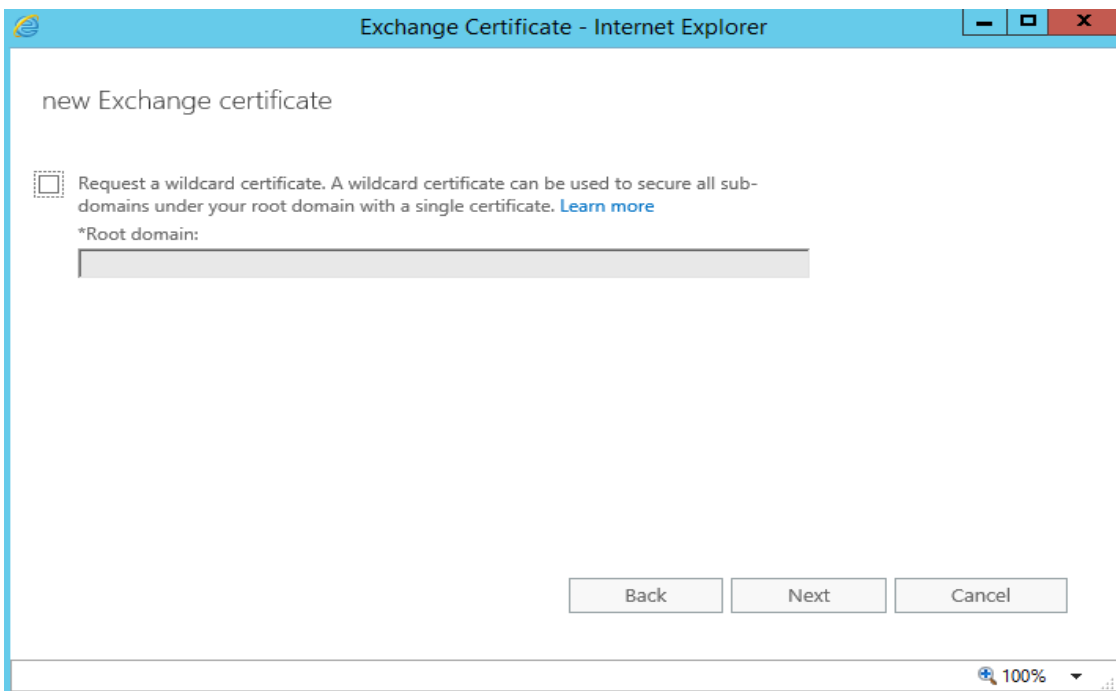
Next Cancel

100%

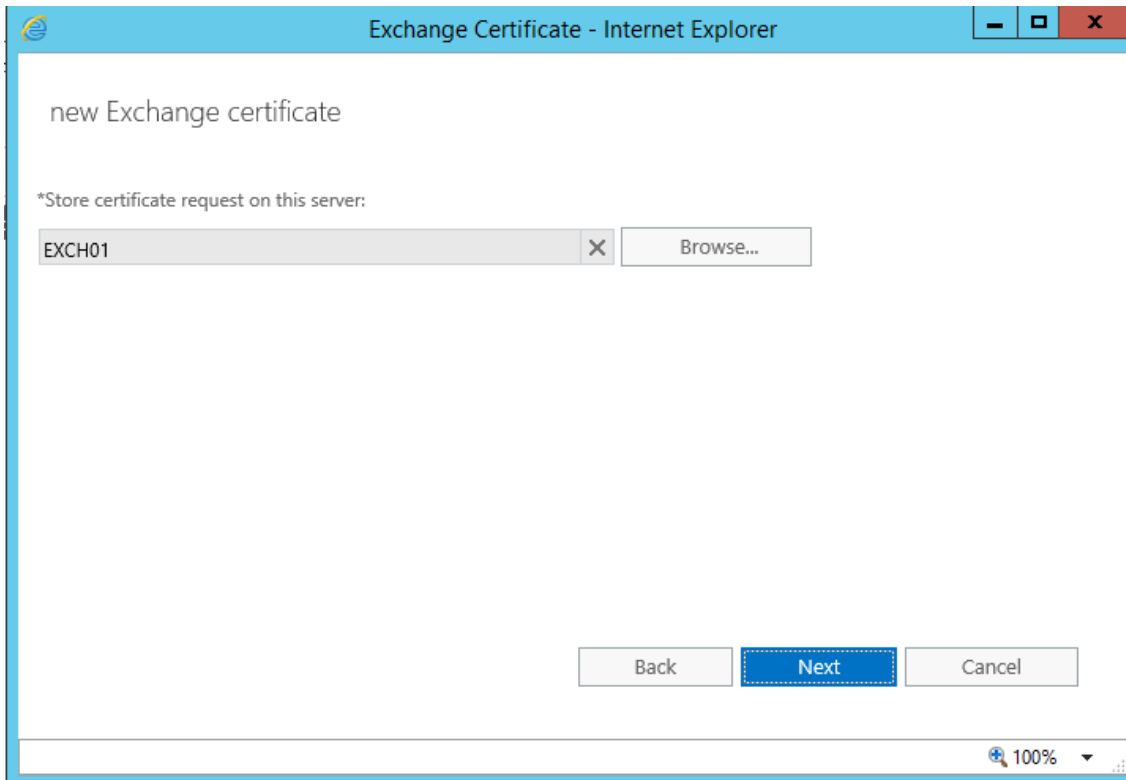
- Type the friendly name of your SSL Certificate and click **Next**



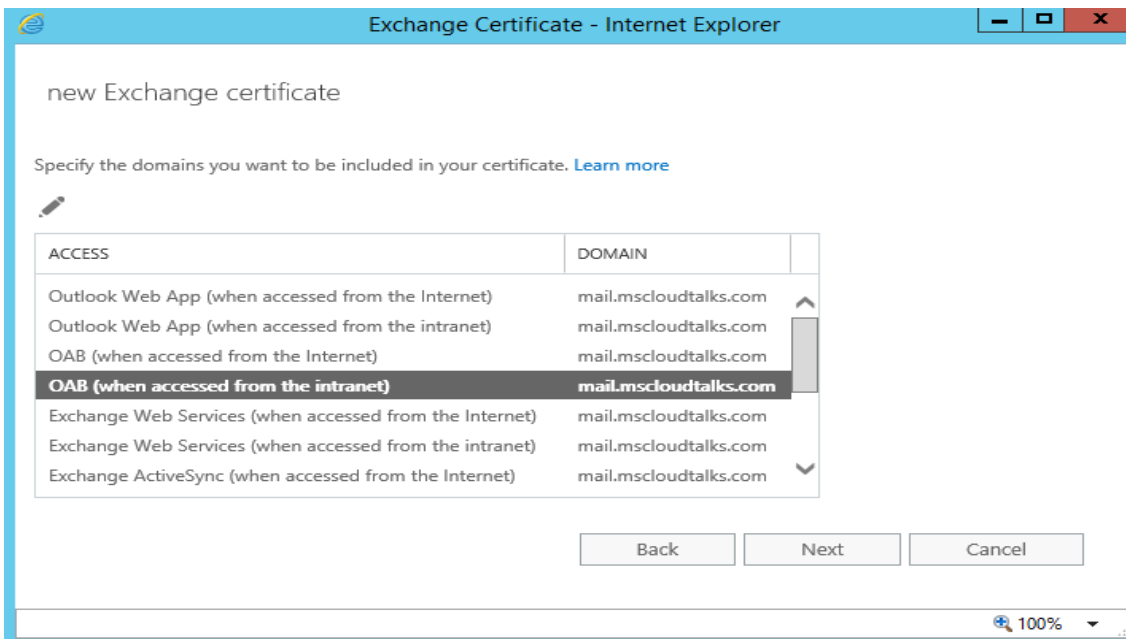
- Exchange 2016 does support Wildcard Certificate but it's not recommended to use WildCard Certificate. We're going to create a **SAN Certificate** Request, Click on Next



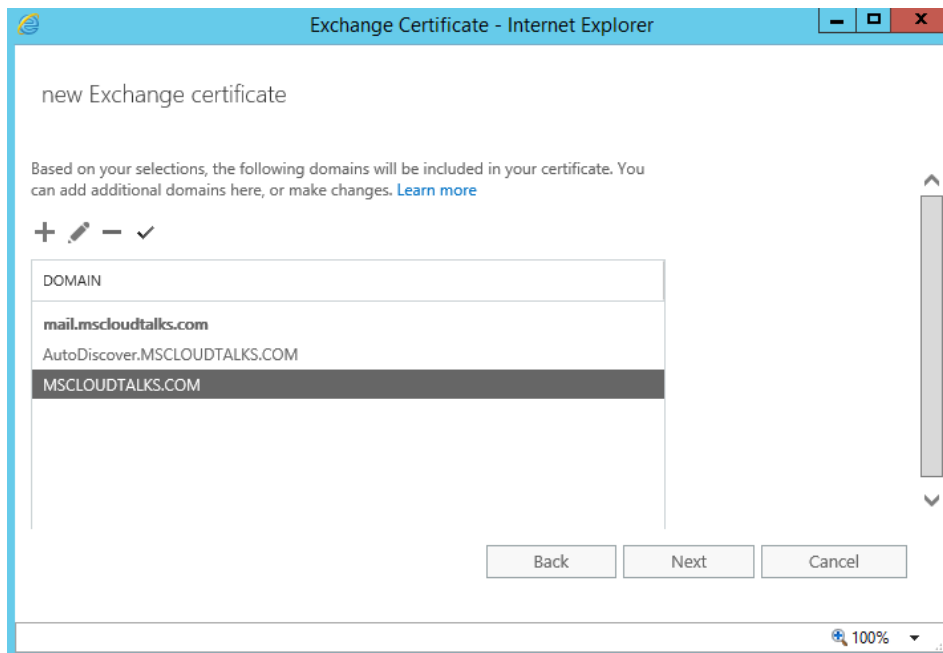
- Click on Browse button to select the Exchange Server where you would like to save the Certificate Request File.



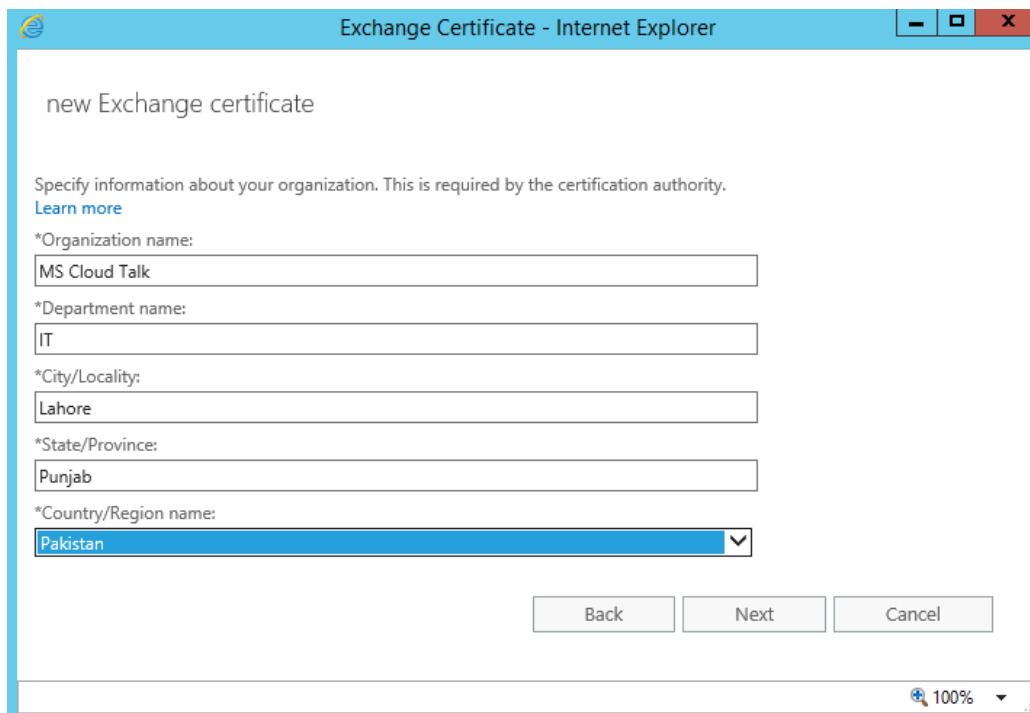
- Here you can see the namespace configuration of your Exchange Server. You can edit your namespace here or click Next to edit this on next page.



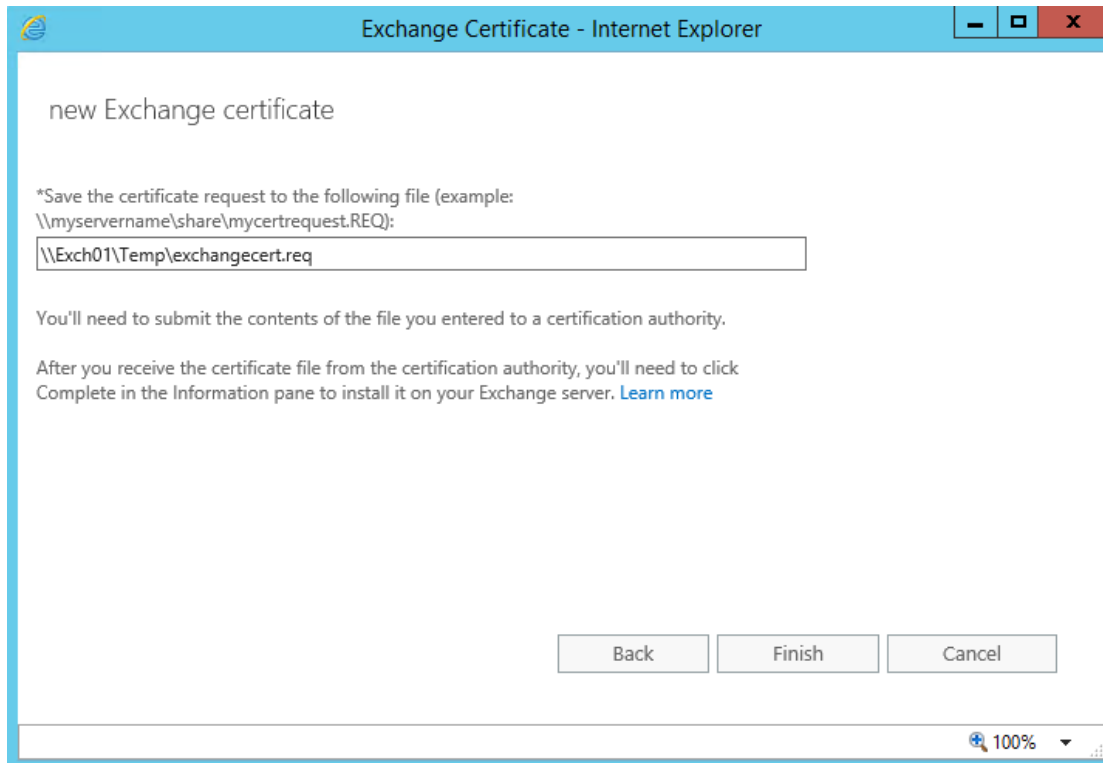
- I've removed all unwanted namespace from certificate request. Click on Next to complete the certificate Request



- Enter your organization information and click **Next**



- Specify the UNC path of your SSL certificate request file and click on Finish to complete the request process.



Assign SSL Certificate Request

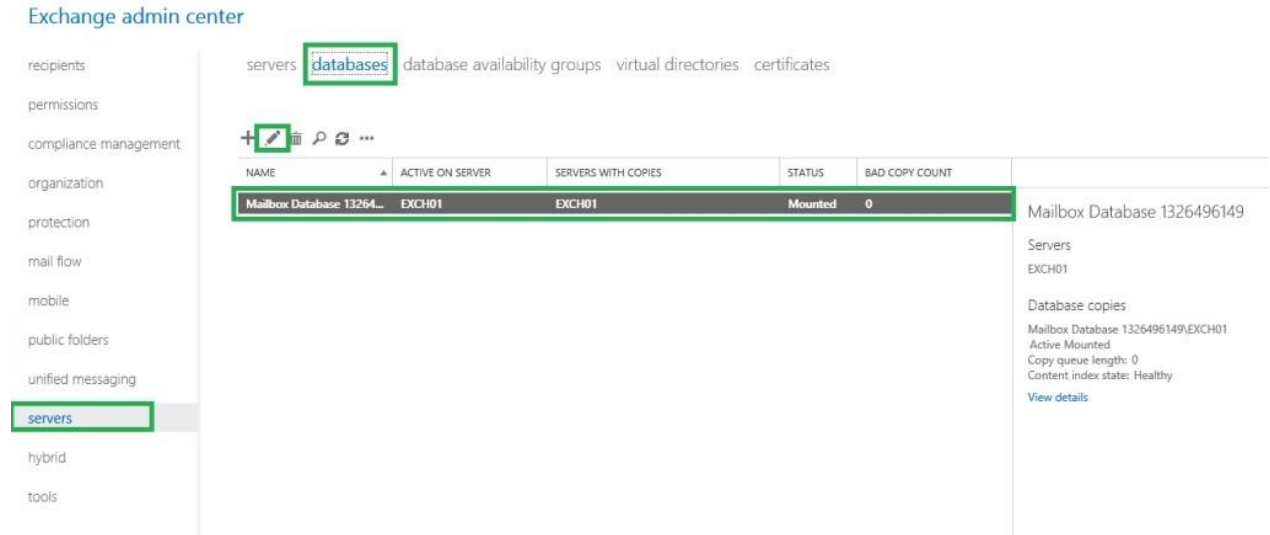
- Once the certificate request is completed. Copy the CSR file to generate a SSL certificate from 3rd party SSL provider like **GoDaddy**, **DigiCert** or **GeoTrust**.
- Once you've purchased a SSL Certificate from Public SSL provider, Login to your Exchange Server and Navigate to Exchange Admin Center → Servers → Certificates
- Select the SSL Certificate for which you've created a request and click on **Complete** to complete the SSL certificate Request.

Rename Default Database

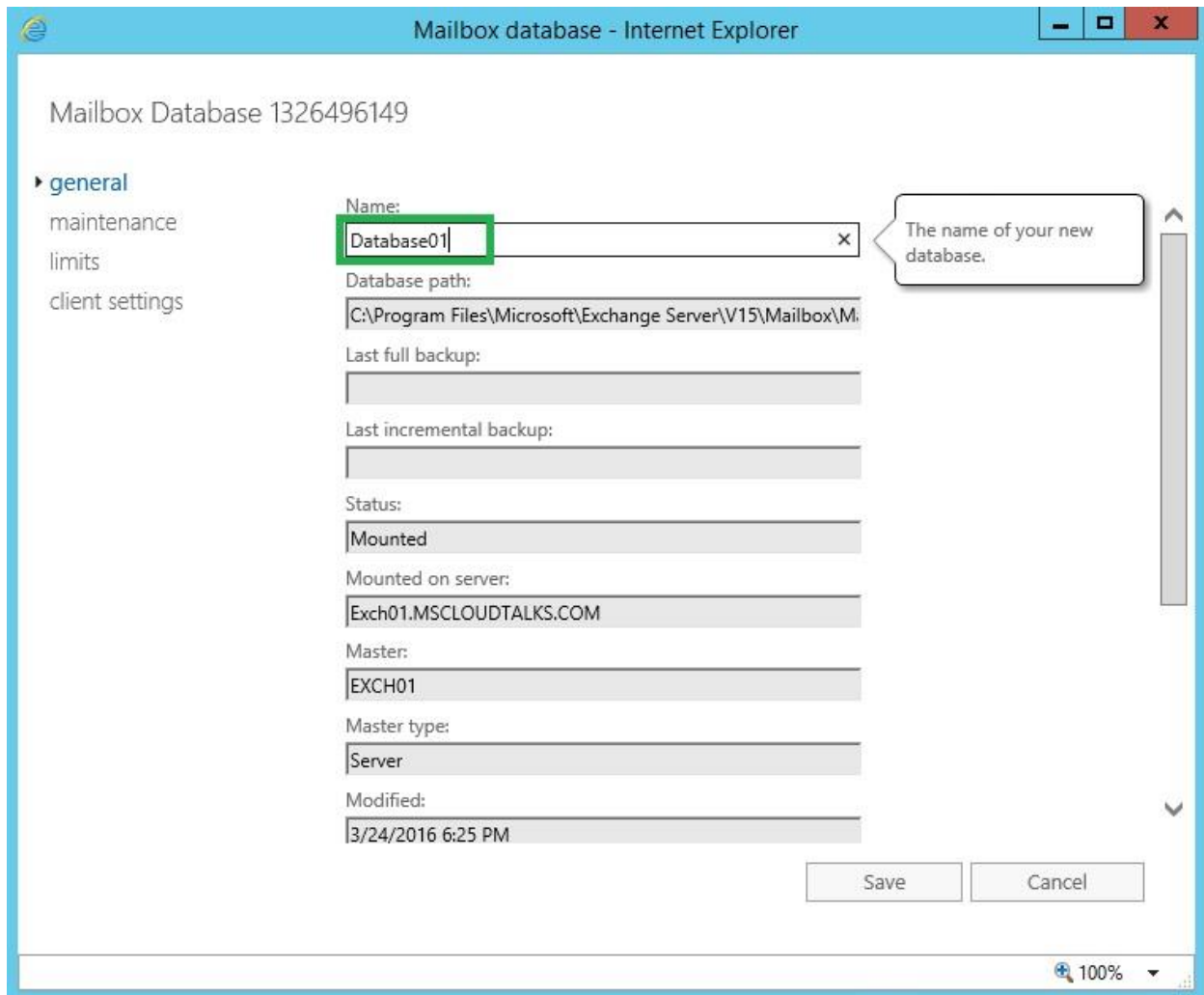
Rename Database using Exchange Admin Center

To rename your database using GUI method, follow the following steps.

- Login to Exchange Admin Center.
- Navigate to Exchange Admin Center → Servers → Databases
- Select the database and click on Edit



- Enter the new name of the Database in “Name” field and Click on Save



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- You're done with the renaming of your database using Exchange Admin Center.



NAME	ACTIVE ON SERVER	SERVERS WITH COPIES	STATUS	BAD COPY COUNT
Database01	EXCH01	EXCH01	Mounted	0

Rename Exchange 2016 Database from Exchange Management Shell

Another method of renaming your Exchange 2016 database is to use [Exchange Management Shell](#). To rename your database using EMS, follow the following steps.

- Run Exchange Management Shell as Administrator
- Run the following cmdlet in Exchange Management Shell
 - Set-MailboxDatabase -Identity "Database01" -Name DB01

```
Machine: Exch01.MSCLOUDTALKS.COM
[PS] C:\Windows\system32>Set-MailboxDatabase -Identity Database01 -Name DB01
[PS] C:\Windows\system32>
```

In my case, I've renamed my **Database01** database to **DB01** using EMS

- To verify that the database is renamed, run the following cmdlet to retrieve database information
 - Get-MailboxDatabase | ft Name, Server

```
Machine: Exch01.MSCLOUDTALKS.COM
[PS] C:\Windows\system32>Get-MailboxDatabase | ft Name, Server
Name
----
DB01
Server
-----
EXCH01
[PS] C:\Windows\system32>
```

Exchange 2016 Edge Transport Server

Edge Transport servers minimize the attack to your exchange organization by handling all Internet-facing mail flow. Edge Transport Server can be used to provide SMTP relay and smart host services for Exchange organization. Edge Transport role performs anti-spam filtering and applies security and email policies to messages in transport. Always **Install Exchange 2016 Edge Transport server** in the perimeter network and outside of the Active Directory forest.

Renaming a server after Edge Transport Role installation isn't supported.

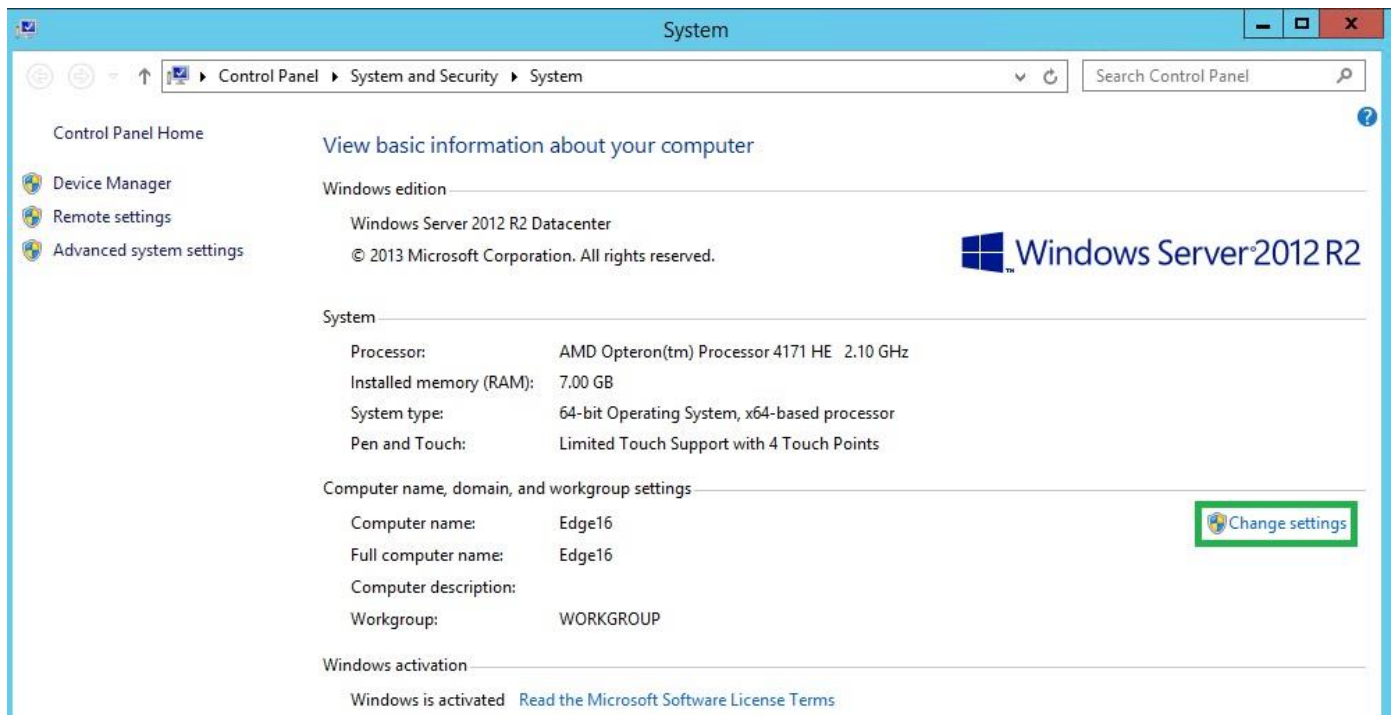
Before we install Exchange 2016 edge Transport Server role make sure that the following pre-requisites are met for edge transport server.

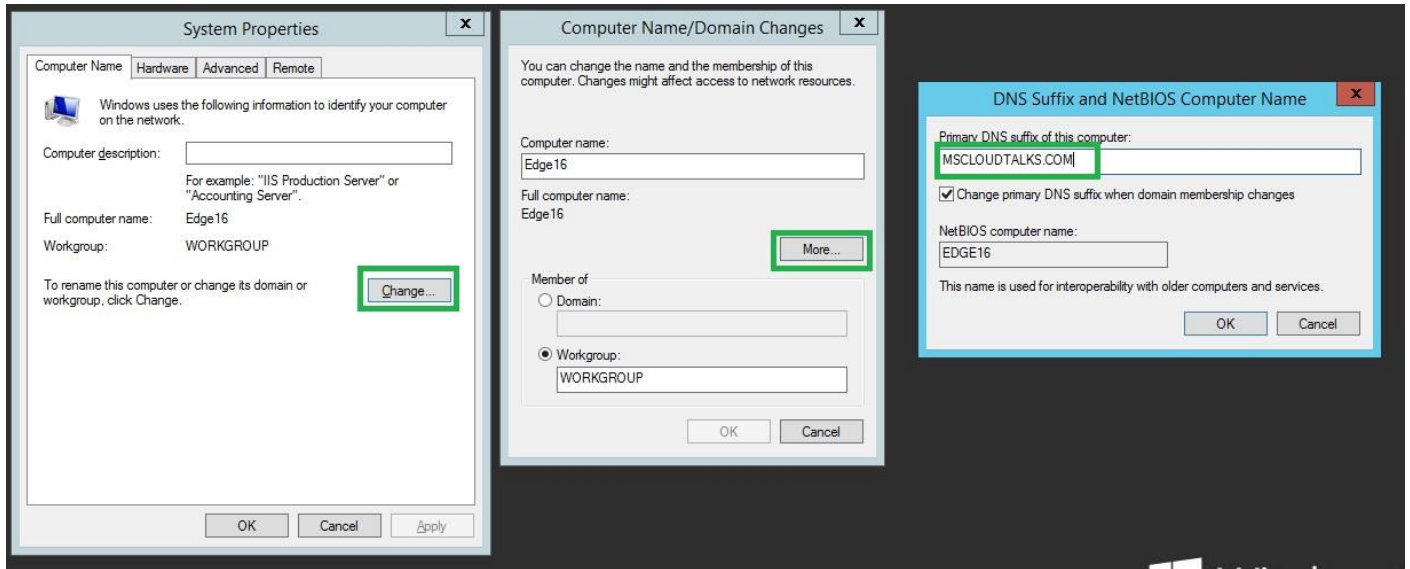
Edge Transport Network Requirement

- You have allowed port 25 traffic from Internet to your Edge Transport Server.
- You have configured the Network ports between Edge Transport Server and Exchange 2016 Server. Network ports required for Edge Transport server to communicate with Exchange 2016 are as below.
 - Port **25** and **2525** for SMTP Mail flow
 - Port **53** for DNS Resolution
 - Port **3389** for Remote Desktop
 - Port **50389** for LDAP needs to be opened locally for LDAP binding
 - Port **50636** for Secure LDAP to provide directory synchronization from Mailbox servers to AD LDS

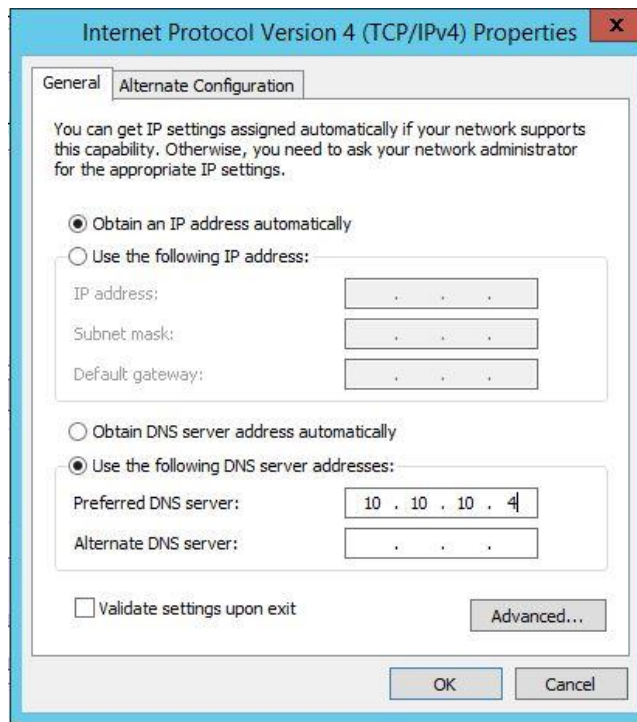
Edge Transport Installation

- Follow the steps to install the edge transport server.
- Login to Edge Transport Server as **local Administrator**
- Set the Edge Server DNS Prefix by Navigating to My Computer --> Properties --> Click on Change under computer name, domain, workstation settings --> Under Computer Name, click on Change -> More --> and set the DNS Prefix. In my case it's **mscloudtalks.com**. This process requires you to restart your computer





- Configure NIC to set the DNS server to point to your local DNS server.



- Install AD LDS on Edge Transport Server Role by running the windows powershell cmdlet "Install-WindowsFeature ADLDS"



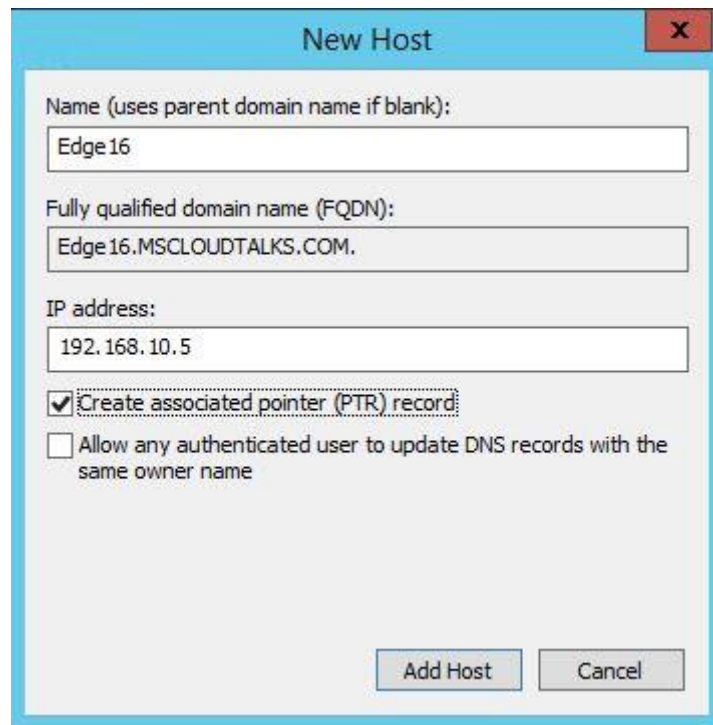
Author: Riaz Javed Butt
Blog: www.msexperttalk.com

```
PS C:\> Install-WindowsFeature ADLDS

Success Restart Needed Exit Code      Feature Result
-----
True     No           Success      {Active Directory Lightweight Directory Se...}
WARNING: To create a new AD LDS instance on server, log on to the destination server and then run the Active Directory
Lightweight Directory Services Setup Wizard. For more information, see http://go.microsoft.com/fwlink/?LinkId=224859.

PS C:\> _
```

- Install .Net Framework 4.5.2. If you're using Windows Server 2012R2 then it's already been installed.
- Create "A" record in your DNS that point to Edge Transport Server.



- Run the Exchange 2016 Setup as Administrator. I always recommend to Check for Updates. If you don't want to check select "Don't Check for updates right now" and click next

Check for Updates?

You can have Setup download Exchange Server 2016 updates from the Internet before you install Exchange. If updates are available, they'll be downloaded and used by Setup. By downloading updates now, you'll have the latest security and product updates. If you don't want to check for updates right now, or if you don't have access to the Internet, skip this step. If you skip this step, be sure to download and install any available updates after you've completed Setup.

Select one of the following options:

- Connect to the Internet and check for updates
- Don't check for updates right now



- Setup will start the process of copying Exchange files for installation.

Copying Files...

Setup needs to copy files that are required to install Exchange Server.

Copying files...

53%



- Once the copy process is completed, Setup will start the initial setup preparation.

Initializing Setup...

Setup is preparing the necessary resources before it can continue to the next step.



- Once the initialization is completed. Exchange Setup will start, Click on Next to continue.

Introduction

Welcome to Microsoft Exchange Server 2016!

Exchange Server is designed to help you increase user productivity, keep your data safe, and provide you with the control you need. You can tailor your solution to your unique needs with flexible deployment options, including hybrid deployments that enable you to take advantage of both on-premises and online solutions. You can use compliance management features to protect against the loss of sensitive information and help with internal and regulatory compliance efforts. And, of course, your users will be able to access their email, calendar, and voice mail on virtually any device and from any location. This wizard will guide you through the installation of Exchange Server 2016.

Plan your Exchange Server 2016 deployment:

[Read about Exchange Server 2016](#)

[Read about supported languages](#)

[Use the Exchange Server Deployment Assistant](#)



next

- Read and accept the license agreement and click Next

License Agreement

Please read and accept the Exchange Server 2016 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.

By using the software, you accept these terms. If you do not accept them, do not use the software. Instead, return it to the retailer for a refund or credit. If you cannot obtain a refund there, contact Microsoft or the Microsoft affiliate in your country for information about Microsoft's refund policy. See [http://www.microsoft.com/refund](#).

- I acccept the terms in the license agreement
- I do not accept the terms in the license agreement.



next

- Use Recommended Settings for Exchange to automatically check online for solutions when encountering errors and provide feedback to Microsoft and click Next.

Recommended Settings

Use recommended settings

Exchange server will automatically check online for solutions when encountering errors and provide usage feedback to Microsoft to help improve future Exchange features.

Don't use recommended settings

Manually configure these settings after installation is complete (see help for more information).

[Read more about providing usage feedback to Microsoft](#)

[Read more about checking for error solutions online](#)



back

next

- Select Edge Transport Server Role and "Automatically Install Windows Server Roles and Features that are required to install Exchange Server" check box and click Next

Server Role Selection

Select the Exchange server roles you want to install on this computer:

- Mailbox role
- Management tools
- Edge Transport role

Automatically install Windows Server roles and features that are required to install Exchange Server



back

next

Edge Transport Server role cannot coexist with Mailbox Server Role.

- Select the installation path, In my case i'm installing it in C Drive as it's my test lab.

Installation Space and Location

Disk space required: 3676.2 MB

Disk space available: 111086.9 MB

Specify the path for the Exchange Server installation:

C:\Program Files\Microsoft\Exchange Server\V15

browse



back

next

- Once the "Readiness Checks" are completed, Click on **Install**

Readiness Checks

The computer will be checked to verify that setup can continue.

Prerequisite Analysis

100%



install

- Exchange 2016 Edge Server Installation process will start. Wait for the 9 step installation to be completed before you can configure your Exchange 2016 Edge Transport Server.

Setup Progress

Step 2 of 9: Copy Exchange Files

16%



Setup Completed

Congratulations! Setup has finished successfully. To complete the installation of Exchange Server 2016, reboot the computer.

You can view additional post-installation tasks online by clicking the link: <http://go.microsoft.com/fwlink/p/?LinkId=255372>.



finish

- Click on Finish to complete the installation of Edge Transport Server Role.

Configure Edge Transport Server

Introduction

Once you have installed the Exchange 2016 Edge Transport Server. Next step is to configure your Edge Transport Server for Mail flow and other policies that you would like to implement to your Exchange organization. If you have not installed your Edge Transport Server yet, you can install the Exchange 2016 Edge Transport Server by following the steps mentioned [here](#)

Edge Transport Server Role is optional in Exchange 2016. It's up to you to use Edge Transport Server Role for SMTP Mail flow or use 3rd party appliance from Barracuda, IronPort etc.

Configuring Exchange 2016 Edge Transport Server

Configuration of Exchange 2016 Edge Transport Server is based on Exchange Management Shell. Just Like Exchange 2013, Exchange 2016 Edge Transport Server do not have Graphical interface available.

Verify Edge Services

Before you start Edge Server configuration, test the edge transport server installation by running the Exchange Management Shell cmdlet *Test-ServiceHealth*

```
[PS] C:\Windows\system32>Test-ServiceHealth
Role : Edge Transport Role
RequiredServicesRunning : True
ServicesRunning : <ADAM_MSExchange, MSExchangeEdgeCredential, MSExchangeServiceHost, MSExchangeTransport,
                  MSExchangeTransportLogSearch>
ServicesNotRunning : <>
```

- Verify Transport Agents are enabled.

```
[PS] C:\Windows\system32>Get-TransportAgent | ft
Identity                                     Enabled          Priority
-----
Connection Filtering Agent                 True            1
Address Rewriting Inbound Agent            True            2
Edge Rule Agent                            True            3
Content Filter Agent                      True            4
Sender Id Agent                           True            5
Sender Filter Agent                       True            6
Recipient Filter Agent                    True            7
Protocol Analysis Agent                   True            8
Attachment Filtering Agent                 True            9
Address Rewriting Outbound Agent           True           10
```

- You can disable or change the priority of any transport agent that you want. To disable a transport agent, run the EMS cmdlet `Disable-TransportAgent -Identity "Agent Name"`

You need to restart `MSExchangeTransport` Service whenever you disable or enable Transport Agent.

- Verify Edge Transport server components state

```
[PS] C:\Windows\system32>Get-ServerComponentState -Identity Edge16
```

Server	Component	State
Edge16.MSCLOUDTALKS.COM	ServerWideOffline	Active
Edge16.MSCLOUDTALKS.COM	HubTransport	Active
Edge16.MSCLOUDTALKS.COM	FrontendTransport	Active
Edge16.MSCLOUDTALKS.COM	Monitoring	Active
Edge16.MSCLOUDTALKS.COM	RecoveryActionsEnabled	Active
Edge16.MSCLOUDTALKS.COM	AutoDiscoverProxy	Active
Edge16.MSCLOUDTALKS.COM	ActiveSyncProxy	Active
Edge16.MSCLOUDTALKS.COM	EcpProxy	Active
Edge16.MSCLOUDTALKS.COM	EwsProxy	Active
Edge16.MSCLOUDTALKS.COM	ImapProxy	Active
Edge16.MSCLOUDTALKS.COM	OabProxy	Active
Edge16.MSCLOUDTALKS.COM	OwaProxy	Active
Edge16.MSCLOUDTALKS.COM	PopProxy	Active
Edge16.MSCLOUDTALKS.COM	PushNotificationsProxy	Active
Edge16.MSCLOUDTALKS.COM	RpsProxy	Active
Edge16.MSCLOUDTALKS.COM	RwsProxy	Active
Edge16.MSCLOUDTALKS.COM	RpcProxy	Active
Edge16.MSCLOUDTALKS.COM	UMCallRouter	Active
Edge16.MSCLOUDTALKS.COM	XropProxy	Active
Edge16.MSCLOUDTALKS.COM	HttpProxyAvailabilityGroup	Active
Edge16.MSCLOUDTALKS.COM	ForwardSyncDaemon	Inactive
Edge16.MSCLOUDTALKS.COM	ProvisioningRps	Inactive
Edge16.MSCLOUDTALKS.COM	MapiProxy	Active
Edge16.MSCLOUDTALKS.COM	EdgeTransport	Active
Edge16.MSCLOUDTALKS.COM	HighAvailability	Active
Edge16.MSCLOUDTALKS.COM	SharedCache	Active
Edge16.MSCLOUDTALKS.COM	MailboxDeliveryProxy	Active
Edge16.MSCLOUDTALKS.COM	RoutingUpdates	Active
Edge16.MSCLOUDTALKS.COM	RestApiProxy	Active

- Verify default Receive Connector on Edge server

```
[PS] C:\Windows\system32>Get-ReceiveConnector | fl

AuthMechanism           : Tls, ExchangeServer
Banner                  :
BinaryMimeEnabled       : True
Bindings                 : <0.0.0:25>
ChunkingEnabled         : True
DefaultDomain           :
DeliveryStatusNotificat : True
ionEnabled
EightBitMimeEnabled     : True
Smtpltf8Enabled         : False
BareLinefeedRejectionEnabled : False
DomainSecureEnabled    : True
EnhancedStatusCodesEnabled : True
LongAddressesEnabled    : False
OrarEnabled             : False
SuppressXAnonymousTls  : False
ProxyEnabled            : False
AdvertiseClientSettings : False
Fqdn                    : Edge16.MSCLLOUDTALKS.COM
ServiceDiscoveryFqdn   :
TlsCertificateName     :
Comment                 :
Enabled                 : True
ConnectionTimeout      : 00:05:00
ConnectionInactivityTimeout : 00:01:00
MessageRateLimit       : 600
MessageRateSource      : IPAddress
MaxInboundConnection   : 5000
MaxInboundConnectionPerSource : 20
MaxInboundConnectionPercentagePerSource : 2
MaxHeaderSize          : 256 KB (262,144 bytes)
MaxHopCount            : 60
MaxLocalHopCount       : 12
MaxLogonFailures       : 3
MaxMessageSize         : 35 MB (36,700,160 bytes)
MaxProtocolErrors      : 5
MaxRecipientsPerMessage : 200
PermissionGroups       : AnonymousUsers, ExchangeServers, Partners
PipeliningEnabled      : True
ProtocolLoggingLevel   : None
RemoteIPRanges         : <0.0.0-255.255.255.255>
RequireEHLODomain      : False
RequireTLS              : False
EnableAuthGSSAPI       : False
ExtendedProtectionPolicy : None
LiveCredentialEnabled  : False
TlsDomainCapabilities  : <>
Server                 : Edge16
TransportRole          : HubTransport
SizeEnabled            : Enabled
TarpitInterval         : 00:00:05
MaxAcknowledgementDelay : 00:00:30
AdminDisplayName       :
ExchangeVersion        : 0.1 (8.0.535.0)
Name                   : Default internal receive connector EDGE16
DistinguishedName      : CN=Default internal receive connector EDGE16,CN=SMTP Receive
```

```
Connectors,CN=Protocols,CN=Edge16,CN=Servers,CN=Exchange Administrative
Group (FVD1BOHF23SPDLT),CN=Administrative Groups,CN=First
Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,CN={5339F4EC-
AE29-4822-9D2E-46579E4A3353}
Identity                : Edge16\Default internal receive connector EDGE16
Guid                   : 2e5d606a-9428-4605-80d0-a7c8d6af94ed
ObjectCategory         : CN=ms-Exch-Smtp-Receive-Connector,CN=Schema,CN=Configuration,CN={5339F4EC-AE29-4822-9D2E-46579E4A3353}
ObjectClass            : {top, msExchSmtpReceiveConnector}
WhenChanged            : 5/6/2016 1:41:42 AM
WhenCreated            : 5/6/2016 1:41:42 AM
WhenChangedUTC         : 5/6/2016 1:41:42 AM
WhenCreatedUTC        : 5/6/2016 1:41:42 AM
OrganizationId        :
Id                     :
OriginatingServer      : localhost
IsValid                : True
ObjectState            : Unchanged
```

Once you have verified Edge Transport Server. Next step is to create Edge Subscription.

Edge Subscription

- To create Edge Transport Subscription, run the following cmdlet

Author: Riaz Javed Butt
Blog: www.msxperttalk.com

```
[PS] C:\Windows\system32>New-EdgeSubscription -FileName "C:\Users\rjbutt\Desktop\Edge.XML"

Confirm
If you create an Edge Subscription, this Edge Transport server will be managed via EdgeSync replication. As a result,
any of the following objects that were created manually will be deleted: accepted domains, message classifications,
remote domains, and Send connectors. After creating the Edge Subscription, you must manage these objects from inside
the organization and allow EdgeSync to update the Edge Transport server. Also, the InternalSMTPServers list of the
TransportConfig object will be overwritten during the synchronization process.
EdgeSync requires that this Edge Transport server is able to resolve the FQDN of the Mailbox servers in the Active
Directory site to which the Edge Transport server is being subscribed, and those Mailbox servers be able to resolve the
FQDN of this Edge Transport server. You should complete the Edge Subscription inside the organization in the next
"1440" minutes before the bootstrap account expires.
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): y
[PS] C:\Windows\system32>_
```

Carefully Read the message before you confirm. Once the edge subscription is created with Mailbox Servers then your edge server will be managed via EdgeSync replication.

- Copy the XML file from Edge Transport Server to your mailbox Server.
- Run the following cmdlet on your mailbox server

```
[PS] C:\Windows\system32>New-EdgeSubscription -FileData ([byte[]](Get-Content -Path "C:\Users\Rjbutt\Desktop\Edge.xml"
-Encoding Byte -ReadCount 0)) -Site "Exchange"

Name           Site           Domain
-----
Edge16         MSCLOUDTALKS.COM/... MSCLOUDTALKS.COM
WARNING: EdgeSync requires that the Mailbox servers in Active Directory site Exchange be able to resolve the IP address
for Edge16.MSCLOUDTALKS.COM and be able to connect to that host on port 50636.

[PS] C:\Windows\system32>_
```

Carefully read the warning message and make sure you have a local DNS entry and Port 50636 opened on your local LAN for Edge and Mailbox server.

- Start the edge sync service from Services.MSC

This cmdlet completes the edge subscription setup for your Exchange 2016. Next Step is to verify the Edge Server subscription.

Verify Edge Subscription

- To verify the edge subscription, run the following cmdlets

```
[PS] C:\Windows\system32>Test-EdgeSynchronization

RunspaceId      : f3f846e7-9fbf-44c7-bb1c-6b84c9191155
SyncStatus      : Normal
UtcNow          : 5/8/2016 10:51:33 PM
Name            : Edge16
LeaseHolder     : CN=EXCH01,CN=Servers,CN=Exchange Administrative Group
                 <FYDIBOHF23SPDLT>,CN=Administrative Groups,CN=MSCLOUDTALKS,CN=Microsoft
                 Exchange,CN=Services,CN=Configuration,DC=MSCLOUDTALKS,DC=COM
LeaseType       : Option
FailureDetail    :
LeaseExpiryUtc  : 5/8/2016 11:21:11 PM
LastSynchronizedUtc : 5/8/2016 10:51:11 PM
TransportServerStatus : Skipped
TransportConfigStatus : Skipped
AcceptedDomainStatus : Skipped
RemoteDomainStatus : Skipped
SendConnectorStatus : Skipped
MessageClassificationStatus : Skipped
RecipientStatus : Skipped
CredentialRecords : Number of credentials 3
CookieRecords   : Number of cookies 2
```

Author: Riaz Javed Butt

Blog: www.msexperttalk.com

```
[PS] C:\Windows\system32>Start-EdgeSynchronization

RunspaceId      : f3f846e7-9fbf-44c7-bb1c-6b84c9191155
Result          : Success
Type            : Recipients
Name            : Edge16
FailureDetails  :
StartUTC        : 5/8/2016 10:52:17 PM
EndUTC          : 5/8/2016 10:52:17 PM
Added           : 0
Deleted         : 0
Updated         : 0
Scanned         : 0
TargetScanned   : 0

RunspaceId      : f3f846e7-9fbf-44c7-bb1c-6b84c9191155
Result          : Success
Type            : Configuration
Name            : Edge16
FailureDetails  :
StartUTC        : 5/8/2016 10:52:17 PM
EndUTC          : 5/8/2016 10:52:17 PM
Added           : 0
Deleted         : 0
Updated         : 0
Scanned         : 0
TargetScanned   : 0
```

Configure the Internal SMTP Servers if you want to bypass any of your server from Edge Sender ID and Connection Filtering agent.