

# STEP BY STEP EXCHANGE 2019 INSTALLATION GUIDE

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## Exchange Server 2019 Installation Step by Step

October 22, 2018 Microsoft announced the final build of Exchange Server 2019 available to download from the Volume Licensing Service Center. Exchange Server 2019 is designed to deliver security, performance and improved administration and management capabilities.

### Exchange 2019 compatibility Requirements

Before you install Exchange Server 2019, we recommend that you review this topic to ensure your network, hardware, software, clients, and other elements meet the requirements for Exchange 2019. Also, make sure you understand the coexistence scenarios that are supported for Exchange 2019 and earlier versions of Exchange.

The supported coexistence scenarios between Exchange 2019 and earlier versions of Exchange are described in the following table:

| Exchange version                                   | Exchange 2019 organization coexistence  |
|--|---|
| Exchange 2010 and earlier versions                 | Not supported   |
| Exchange 2013                                      | Supported with Exchange 2013 Cumulative Update 21 (CU21) or later on all Exchange 2013 servers in the organization, including Edge Transport servers. |
| Exchange 2016                                      | Supported with Exchange 2016 CU11 or later on all Exchange 2016 servers in the organization, including Edge Transport servers.                        |
| Mixed Exchange 2013 and Exchange 2016 organization | Supported if all Exchange 2013 and Exchange 2016 servers in the organization meet the requirements as previously described in this table.             |

The requirements for the network and the directory servers in your Exchange 2019 organization are described in the following table:

| Component               | Requirement  |
|-------------------------|--|
| Domain controllers      | All domain controllers in the forest need to be running one of the following versions of Windows Server: <ul style="list-style-type: none"><li>• Windows Server 2019 Standard or Datacenter</li><li>• Windows Server 2016 Standard or Datacenter</li><li>• Windows Server 2012 R2 Standard or Datacenter</li></ul> |
| Active Directory forest | The Active Directory forest functional level is <b>Windows Server 2012 R2</b> or higher.   |

| Component             | Requirement  |
|-----------------------|--|
| Active Directory site | The Active Directory site where you install the Exchange Server must contain at least one writeable domain controller that's also a global catalog server, or the installation will fail. Furthermore, you can't install the Exchange server and then remove the domain controller from the Active Directory site.     |
| DNS namespace         | Exchange 2019 supports the following DNS namespaces: <ul style="list-style-type: none"><li>• Contiguous</li><li>• Noncontiguous</li><li>• Single label domains</li><li>• Disjoint</li></ul>  |
| IPv6                  | Exchange 2013 and later support IPv6 only when IPv4 is also installed and enabled on the Exchange server.<br>If you deploy Exchange in this configuration, and your network supports IPv4 and IPv6, all Exchange servers can send data to and receive data from devices, servers, and clients that use IPv6 addresses. |

Installing Exchange 2019 on a computer that's running Windows Server Core is fully supported and recommended by Microsoft. The Desktop Experience feature is no longer required.

## Exchange 2019 Pre-requisites

You can use any member of the Active Directory domain to prepare Active Directory for Exchange 2019. The computer requires the following software:

- [.NET Framework 4.7.2](#) or later
- [Visual C++ Redistributable Package for Visual Studio 2012](#)

The Visual C++ Redistributable package is required if you're using the Exchange Setup Wizard to prepare Active Directory. If you're using unattended Setup from the command line to prepare Active Directory, this package isn't required.

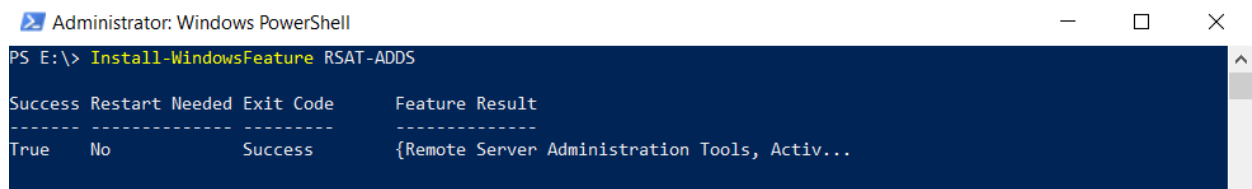
- Install the Remote Tools Administration Pack by running the following command in Windows PowerShell:

```
Install-WindowsFeature RSAT-ADDS
```

```
Administrator: Windows PowerShell
PS E:\> Install-WindowsFeature RSAT-ADDS
```



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```
Administrator: Windows PowerShell
PS E:\> Install-WindowsFeature RSAT-ADD5

Success Restart Needed Exit Code      Feature Result
-----
True     No             Success          {Remote Server Administration Tools, Activ...
```

## .Net Framework Installation

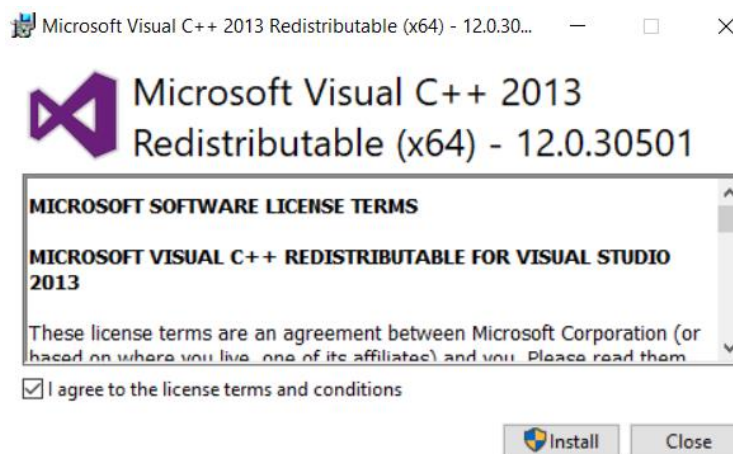
If you are installing Exchange Server 2019 on Windows Server 2019 then no action is required as Windows Server 2019 comes with .Net Framework 4.7.2. For Windows Server 2016, you need to install .Net Framework 4.7.1 or higher.

- [.NET Framework 4.7.1](#) or above (Windows Server 2016)
- [.NET Framework 4.7.2](#) (comes default with Windows Server 2019 preview)

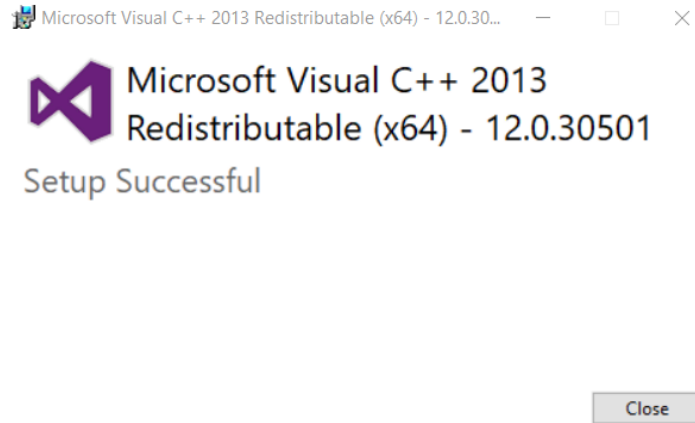
If .Net Framework on Windows Server 2019 isn't installed, you can install this from Server Manager.

## Install Visual C++ Redistributable Packages for Visual Studio 2013

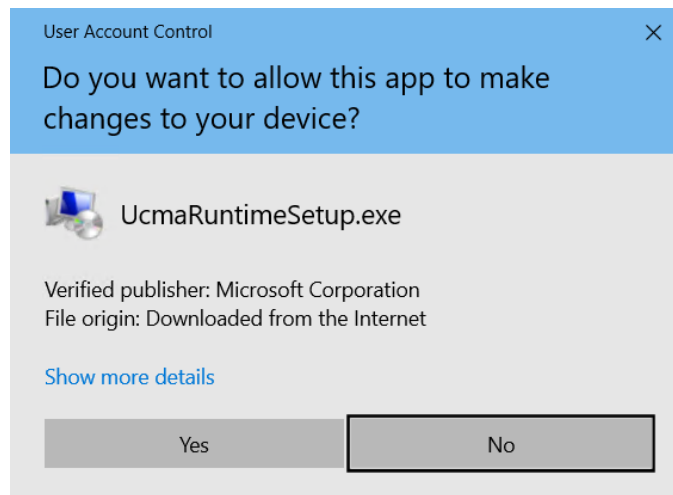
Download Visual C++ Redistributable package for VS 2013 and install on Exchange server. [Visual C++ Redistributable Packages for Visual Studio 2013](#) can be downloaded from Microsoft website.



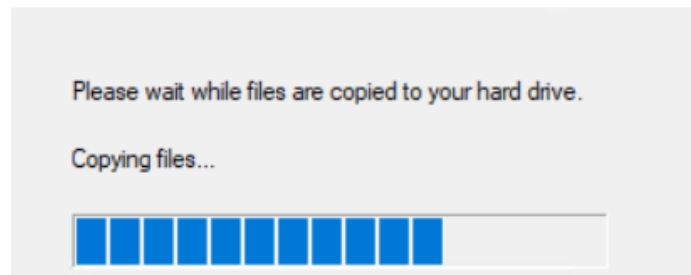
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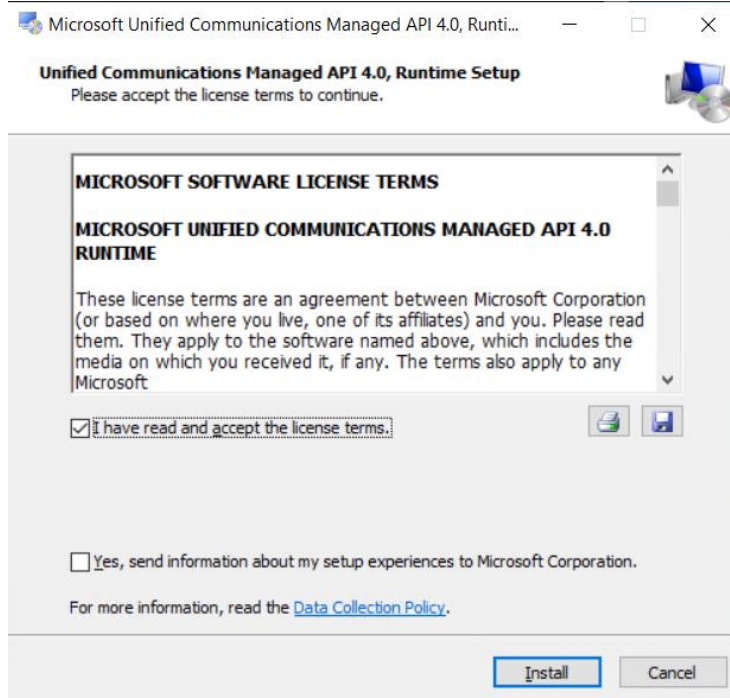
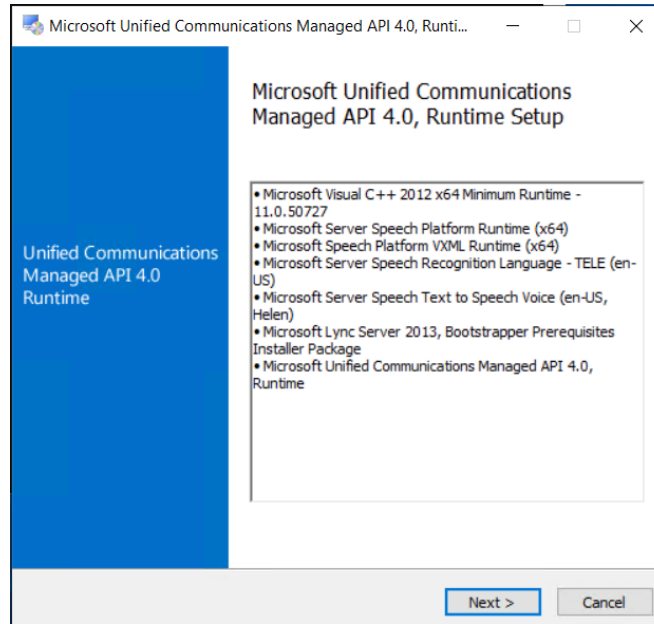


Microsoft Unified Communications Managed API 4.0  
Download and install [Unified Communications Managed API \(UCMA\) 4.0](#) package from Microsoft website.



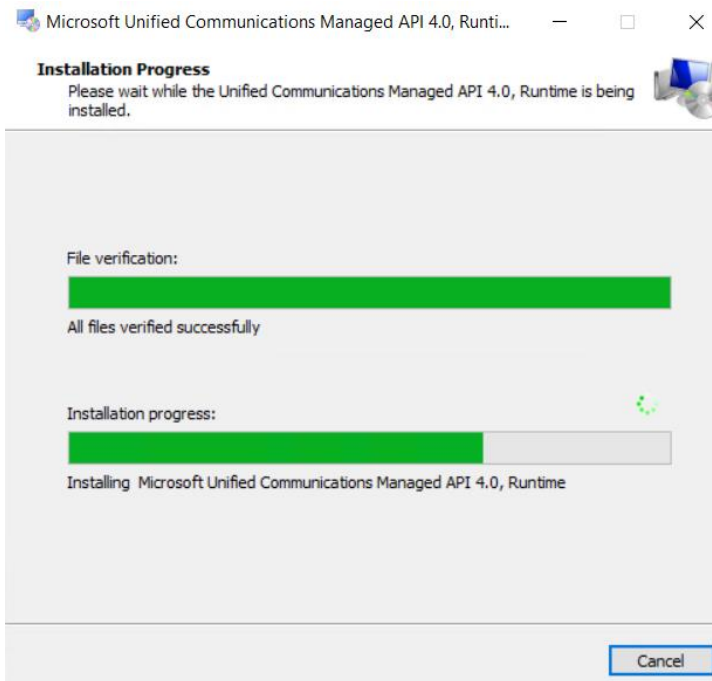
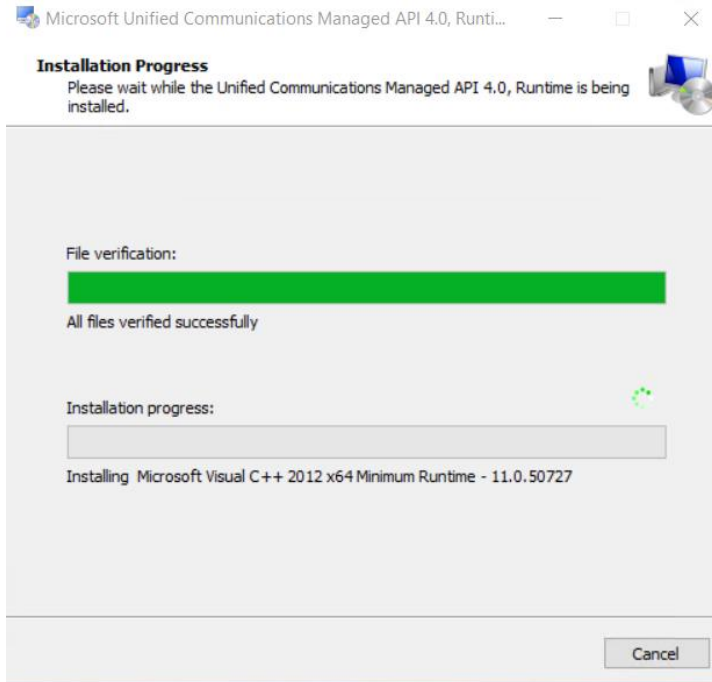
Microsoft Unified Communications Managed API 4.0, Runti...

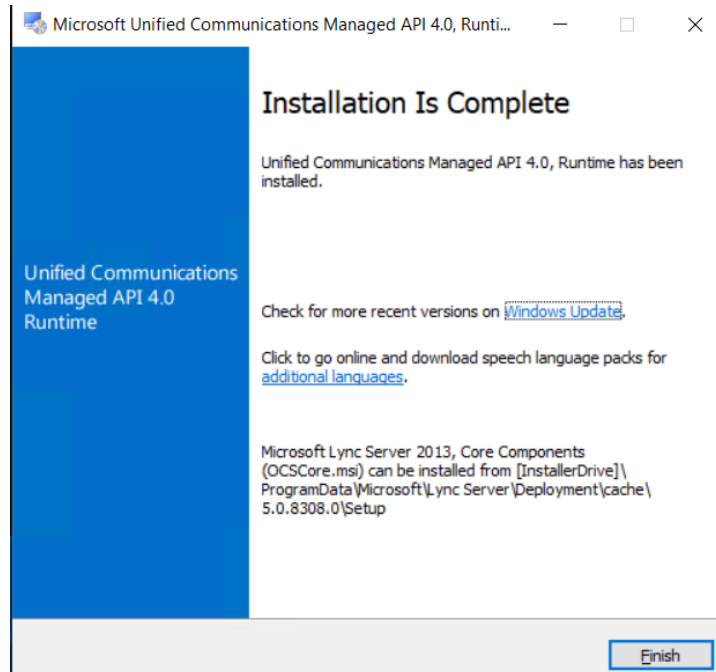






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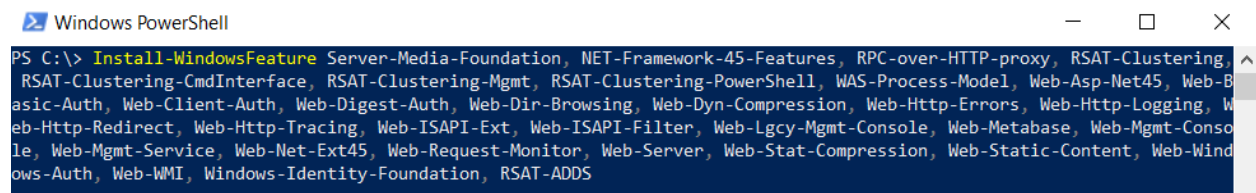




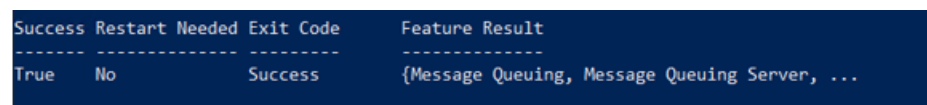
## Windows Server 2019 prerequisites for Exchange Server 2019

Run the following powershell cmdlet to install Windows Server 2019 prerequisites for Exchange server 2019.

```
Install-WindowsFeature Server-Media-Foundation, NET-Framework-45-Features, 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
```



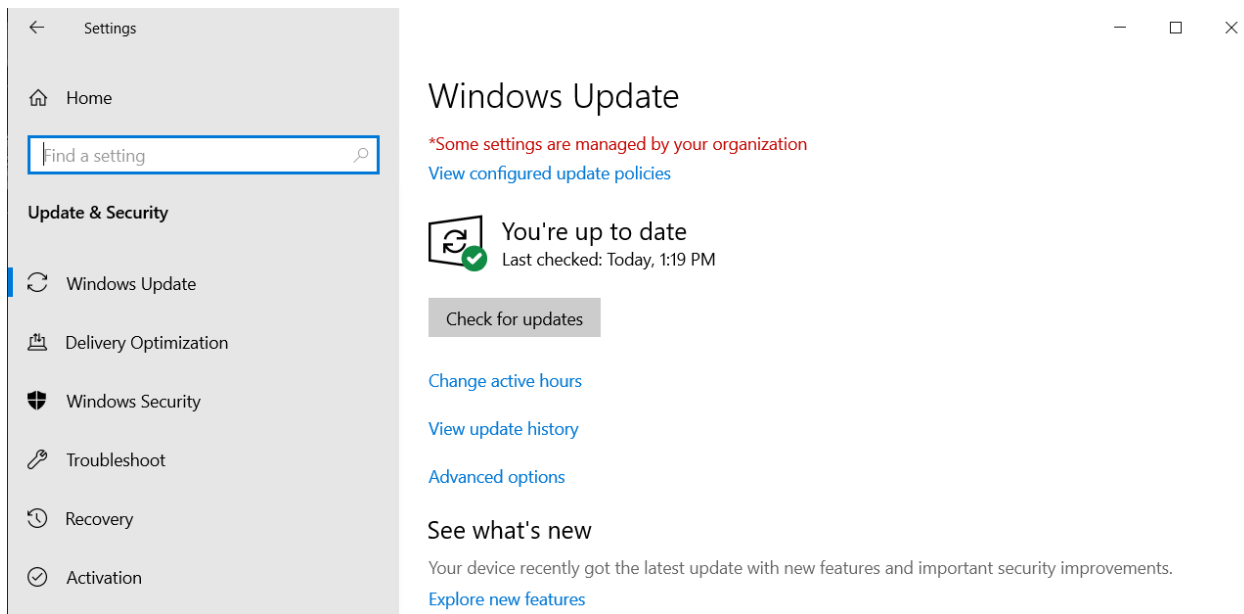
Once installation is completed, you will see a following message in your PowerShell window.



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## Check Windows Updates

Before Installing Exchange Server 2019 or any version of Exchange server, it's highly recommended to ensure you have all windows patches installed on your windows server.



## Exchange Server 2019 Installation

Once all pre-requisites are completed. Now is the time to extend your Active Directory with Exchange Server 2019. It's recommended to perform this task after hours and ensure you have a backup of your active directory available before you perform following steps.

### Step 1: Extend the Active Directory schema

When you extend the Active Directory schema for Exchange, the following requirements apply:

- Your account needs to be a member of the **Schema Admins** and **Enterprise Admins** security groups. If you have multiple Active Directory forests, make sure you're logged into the right one.
- The computer needs to be a member of the same Active Directory domain and site as the schema master.
- If you use the `/DomainController:<DomainControllerFQDN>` switch, you need to specify the domain controller that's the schema master.
- The only supported way to extend the schema for Exchange is to use Setup.exe with `/PrepareSchema`, `/PrepareAD`, or the Exchange Setup wizard. Other ways of extending the schema aren't supported.

Run the following cmdlet from PowerShell to extend AD Schema for Exchange Server 2019.

```
.\Setup.exe /IAcceptExchangeServerLicenseTerms /PrepareSchema
```



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```
PS E:\> .\Setup.EXE /IAcceptExchangeServerLicenseTerms /PrepareSchema

Microsoft Exchange Server 2019 Unattended Setup

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

Performing Microsoft Exchange Server Prerequisite Check

Prerequisite Analysis COMPLETED

Configuring Microsoft Exchange Server

Extending Active Directory schema COMPLETED

The Exchange Server setup operation completed successfully.
```

I have Exchange Server 2019 setup mounted in E Drive.

## Step 2: Prepare Active Directory

After Active Directory schema has been extended, you can prepare other parts of Active Directory for Exchange. During this step, Exchange will create containers, objects, and other items in Active Directory to store information. The collection of the Exchange containers, objects, attributes, and so on, is called the *Exchange organization*.

When you prepare Active Directory for Exchange, the following requirements apply:

- Your account needs to be a member of the **Enterprise Admins** security group. If you skipped Step 1 because you want the */PrepareAD* command to extend the schema, the account also needs to be a member of the **Schema Admins** security group.
- The computer needs to be a member of the same Active Directory domain and site as the schema master and must be able to contact all of the domains in the forest on TCP port 389.
- Wait until Active Directory has finished replicating the schema changes from Step 1 to all domain controllers before you try to prepare Active Directory.
- You need to select a name for the Exchange organization. The organization name is used internally by Exchange and isn't typically seen by users, doesn't affect the functionality of Exchange, and doesn't determine what you can use for email addresses.
  - The organization name can't contain more than 64 characters and can't be blank.
  - Valid characters are A to Z, a to z, 0 to 9, hyphen or dash (-), and space, but leading or trailing spaces aren't allowed.
  - You can't change the organization name after it's set.

To prepare Active Directory for Exchange, run the following command in a Windows Command Prompt window:

```
.\Setup.exe /IAcceptExchangeServerLicenseTerms /PrepareAD /OrganizationName: "MS Expert Talk"
```

I'm using the Exchange installation files on drive E: and names the Exchange organization "MS Expert Talk".



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```
Administrator: Windows PowerShell
PS E:\> .\Setup.EXE /IAcceptExchangeServerLicenseTerms /PrepareAD /OrganizationName:"MS EXPERT TALK"

Microsoft Exchange Server 2019 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 2019 by using 'Setup /PrepareAD'. No Exchange Server 2016 roles
have been detected in this topology. After this operation, you will not be able to install any Exchange Server 2016
roles.
For more information, visit: http://technet.microsoft.com/library\(EXCHG.150\)/ms.exch.setupreadiness.NoE16ServerWarning.aspx

Setup will prepare the organization for Exchange Server 2019 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: http://technet.microsoft.com/library\(EXCHG.150\)/ms.exch.setupreadiness.NoE15ServerWarning.aspx

Configuring Microsoft Exchange Server

Organization Preparation COMPLETED

The Exchange Server setup operation completed successfully.
PS E:\>
```

If you have a hybrid deployment configured between your on-premises organization and Exchange Online, add the `/TenantOrganizationConfig` switch to the command.

As in Step 1, you'll need to wait while Active Directory replicates the changes from this step to all your domain controllers before you proceed, and you can use the **repadmin** tool to check the progress of the replication.

### Step 3: Prepare Active Directory Domains

The final step is to prepare the Active Directory domain where Exchange servers will be installed or where mail-enabled users will be located. This step creates additional containers and security groups and sets the permission, so Exchange can access them.

If you have multiple domains in your Active Directory forest, you have the following choices in how to prepare them:

- Prepare all domains in the Active Directory forest
- Choose the Active Directory domains to prepare

Regardless of the method you choose, wait until Active Directory has finished replicating the changes from Step 2 to all domain controllers before you proceed. Otherwise, you might get an error when you try to prepare the domains.

#### Step 3.1: Prepare all domains in the Active Directory forest

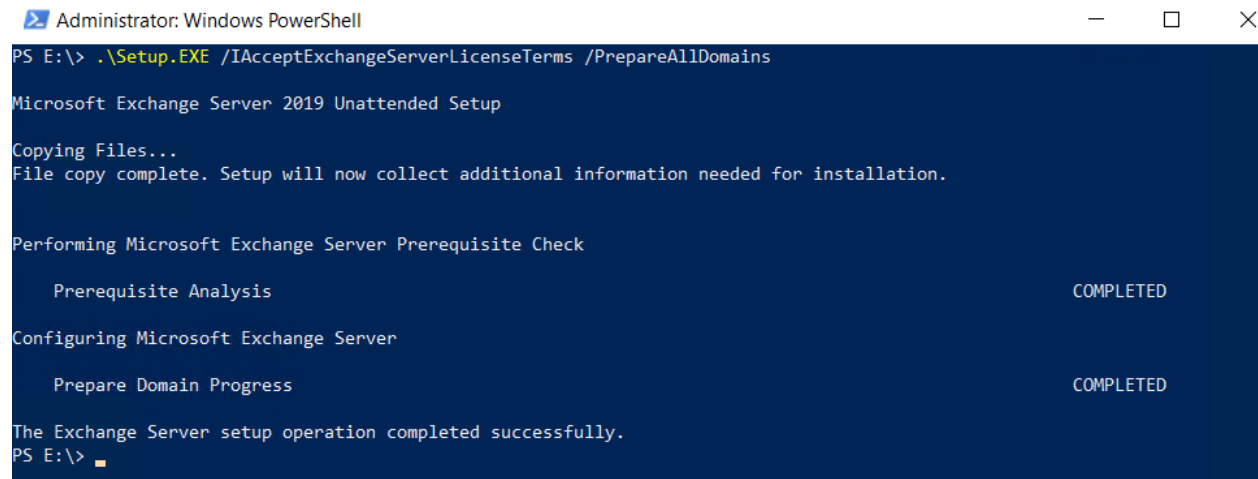
When you prepare all domains in the Active Directory forest for Exchange, your account needs to be a member of the Enterprise Admins security group.



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To prepare all domains in your Active Directory forest, run the following command in a Windows Command Prompt window:

```
.\Setup.exe /IAcceptExchangeServerLicenseTerms /PrepareAllDomains
```



```
Administrator: Windows PowerShell
PS E:\> .\Setup.EXE /IAcceptExchangeServerLicenseTerms /PrepareAllDomains

Microsoft Exchange Server 2019 Unattended Setup

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

Performing Microsoft Exchange Server Prerequisite Check

    Prerequisite Analysis                                     COMPLETED

Configuring Microsoft Exchange Server

    Prepare Domain Progress                                 COMPLETED

The Exchange Server setup operation completed successfully.
PS E:\>
```

### Step 3.2: Choose the Active Directory domains to prepare

You don't need to do this step in the domain where you ran the `/PrepareAD` command in Step 2, because the `/PrepareAD` command has automatically prepared that domain for you.

When you prepare specific domains in your Active Directory forest, the following requirements apply:

- You need to prepare every domain where an Exchange server will be installed.
- You need to prepare any domain that will contain mail-enabled users, even if the domain won't contain any Exchange servers.
- Your account needs to be a member of the **Domain Admins** group in the domain that you want to prepare.
- If the domain that you want to prepare was created **after** you ran `/PrepareAD` in Step 2, your account also needs to be a member of the **Organization Management** role group in Exchange.

To prepare a specific domain in your Active Directory forest, run the following command in a Windows Command Prompt window:

```
.\Setup.exe /IAcceptExchangeServerLicenseTerms /PrepareDomain:<Domain Name>
```

If you have a single domain AD forest, you are not required to perform step 3.2. For this tutorial, I only have single forest root domain and I am not required to run this cmdlets in my topology.

### Exchange Active Directory versions

The tables in the following sections contain the Exchange objects in Active Directory that are updated each time you install a new version of Exchange (a new installation or a CU). You can compare the object versions you see with the values in the tables to verify that Exchange successfully updated Active Directory during the installation.



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- **rangeUpper** is located in the **Schema** naming context in the properties of the **ms-Exch-Schema-Version-Pt** container.
- **objectVersion (Default)** is the **objectVersion** attribute located in the **Default** naming context in the properties of the **Microsoft Exchange System Objects** container.
- **objectVersion (Configuration)** is the **objectVersion** attribute located in the **Configuration** naming context in **Services > Microsoft Exchange** in the properties of the **<Your Exchange Organization Name>** container.

| Exchange 2019 version | rangeUpper | objectVersion (Default) | objectVersion (Configuration) |
|-----------------------|------------|-------------------------|-------------------------------|
| Exchange 2019 RTM     | 17000      | 13236                   | 16751                         |
| Exchange 2019 Preview | 15332      | 13236                   | 16213                         |

## Exchange Server 2019 Installation

Before you install an Exchange Server 2019, verify the following prerequisites:

- The target server must be a member of an Active Directory domain.
- The account that you use to install Exchange requires the following permissions:
  - Enterprise Admins group membership: Required if this is the first Exchange server in the organization.
  - Schema Admins group membership: Required if you haven't previously extended the Active Directory schema or prepared Active Directory for Exchange 2019.
  - Exchange Organization Management role group membership: Required if you've already prepared the Active Directory domain that will contain the Exchange server, or if other Exchange servers already exist in the organization.

At this point, you are ready to install your first Exchange 2019 server. As mentioned previously in the document, this lab is focused on installation of Exchange server 2019 on Windows Server 2019 with Desktop Experience. I'll upload a separate documentation for installing Exchange Server 2019 on Windows Server Core. To install Exchange Server 2019, follow the following steps:

- Run Setup.exe as administrator

Microsoft Exchange Server Setup is initializing...



## Check for Updates?

You can have Setup download Exchange Server 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



It's recommended to always check for updates before you start the installation, Click **Next** to proceed. In next step, setup will start the copy process to copy Exchange files.



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MICROSOFT EXCHANGE SERVER 2019

? X

## Copying Files...

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

Copying files...

25%



The **Copying Files** page shows the progress of copying files to the local hard drive. Typically, the files are copied to `%WinDir%\Temp\ExchangeSetup`, but you can confirm the location in the Exchange Setup log at `C:\ExchangeSetupLogs\ExchangeSetup.log`



## Introduction

Welcome to Microsoft Exchange Server!

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.

Plan your Exchange Server deployment:

[Read about Exchange Server](#)

[Read about supported languages](#)

[Use the Exchange Server Deployment Assistant](#)



next

On the **Introduction** page, Microsoft recommend that you visit the Exchange Server deployment planning links if you haven't already reviewed them. Click **Next** to continue.

# License Agreement

Please read and accept the Exchange Server license agreement.

**MICROSOFT SOFTWARE LICENSE TERMS**

**MICROSOFT EXCHANGE SERVER 2019 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

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



next

On the **License Agreement** page, review the software license terms, select **I accept the terms in the license agreement**, and then click **Next** to continue. I would say you probably don't have any other option other than accepting the agreement or you can't install Exchange server 😊

## 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

On the **Recommended Settings** page, choose one of the following settings:

- **Use recommended settings:** Exchange automatically sends error reports and information about your computer hardware and how you use Exchange to Microsoft. For information about what's sent to Microsoft and how it's used, click ? or the help links on the page.
- **Don't use recommended settings:** These settings are disabled, but you can enable them at any time after Setup completes.

I highly recommend to us “**Recommended Settings**”. Click **Next** to continue.

## 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

On the **Server Role Selection** page, configure the following options:

- **Mailbox role:** Select this option, which also automatically installs the **Management Tools**.
- **Automatically install Windows Server roles and features that are required to install Exchange:** Select this option to have the Setup wizard install the required Windows prerequisites. You might need to reboot the computer to complete the installation of some Windows features. If you don't select this option, you need to install the Windows features manually.

Selecting this option installs only the *Windows features* that are required by Exchange. You need to install other prerequisites manually.

Click **Next** to continue.

## Installation Space and Location

Disk space required: 5734.1 MB

Disk space available: 112553.8 MB

Specify the path for the Exchange Server installation:

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



On the **Installation Space and Location** page, either accept the default installation location (**C:\Program Files\Microsoft\Exchange Server\V15**) or click **Browse** to choose a new location. Make sure that you have enough disk space available in the location where you want to install Exchange. It's highly recommended not to install Exchange Server on OS drive. As I'm doing an installation in lab environment, we're good to do the installation on C/OS drive. For production implementation, I highly recommend leveraging a separate drive for Exchange installation.

Click **Next** to continue.

## 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

On the **Malware Protection Settings** page, choose whether you want disable malware scanning. Malware scanning is enabled by default (the value **No** is selected). If you disable malware scanning, you can enable it in the future. Click **Next** to continue.

## Readiness Checks

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

Configuring Prerequisites

52%



back

install

On the **Readiness Checks** page, verify that the organization and server role prerequisite checks completed successfully. If they haven't, the only option on the page is **Retry**, so you need to resolve the errors before you can continue.



## Readiness Checks

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

Prerequisite Analysis

100%



 Exchange

install

## Setup Progress

Step 1 of 15: Organization Preparation

5%



On the **Setup Progress** page, a progress bar indicates how the installation is proceeding.

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? X

## Setup Completed

Congratulations! Setup has finished successfully. To complete the installation of Microsoft Exchange Server, 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

On the **Setup Completed** page, click **Finish**, and then restart the computer.

## Verify Exchange Server 2019 Installation

After you install Exchange Server 2019, Microsoft recommend that you verify the installation by running the **Get-ExchangeServer** cmdlet and by reviewing the Exchange Setup log. If the setup process fails or errors occur during installation, you can use the Setup log to find the source of the problem.

### Get-ExchangeServer Cmdlet

To verify that Exchange installed successfully, run the following commands in the Exchange Management Shell.

Get-ExchangeServer

```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Get-ExchangeServer |ft -AutoSize
Name      Site
-----
EXCH01    MSEXPERTTALK.COM/Configuration/Sites/HQ_Site
ServerRole Edition
-----
Mailbox   StandardEvaluation
AdminDisplayVersion
-----
Version 15.2 (Build 221.12)
[PS] C:\windows\system32>
```

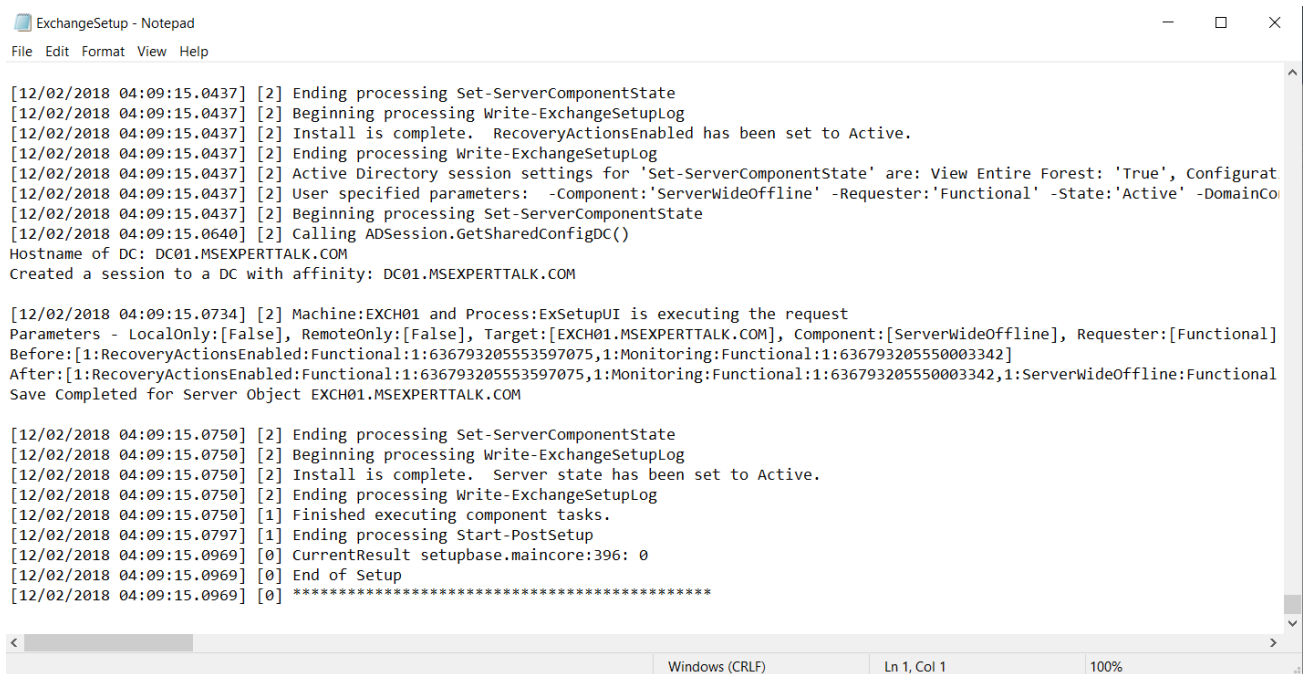


**Author:** Riaz Javed Butt  
**Blog:** [www.msexperttalk.com](http://www.msexperttalk.com)

## Exchange Setup Logs

Exchange Setup logs events in the **Application** log of the Windows Server. This log contains a history of each action that the system takes during Exchange setup and any errors that occurred (By default, the logging method is set to Verbose). You can use the Windows **Event Viewer** to find the messages related to Exchange setup.

The Exchange Setup log is available at `<system drive>\ExchangeSetupLogs\ExchangeSetup.log` (`<system drive>` is the drive where Windows is installed). The Setup log tracks the progress of every task during the Exchange installation and configuration. The file contains information about the status of the prerequisite and system readiness checks before installation starts, the application installation progress, and the configuration changes that are made to the system. Check this log file to verify that Exchange was installed as expected. Below is the snippet of how ExchangeSetup.Logs file looks like.



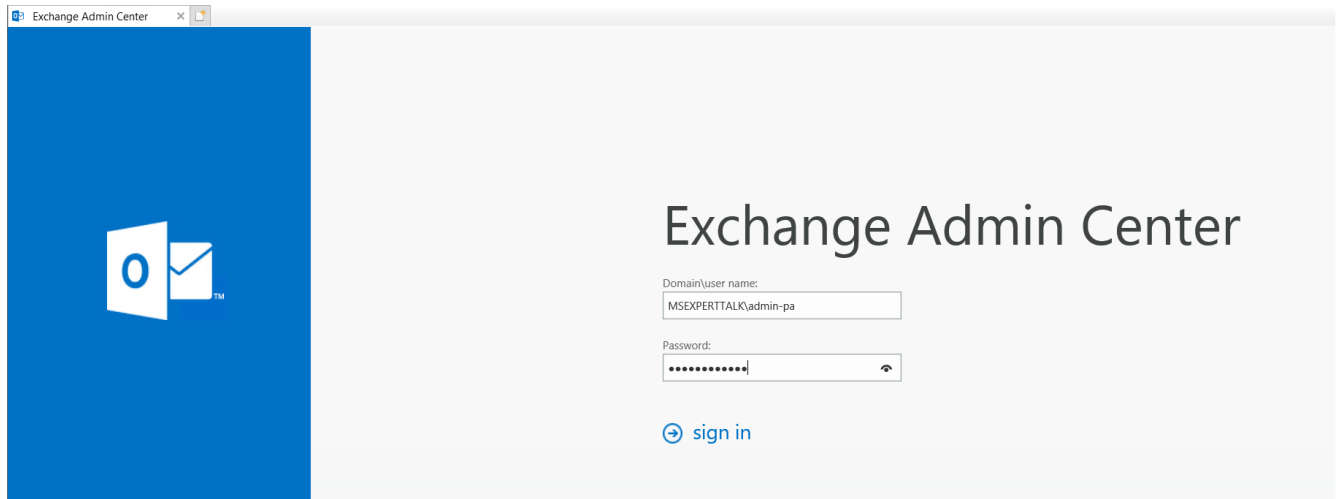
```
ExchangeSetup - Notepad
File Edit Format View Help

[12/02/2018 04:09:15.0437] [2] Ending processing Set-ServerComponentState
[12/02/2018 04:09:15.0437] [2] Beginning processing Write-ExchangeSetupLog
[12/02/2018 04:09:15.0437] [2] Install is complete. RecoveryActionsEnabled has been set to Active.
[12/02/2018 04:09:15.0437] [2] Ending processing Write-ExchangeSetupLog
[12/02/2018 04:09:15.0437] [2] Active Directory session settings for 'Set-ServerComponentState' are: View Entire Forest: 'True', Configurat
[12/02/2018 04:09:15.0437] [2] User specified parameters: -Component:'ServerWideOffline' -Requester:'Functional' -State:'Active' -DomainCo
[12/02/2018 04:09:15.0437] [2] Beginning processing Set-ServerComponentState
[12/02/2018 04:09:15.0640] [2] Calling ADSession.GetSharedConfigDC()
Hostname of DC: DC01.MSEXPERTTALK.COM
Created a session to a DC with affinity: DC01.MSEXPERTTALK.COM

[12/02/2018 04:09:15.0734] [2] Machine:EXCH01 and Process:ExSetupUI is executing the request
Parameters - LocalOnly:[False], RemoteOnly:[False], Target:[EXCH01.MSEXPERTTALK.COM], Component:[ServerWideOffline], Requester:[Functional]
Before:[1:RecoveryActionsEnabled:Functional:1:636793205553597075,1:Monitoring:Functional:1:636793205550003342]
After:[1:RecoveryActionsEnabled:Functional:1:636793205553597075,1:Monitoring:Functional:1:636793205550003342,1:ServerWideOffline:Functional
Save Completed for Server Object EXCH01.MSEXPERTTALK.COM

[12/02/2018 04:09:15.0750] [2] Ending processing Set-ServerComponentState
[12/02/2018 04:09:15.0750] [2] Beginning processing Write-ExchangeSetupLog
[12/02/2018 04:09:15.0750] [2] Install is complete. Server state has been set to Active.
[12/02/2018 04:09:15.0750] [2] Ending processing Write-ExchangeSetupLog
[12/02/2018 04:09:15.0750] [1] Finished executing component tasks.
[12/02/2018 04:09:15.0797] [1] Ending processing Start-PostSetup
[12/02/2018 04:09:15.0969] [0] CurrentResult setupbase.maincore:396: 0
[12/02/2018 04:09:15.0969] [0] End of Setup
[12/02/2018 04:09:15.0969] [0] *****
```





## Exchange 2019 Post Installation Steps

Once you have your Exchange 2019 server installed, next step is to perform post installation configuration to ensure your server is ready to handle day to day messaging operations. Post installation activities includes:

- Create admin mailbox
- Exchange 2019 Product Activation
- Configure mail flow and Client access on Exchange Servers
- Install Exchange Management tools
- Configure IM integration
- Configure Virtual Directories
- Configure Offline Address Book

## Rename Exchange Database

Just like previous version of Exchange, Exchange 2019 installation also creates a default database with the name “**Mailbox Database 123456789**” in default installation directory. In my case, the default database is being created in “**C:\Program Files\Microsoft\Exchange Server\V15\Mailbox\**” as I have installed Exchange Server 2019 in default directory.

It's not recommended to install Exchange server on operating system drive.

One of the Exchange 2019 Post-Installation step is to rename the default database as per the naming convention used by your organization. There are two methods available to rename your database in Exchange 2019.

- Rename Exchange 2019 Database from GUI
- Rename Exchange 2019 Database from Exchange Management Shell

## Option 1 - Rename Exchange 2019 Database from GUI

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

Enterprise Office 365

### Exchange admin center

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

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

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| NAME                        | ACTIVE ON SER... | SERVERS WITH COPIES | STATUS  | BAD COPY COUNT |
|-----------------------------|------------------|---------------------|---------|----------------|
| Mailbox Database 1890727828 | EXCH01           | EXCH01              | Mounted | 0              |

Mailbox Database 1890727828

Servers  
EXCH01

Database copies  
Mailbox Database 1890727828\EXCH01  
Active Mounted  
Copy queue length: 0  
Content index state: NotApplicable  
[View details](#)

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

## Mailbox Database 1890727828

▸ **general**

[maintenance](#)

[limits](#)

[client settings](#)

Name:

DB01

Database path:

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

Last full backup:

Last incremental backup:

Status:

Mounted

Mounted on server:

EXCH01.MSEXPERTTALK.COM

Master:

EXCH01

Master type:

Server

- Hit Save button and you are done renaming your database via GUI.

[servers](#) [databases](#) [database availability groups](#) [virtual directories](#) [certificates](#)



| NAME | ACTIVE ON SER... | SERVERS WITH COPIES | STATUS  | BAD COPY COUNT |
|------|------------------|---------------------|---------|----------------|
| DB01 | EXCH01           | EXCH01              | Mounted | 0              |

**Author:** Riaz Javed Butt

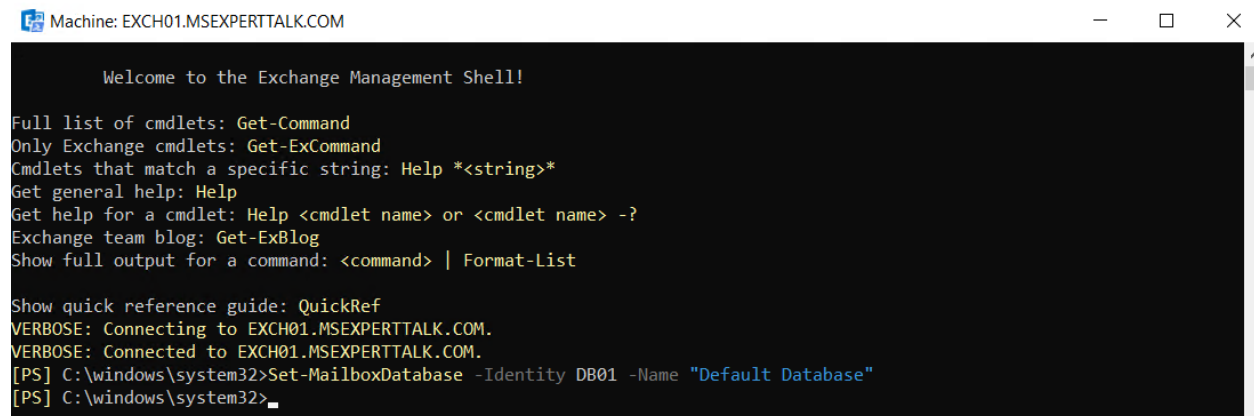
**Blog:** [www.msexperttalk.com](http://www.msexperttalk.com)

## Option 2 - Rename the database by using Exchange Management Shell

Another method of renaming your Exchange 2019 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

```
C:\> Set-Mailboxdatabase -Identity DB01 -Name "Default Database"
```



```
Machine: EXCH01.MSEXPERTTALK.COM

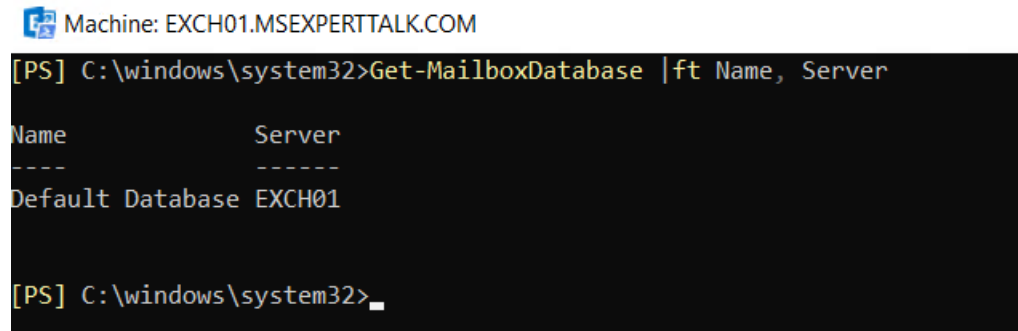
Welcome to the Exchange Management Shell!

Full list of cmdlets: Get-Command
Only Exchange cmdlets: Get-ExCommand
Cmdlets that match a specific string: Help *<string>*
Get general help: Help
Get help for a cmdlet: Help <cmdlet name> or <cmdlet name> -?
Exchange team blog: Get-ExBlog
Show full output for a command: <command> | Format-List

Show quick reference guide: QuickRef
VERBOSE: Connecting to EXCH01.MSEXPERTTALK.COM.
VERBOSE: Connected to EXCH01.MSEXPERTTALK.COM.
[PS] C:\windows\system32>Set-MailboxDatabase -Identity DB01 -Name "Default Database"
[PS] C:\windows\system32>
```

To verify that the database is renamed, run the following cmdlet to retrieve database information

- `Get-MailboxDatabase | ft Name, Server`



```
Machine: EXCH01.MSEXPERTTALK.COM

[PS] C:\windows\system32>Get-MailboxDatabase | ft Name, Server

Name          Server
----          -
Default Database EXCH01

[PS] C:\windows\system32>
```

## Activate Exchange Server 2019

A product key tells Exchange Server 2019 that you have purchased a Standard or Enterprise Edition license.

Enterprise Edition let you mount more than five databases per server in addition to everything that's available with a Standard Edition license. If you want to read more about Exchange licensing, see [Exchange Server editions and versions](#). If you don't enter a product key, your server is automatically



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licensed as a trial edition. The trial edition has Exchange Standard Edition server features and is helpful if you want to try out Exchange before you buy it, or to run tests in a lab.

Exchange Server 2019 edition trial edition is valid for up to 180 days. If you want to keep using the server beyond 180 days, you'll need to enter a product key or the Exchange admin center (EAC) will start to show reminders that you need to enter a product key to license the server.

Exchange Server 2019 product key can be entered by using Exchange Admin Center (GUI) or by using Exchange Management Shell. You can use either of these options to enter your Exchange Server product key. Once you enter the product key, you need to restart Information Store service.

### Option 1 – Enter the Product key using GUI

To enter Exchange Server 2019 product key using Exchange Admin Center, Follow the below steps:

- In the Exchange Admin Center, Navigate to **Servers > Servers**, select the server you want to license, and then click **Edit** or Click **Enter Product Key** option in details pane.

#### Exchange admin center

recipients

permissions

compliance management

organization

protection

mail flow

mobile

public folders

**servers**

hybrid

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

✎ ⌵ ⌵

| NAME   | SERVER ROLES | VERSION                     |
|--------|--------------|-----------------------------|
| EXCH01 | Mailbox      | Version 15.2 (Build 221.12) |

- The Exchange server properties window opens. On the **General tab**, enter the product key in the **Enter a valid product key** text box.



EXCH01

general

databases and database availability groups

POP3

IMAP4

unified messaging

DNS lookups

transport limits

transport logs

Outlook Anywhere

Version number:

Version 15.2 (Build 221.12)

Roles:

Mailbox

This Exchange server is currently licensed as a Trial Edition. You can add a new license by entering a product key below. [Learn more](#)

Enter a valid product key.

-  -  -  -

Save

Cancel

- When you're finished, click **Save**. You will see the following message to restart your Exchange Information Store service.

## Warning

The product key has been validated and the product ID has been successfully created. This change won't take effect until the Information Store service has been restarted.

OK

**Author:** Riaz Javed Butt

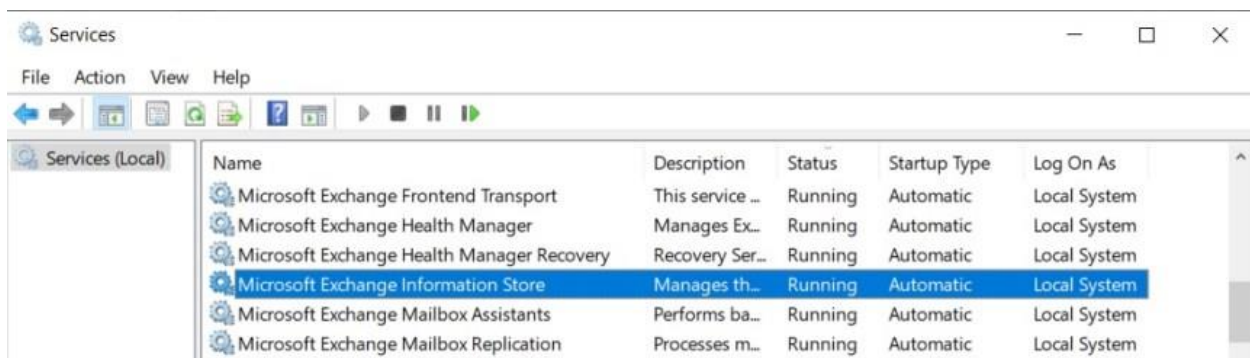
**Blog:** [www.msexperttalk.com](http://www.msexperttalk.com)

After you license a mailbox server, do the following steps to restart the Microsoft Exchange Information Store service:

- On the Exchange server, open the Windows Services console. Open Server Manager, and then click **Tools > Services**.

You can also launch services snap in by running the command **services.msc** from the **Run** dialog, a Command Prompt window, or the Exchange Management Shell.

- In the list of services, right-click on **Microsoft Exchange Information Store**, and then click **Restart**.



Once you restart the service, Your Exchange Server 2019 product is activated.

Option 2 – Enter the Product key using Exchange Management Shell

Exchange Server 2019 can product key can be activated with Exchange Management Shell. To enter the product key in the Exchange Management Shell, use this syntax:

```
Set-ExchangeServer <ServerName> -ProductKey <Enter Product Key>
```

Note that this command works to license an unlicensed server or to upgrade a licensed server from a Standard Edition license to an Enterprise Edition license.

This example license the Exchange server named EXCH01.

```
Set-ExchangeServer EXCH01 -ProductKey 12345-67890-12345-67892-09876
```

```
Machine: EXCH01.MSEXPERTTALK.COM

Welcome to the Exchange Management Shell!

Full list of cmdlets: Get-Command
Only Exchange cmdlets: Get-ExCommand
Cmdlets that match a specific string: Help *<string*>
Get general help: Help
Get help for a cmdlet: Help <cmdlet name> or <cmdlet name> -?
Exchange team blog: Get-ExBlog
Show full output for a command: <command> | Format-List

Show quick reference guide: QuickRef
VERBOSE: Connecting to EXCH01.MSEXPERTTALK.COM.
VERBOSE: Connected to EXCH01.MSEXPERTTALK.COM.
[PS] C:\windows\system32>
[PS] C:\windows\system32>Set-ExchangeServer EXCH01 -ProductKey 12345-67890-12345-67892-09876
```



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Once the product key is activated, run the following cmdlet to restart Exchange Information Store service.

```
Restart-Service MExchangeIS
```

```
[PS] C:\windows\system32>Restart-Service MExchangeIS_
```

For detailed syntax and parameter information, see [Set-ExchangeServer](#).

## Configure mail flow and client access on Exchange servers

After you've installed Exchange Server 2019, you need to configure Exchange for mail flow and client access. Without these steps, you won't be able to send mail to the internet and external clients (for example, Microsoft Outlook, and Exchange ActiveSync devices) won't be able to connect to your Exchange.

You will receive certificate warnings when you connect to the Exchange admin center (EAC) website until you configure a secure socket layer (SSL) certificate on the Mailbox server.

### Create an internet Send connector

When install your first Exchange 2019 server, the server can not send email outside of your Exchange organization. To send email outside of your Exchange organization, you need to create a Send connector.

By default, a Receive connector named "Default Frontend <ServerName>\_" is created when Exchange is installed. This Receive connector accepts anonymous SMTP connections from external servers. You don't need to do any additional configuration if this is the functionality you want. If you want to restrict inbound connections from external servers, modify the **Default Frontend <Mailbox server>** Receive connector on the Mailbox server.

Until you create a Send connector, mail can't flow from your Exchange to the internet. The exception is if you install an Edge Transport in your perimeter network and subscribe the Edge Transport to your Exchange organization.

#### *Option 1 - Use the EAC to create an internet Send connector*

- In the EAC, navigate to **Mail flow > Send connectors**, and then click **Add +**. This starts the **New Send connector** wizard.



## Exchange admin center

recipients

permissions

compliance management

organization

protection

**mail flow**

mobile

public folders

servers

hybrid

rules delivery reports accepted domains email address policies receive connectors [send connectors](#)

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| NAME                                     | STATUS |
|--|--------|
| There are no items to show in this view. |        |

- On the first page, enter the following information:
  - **Name:** Enter a descriptive name for the Send connector, for example, Outbound to internet.
  - **Type:** Select **Internet**.
  - When you're finished, click **Next**.

new send connector

Create a Send connector.

There are four types of send connectors. Each connector has different permissions and network settings. [Learn more...](#)

\*Name:

Outbound to Email

Type:

Custom (For example, to send mail to other non-Exchange servers)

Internal (For example, to send intranet mail)

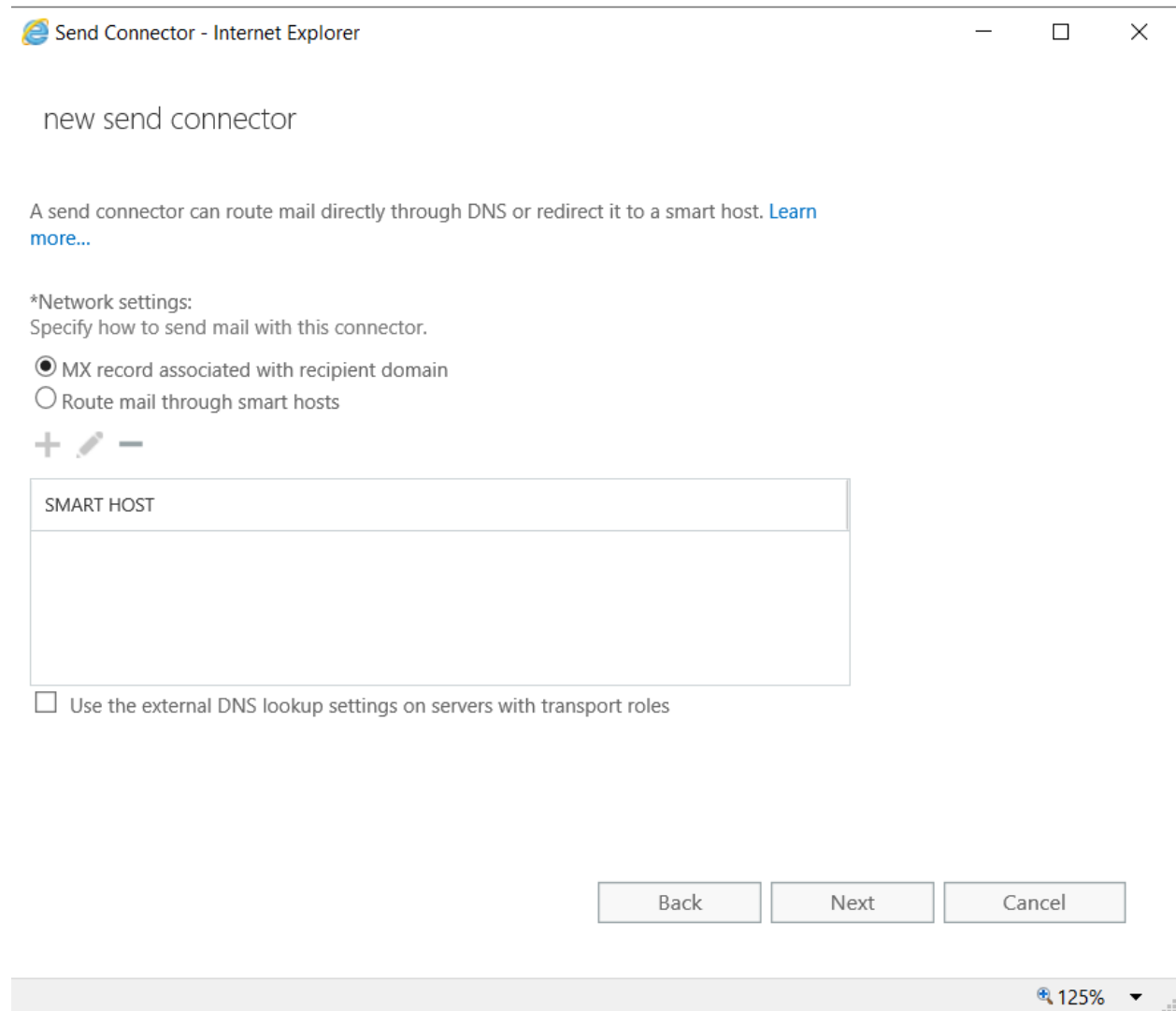
Internet (For example, to send internet mail)

Partner (For example, to route mail to trusted third-party servers)

Next Cancel

125%

- On the next page, verify that **MX record associated with recipient domain** is selected. This means the connector uses DNS on the internet to route mail, as opposed to routing all outbound mail to a smart host. When you're finished, click **Next**.



- On the next page, enter the following information:
  - In the **Address space** section, click **Add +**. In the **Add domain** dialog box that appears, in **Fully Qualified Domain Name (FQDN)**, enter an asterisk (\*), and then click **Save**. This value indicates that the Send connector applies to messages addressed to all external domains.

## new send connector

A Send connector routes mail to a specified list of domains. These domains can be an SMTP address space or a custom type. [Learn more...](#)

\*Address space:  
Specify the address space or spaces to which this connector will route mail.

+ ✎ -

| TYPE | DOMAIN | COST |
|------|--------|------|
| SMTP | *      | 1    |
|      |        |      |

Scoped send connector

Back

Next

Cancel

- The **Scoped send connector** setting is important if your organization has Exchange servers installed in multiple Active Directory sites:
- If you don't select **Scoped send connector**, the connector is usable by all transport servers (Exchange 2013 or later Mailbox servers and Exchange 2010 Hub Transport servers) in the entire Active Directory forest. This is the default value.
- If you select **Scoped send connector**, the connector is only usable by other transport servers in the same Active Directory site.
- When you're finished, click **\*\*Next\*\***.
- On the next page, in the **Source server** section, click **Add +**. In the **Select a Server** dialog box that appears, select one or more Mailbox servers that you want to use to send mail to the internet. If you have multiple Mailbox servers in your environment, select the ones that can route mail to the internet. If you have only one Mailbox server, select that one. After you've selected at least one Mailbox server, click **Add**, click **OK**, and then click **Finish**.

## new send connector

A send connector sends mail from a list of servers with transport roles or Edge Subscriptions.  
[Learn more...](#)

\*Source server:

Associate this connector with the following servers containing transport roles. You can also add Edge Subscriptions to this list.

+ -

| SERVER | SITE   | ROLE    |
|--------|--|---------|
| EXCH01 | MSEXPERTTALK.COM/Configuration/Sites/Defaul... | Mailbox |

Back

Finish

Cancel

### Option 2 - Use the Exchange Management Shell to create an internet Send connector

- Open the Exchange Management Shell. Run the following Exchange Management cmdlet:

```
New-SendConnector -Name <Name> -AddressSpaces * -Internet [-SourceTransportServer <fqdn1>,<fqdn2>...]
```

This example creates the internet Send connector named "To internet" with the following properties:

- The usage type is **Internet**.
- The Send connector uses DNS routing. We aren't using the ***DNSRoutingEnabled*** parameter, and the default value is \$true.
- The Send connector is for all external domains (\*).
- The local Exchange server is the source server. We aren't using the ***SourceTransportServer*** parameter, and the default value is the local Exchange server.
- The Send connector isn't scoped to the local Active Directory site. We aren't using the ***IsScopedConnector*** parameter, and the default value is \$false.



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## Configure Exchange Server 2019 Virtual Directories

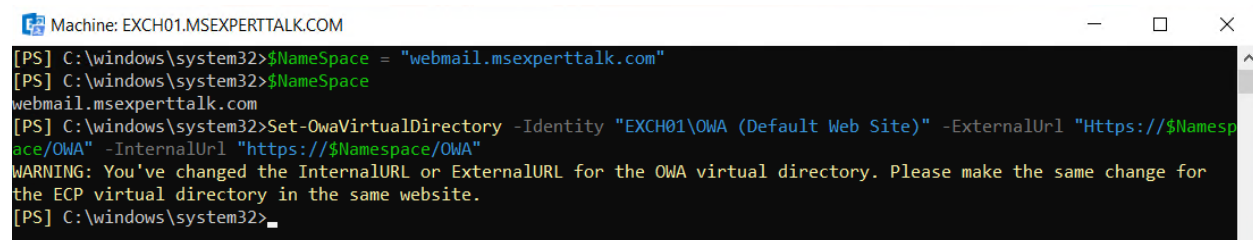
You can use the Exchange admin center (EAC) or the Exchange Management Shell to view or modify the properties of Exchange 2019 virtual directories.

### Configure Outlook on the Web Virtual Directory

Although the name has changed to Outlook on the web for OWA, the name of the virtual directory is still "owa". To configure Outlook on the web virtual directory, run the following Exchange Management Shell commands.

```
$namespace = "webmail.msexperttalk.com"
```

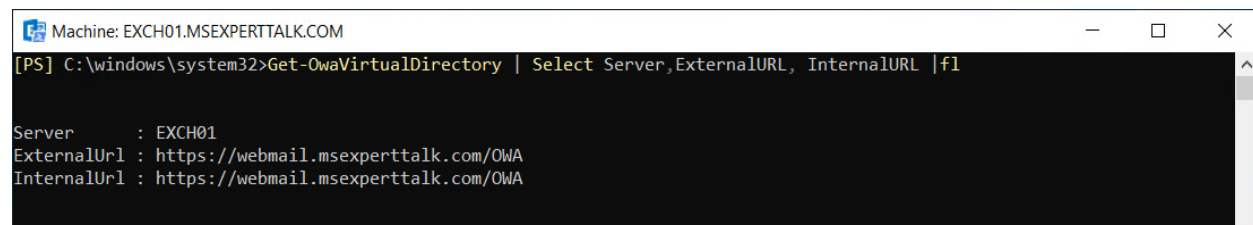
```
Set-OwaVirtualDirectory -Identity "HOSTNAME\OWA (Default Web Site)" -ExternalUrl https://\$Namespace/owa -InternalUrl https://\$Namespace/owa
```



```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>$Namespace = "webmail.msexperttalk.com"
[PS] C:\windows\system32>$Namespace
webmail.msexperttalk.com
[PS] C:\windows\system32>Set-OwaVirtualDirectory -Identity "EXCH01\OWA (Default Web Site)" -ExternalUrl "Https://$Namespace/OWA" -InternalUrl "https://$Namespace/OWA"
WARNING: You've changed the InternalURL or ExternalURL for the OWA virtual directory. Please make the same change for the ECP virtual directory in the same website.
[PS] C:\windows\system32>
```

To verify the OWA URL, run the following command.

```
Get-OwaVirtualDirectory | Select Server,ExternalURL,InternalURL | fl
```



```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Get-OwaVirtualDirectory | Select Server,ExternalURL, InternalURL | fl
Server      : EXCH01
ExternalUrl : https://webmail.msexperttalk.com/OWA
InternalUrl : https://webmail.msexperttalk.com/OWA
```

### Configure ECP Virtual Directory

To configure ECP virtual directory, run the following Exchange Management Shell commands.

```
$namespace = "webmail.msexperttalk.com"
```

```
Set-EcpVirtualDirectory -Identity "HOSTNAME\ECP (Default Web Site)" -ExternalUrl https://\$namespace/ecp -InternalUrl https://\$namespace/ecp
```

To verify the configuration of ECP virtual directory, run the following cmdlet.

```
Get-EcpVirtualDirectory | Select Server,ExternalURL,InternalURL | fl
```



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**Blog:** [www.msexperttalk.com](http://www.msexperttalk.com)

```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-EcpVirtualDirectory -Identity "EXCH01\ECP (Default Web Site)" -ExternalUrl https://$namespace/ce/ecp -InternalUrl https://$namespace/ecp
[PS] C:\windows\system32>Get-EcpVirtualDirectory | Select Server,ExternalURL,InternalURL | fl

Server          : EXCH01
ExternalUrl     : https://webmail.msexperttalk.com/ecp
InternalUrl     : https://webmail.msexperttalk.com/ecp
```

## Configure Outlook Anywhere

To configure Outlook Anywhere, run the following command.

```
Set-OutlookAnywhere -Identity "HOSTNAME\RPC (Default Web Site)" -ExternalHostname $namespace -InternalHostname $namespace -ExternalClientsRequireSsl $true -InternalClientsRequireSsl $true -DefaultAuthenticationMethod NTLM
```

To verify Outlook anywhere configuration, run the following command.

```
Get-OutlookAnywhere | Select Server,ExternalHostname,Internalhostname | fl
```

```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-OutlookAnywhere -Identity "EXCH01\RPC (Default Web Site)" -ExternalHostname $namespace -InternalHostname $namespace -ExternalClientsRequireSsl $true -InternalClientsRequireSsl $true -DefaultAuthenticationMethod NTLM
[PS] C:\windows\system32>Get-OutlookAnywhere | Select Server,ExternalHostname,Internalhostname | fl

Server          : EXCH01
ExternalHostname : webmail.msexperttalk.com
InternalHostname : webmail.msexperttalk.com
```

## Configure ActiveSync Virtual Directory

Run the following command to configure activesync virtual directory.

```
Set-ActiveSyncVirtualDirectory -Identity "HOSTNAME\Microsoft-Server-ActiveSync (Default Web Site)" -ExternalUrl https://$namespace/Microsoft-Server-ActiveSync -InternalUrl https://$namespace/Microsoft-Server-ActiveSync
```

To verify the active sync configuration, run the following command.

```
Get-ActiveSyncVirtualDirectory | select server,externalurl,internalurl | fl
```

```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-ActiveSyncVirtualDirectory -Identity "EXCH01\Microsoft-Server-ActiveSync (Default Web Site)" -ExternalUrl https://$namespace/Microsoft-Server-ActiveSync -InternalUrl https://$namespace/Microsoft-Server-ActiveSync
[PS] C:\windows\system32>Get-ActiveSyncVirtualDirectory | select server,externalurl,internalurl | fl

Server          : EXCH01
ExternalUrl     : https://webmail.msexperttalk.com/Microsoft-Server-ActiveSync
InternalUrl     : https://webmail.msexperttalk.com/Microsoft-Server-ActiveSync
```

## Configure Exchange Web Services Virtual Directory

Run the following command for exchange web services virtual directory configuration.



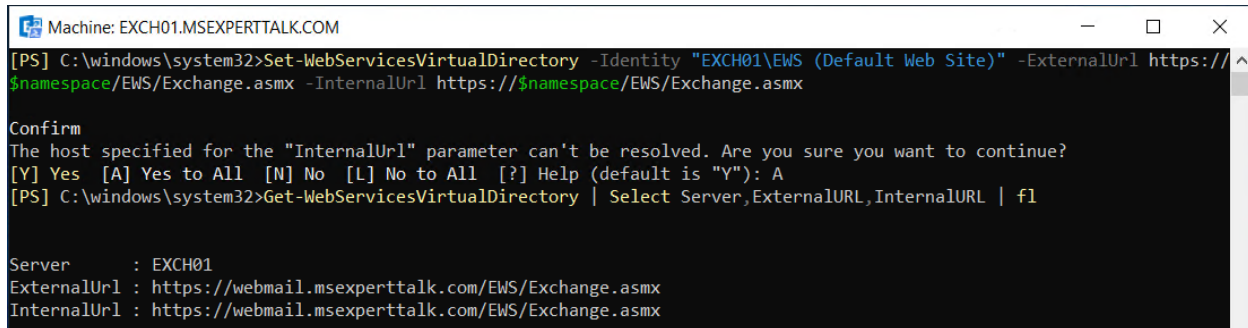
**Author:** Riaz Javed Butt

**Blog:** [www.msexperttalk.com](http://www.msexperttalk.com)

```
Set-WebServicesVirtualDirectory -Identity "HOSTNAME\EWS (Default Web Site)" -ExternalUrl https://\$namespace/EWS/Exchange.asmx -InternalUrl https://\$namespace/EWS/Exchange.asmx
```

To verify the configuration, run the following cmdlet.

```
Get-WebServicesVirtualDirectory | Select Server,ExternalURL,InternalURL | fl
```



```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-WebServicesVirtualDirectory -Identity "EXCH01\EWS (Default Web Site)" -ExternalUrl https://$namespace/EWS/Exchange.asmx -InternalUrl https://$namespace/EWS/Exchange.asmx

Confirm
The host specified for the "InternalUrl" parameter can't be resolved. Are you sure you want to continue?
[Y] Yes [A] Yes to All [N] No [L] No to All [?] Help (default is "Y"): A
[PS] C:\windows\system32>Get-WebServicesVirtualDirectory | Select Server,ExternalURL,InternalURL | fl

Server          : EXCH01
ExternalUrl     : https://webmail.msexperttalk.com/EWS/Exchange.asmx
InternalUrl     : https://webmail.msexperttalk.com/EWS/Exchange.asmx
```

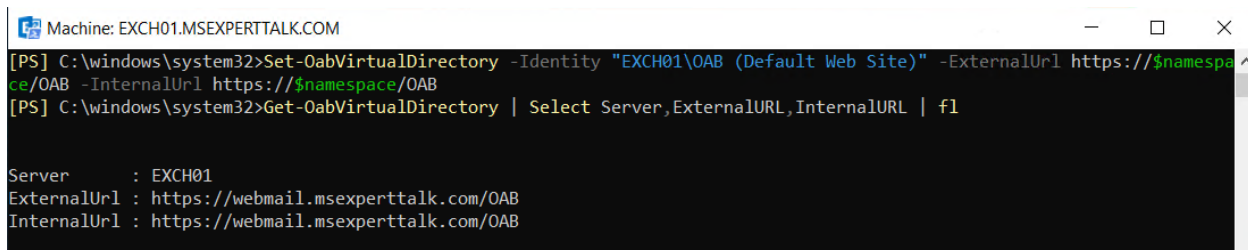
### Configure OAB Virtual Directory

Run the following command to configure OAB virtual directory.

```
Set-OabVirtualDirectory -Identity "HOSTNAME\OAB (Default Web Site)" -ExternalUrl https://\$namespace/OAB -InternalUrl https://\$namespace/OAB
```

To verify the OAB virtual directory URL configuration, run the following command.

```
Get-OabVirtualDirectory | Select Server,ExternalURL,InternalURL | fl
```



```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-OabVirtualDirectory -Identity "EXCH01\OAB (Default Web Site)" -ExternalUrl https://$namespace/OAB -InternalUrl https://$namespace/OAB
[PS] C:\windows\system32>Get-OabVirtualDirectory | Select Server,ExternalURL,InternalURL | fl

Server          : EXCH01
ExternalUrl     : https://webmail.msexperttalk.com/OAB
InternalUrl     : https://webmail.msexperttalk.com/OAB
```

### Configure AutoDiscover Virtual Directory

Configure AutoDiscover Service Internal URI. By default, it's setup with server hostname.

```
Set-ClientAccessService -Identity <HOSTNAME> -AutoDiscoverServiceInternalUri "https://autodiscover.msexperttalk.com/Autodiscover/Autodiscover.xml"
```

To verify, run the following cmdlet.

```
Get-ClientAccessService | fl identity,autodiscoverserviceinternaluri
```



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```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-ClientAccessService -Identity "EXCH01" -AutoDiscoverServiceInternalUri https://autodiscover.msexperttalk.com/Autodiscover/Autodiscover.xml
[PS] C:\windows\system32>Get-ClientAccessService | fl identity,autodiscoverServiceInternalUri

Identity                : EXCH01
AutoDiscoverServiceInternalUri : https://autodiscover.msexperttalk.com/Autodiscover/Autodiscover.xml
```

## Configure MAPI Virtual Directory

Run the following command to configure MAPI virtual directory.

```
Set-MapiVirtualDirectory -Identity "HOSTNAME\mapi (Default Web Site)" -ExternalUrl https://$namespace/mapi -InternalUrl https://$namespace/mapi
```

To verify, run the following command.

```
Get-MapiVirtualDirectory | Select Server,ExternalURL,InternalURL | fl
```

```
Machine: EXCH01.MSEXPERTTALK.COM
[PS] C:\windows\system32>Set-MapiVirtualDirectory -Identity "EXCH01\mapi (Default Web Site)" -ExternalUrl https://$namespace/mapi -InternalUrl https://$namespace/mapi
[PS] C:\windows\system32>Get-MapiVirtualDirectory | Select Server,ExternalURL,InternalURL | fl

Server                : EXCH01
ExternalUrl           : https://webmail.msexperttalk.com/mapi
InternalUrl           : https://webmail.msexperttalk.com/mapi
```

Once all Exchange virtual directories are configured, restart IIS service by running the following command.

```
C:\> IISReset
```

```
Administrator: Windows PowerShell
PS C:\> iisreset

Attempting stop...
Internet services successfully stopped
Attempting start...
Internet services successfully restarted
PS C:\>
```

## Configure Default Email Address Policy

We recommend that you configure a user principal name (UPN) that matches the primary email address of each user. If you don't provide a UPN that matches the email address of a user, the user will be required to manually provide their domain\user name or UPN in addition to their email address. If their UPN matches their email address, Outlook on the web (formerly known as Outlook on the web), ActiveSync, and Outlook will automatically match their email address to their UPN. To configure the default email address policy, run the following steps:

- In the EAC, go to **Mail flow > Email address policies**.



- Select the email address policy that you want to modify and click on **Edit**

### Exchange admin center

recipients rules delivery reports accepted domains **email address policies** receive connectors send connectors

permissions

compliance management

organization

protection

**mail flow**

| NAME           | PRIORITY | STATUS  |
|----------------|----------|---------|
| Default Policy | Lowest   | Applied |

- Select the policy and modify the configuration as per your email address policy

Email Address Format -- Webpage Dialog

email address format

Select an accepted domain:  
MSEXPERTTALK.COM

Specify a custom domain name for the email address:

Email address format:  
Example user: John Smith

alias@contoso.com

John.Smith@contoso.com

JSmith@contoso.com

JohnS@contoso.com

Smith.John@contoso.com

SJohn@contoso.com

SmithJ@contoso.com

Enter a custom address type

SMTP

If you don't want to use one of the pre-canned SMTP email address formats, you can specify a custom SMTP email address.  
[Learn more](#)

Save Cancel

Email Address Policy - Internet Explorer

Default Policy

general

**email address format**

apply to

\*Email address format:

| TYPE | ADDRESS FORMAT                |
|------|-------------------------------|
| SMTP | <b>alias@MSEXPERTTALK.COM</b> |

You can create multiple email addresses for this email address policy. The email address that appears in bold text is the default reply email address. Click + Add to add an email address format.

Save Cancel

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Email Address Policy - Internet Explorer

Default Policy

general

email address format

▶ **apply to**

\*Specify the types of recipients this email address policy will apply to.

All recipient types

Only the following recipient types:

- Users with Exchange mailboxes
- Mail users with external email addresses
- Resource mailboxes
- Mail contacts with external email addresses
- Mail-enabled groups

[Preview recipients the policy applies to](#)

Save Cancel

- Select the email address policy that you want to apply (a policy that has the **Status** value **Unapplied**).
- In the details pane, click **Apply**.

| NAME           | PRIORITY | STATUS    |
|----------------|----------|-----------|
| Default Policy | Lowest   | Unapplied |

Default Policy

Email Address Format

SMTP

Primary: alias@MSEXPERTTALK.COM

Includes

All recipient types

Not Applied

Some changes were recently made to this email address policy.

[Apply](#)

- After you click **Apply**, a warning message that appears. Click **Yes** to apply the policy by using the EAC. A progress bar allows you to monitor the recipient update process. When updates are complete, click **Close**.

## Warning

Applying this email address policy may take a long time to finish. During the update, you won't be able to perform other tasks.

If this email address policy applies to more than 3,000 recipients, you should run the following Exchange Management Shell command to update it: Update-EmailAddressPolicy. Do you want to continue?

## Configure Exchange Server 2019 Certificate

One of the most important post installation tasks is to configure SSL certificate in Exchange 2019. Ensuring that certificates are installed and configured correctly is key to deliver a secure messaging infrastructure. Certificate management in the EAC can help administrators:

- Minimizing the number of certificates that are required.
- Minimizing the interaction that's required for certificates.
- Allowing the centralized installation and management of certificates on all Exchange servers in the organization.

There are 2 methods available in Exchange 2019 to configure SSL Certificate.

- SSL Certificate using Exchange Admin Center
- SSL Certificate using Exchange Management Shell

### Certificate Requirements for Exchange services

The Exchange services that certificates can be assigned to are described in the following table.

| Service    | Description  |
|------------|--|
| IIS (HTTP) | By default, the following services are offered under the default website in the Client Access (frontend) services on a Mailbox server, and are used by clients to connect to Exchange: <ul style="list-style-type: none"><li>• Autodiscover</li><li>• Exchange ActiveSync</li><li>• Exchange admin center</li><li>• Exchange Web Services</li><li>• Offline address book (OAB) distribution</li><li>• Outlook Anywhere (RPC over HTTP)</li><li>• Outlook MAPI over HTTP</li><li>• Outlook on the web</li></ul> |

| Service     | Description  |
|-------------|--|
|             | <ul style="list-style-type: none"><li>• Remote PowerShell*</li></ul> Because you can only associate a single certificate with a website, all the DNS names that clients use to connect to these services need to be included in the certificate. You can accomplish this by using a SAN certificate or a wildcard certificate. |
| POP or IMAP | The certificates that are used for POP or IMAP can be different from the certificate that's used for IIS. However, to simplify administration, we recommend that you also include the host names that are used for POP or IMAP in your IIS certificate, and use the same certificate for all of these services.                |
| SMTP        | SMTP connections from clients or messaging servers are accepted by one or more Receive connectors that are configured in the Front End Transport service on the Exchange server.   |

### Best practices for Exchange certificates

Although the configuration of your organization's digital certificates will vary based on its specific needs, information about best practices has been included to help you choose the digital certificate configuration that's right for you.

- **Use as few certificates as possible:** Very likely, this means using SAN certificates or wildcard certificates. In terms of interoperability with Exchange, both are functionally equivalent. The decision on whether to use a SAN certificate vs a wildcard certificate is more about the key capabilities or limitations (real or perceived) for each type of certificate as described in the Digital certificates overview.
- **Use certificates from a commercial CA** for client and external server connections: Although you can configure most clients to trust any certificate or certificate issuer, it's much easier to use a certificate from a commercial CA for client connections to your Exchange servers. No configuration is required on the client to trust a certificate that's issued by a commercial CA. Many commercial CAs offer certificates that are configured specifically for Exchange. You can use the EAC or the Exchange Management Shell to generate certificate requests that work with most commercial CAs.
- **Verify that the CA is trusted by the clients** (operating systems, browsers, and mobile devices) that connect to your Exchange servers.
- Verify that the CA supports the kind of certificate that you need. For example, not all CAs support SAN certificates, the CA might limit the number of common names that you can use in a



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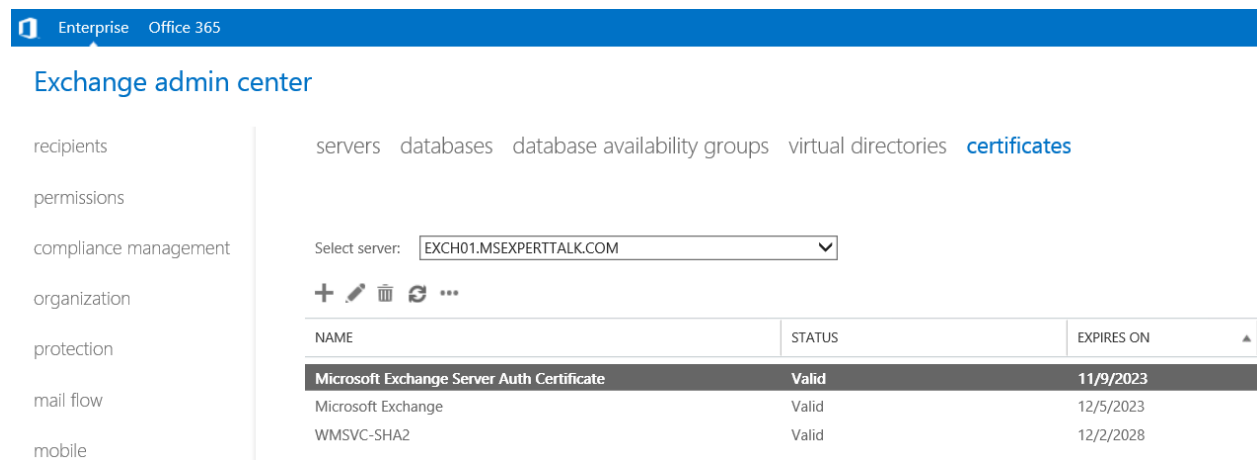
SAN certificate, or the CA may charge extra based on the number of common names in a SAN certificate.

- See if the CA offers a grace period during which you can add additional common names to SAN certificates after they're issued without being charged.
- Verify that the certificate's license allows you to use the certificate on the required number of servers. Some CAs only allow you to use the certificate on one server.
- **Use the Exchange certificate wizard:** A common error when you create certificates is to forget one or more common names that are required for the services that you want to use. The certificate wizard in the Exchange admin center helps you include the correct list of common names in the certificate request. The wizard lets you specify the services that will use the certificate and includes the common names that you need to have in the certificate for those services.
- **Use as few host names as possible:** Minimizing the number of host names in SAN certificates reduces the complexity that's involved in certificate management. Don't feel obligated to include the host names of individual Exchange servers in SAN certificates if the intended use for the certificate doesn't require it. Typically, you only need to include the DNS names that are presented to the internal clients, external clients, or external servers that use the certificate to connect to Exchange.

For this documentation, we're going to configure SSL Certificate on Exchange 2019 using the **Exchange Admin Center**. To configure the SSL Certificate, follow the instructions mentioned below.

### Create SSL Certificate Request for Exchange Server

- Open the EAC and navigate to Servers > Certificates.
- In the Select server list, select the Exchange server where you want to install the certificate, and then click Add **+**.



| NAME                                       | STATUS | EXPIRES ON |
|--|--------|------------|
| Microsoft Exchange Server Auth Certificate | Valid  | 11/9/2023  |
| Microsoft Exchange                         | Valid  | 12/5/2023  |
| WMSVC-SHA2                                 | Valid  | 12/2/2028  |

- The New Exchange certificate wizard opens. On the This wizard will create a new certificate or a certificate request file page, verify that Create a request for a certificate from a certification authority is selected, and then click Next.



## 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

- On the **Friendly name for this certificate** page, enter a descriptive name for the certificate, and then click **Next**.

## new Exchange certificate

\*Friendly name for this certificate:

Exchange Server 2019 SSL | ×

The friendly name is the display name for the certificate.

Back

Next

Cancel

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- On the **Request a wildcard certificate** page, make one of the following choices:
  - **If you want a wildcard certificate:** Select **Request a wildcard certificate**, and enter the wildcard character (\*) and the domain in the **Root domain** field. When you're finished, click **Next**.

Exchange Certificate - Internet Explorer



### new Exchange certificate

- Request a wildcard certificate (for example, \*.contoso.com or \*.eu.contoso.com). You can use a wildcard certificate for any host names in the domain but not for host names in subdomains. [Learn more](#)

\*Root domain:

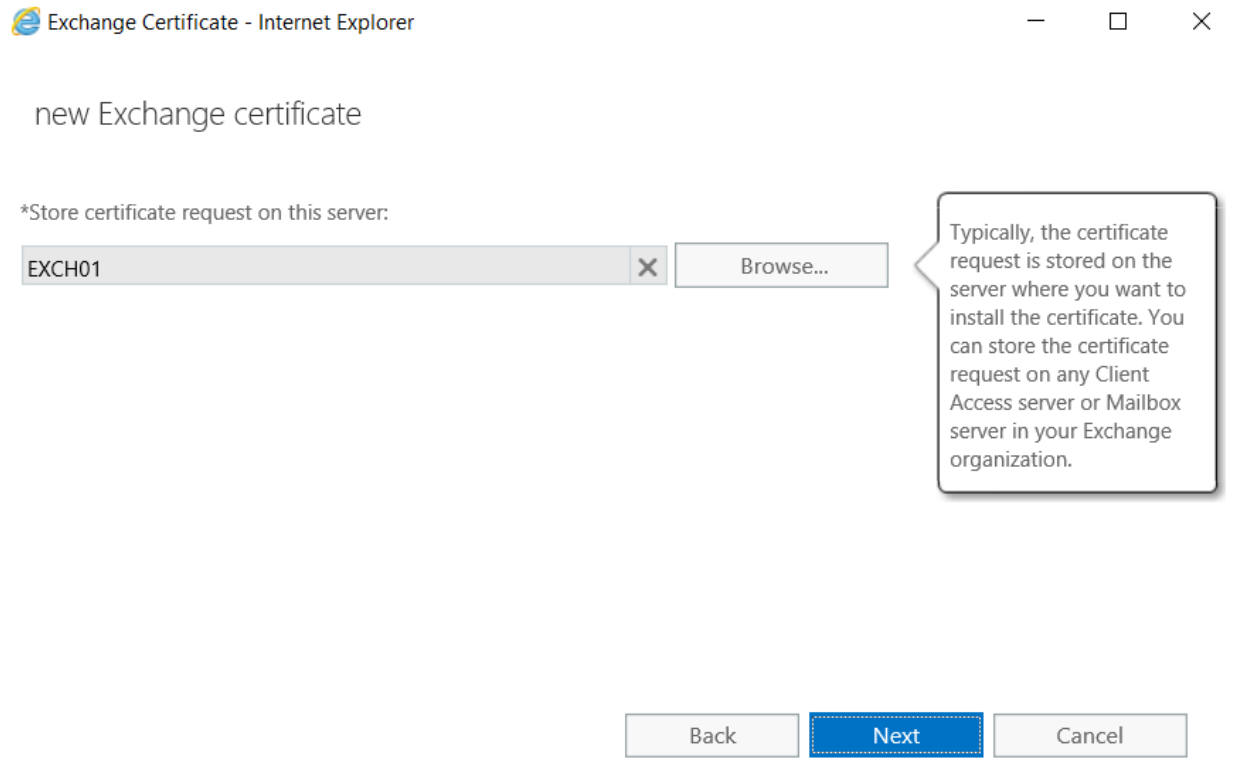
\*.msexperttalk.com

Back

Next

Cancel

- In the **Store certificate request on this server** page, click **Browse** and select the Exchange server where you want to store the certificate request (where you want to install the certificate), click **OK**, and then click **Next**.



- On the **Specify information about your organization** page, enter the following values:
  - Organization name
  - Department name
  - City/Locality
  - State/Province
  - Country/Region name

**Note:** These X.500 values are included in the certificate's **Subject** field. Although a value is required in every field before you can proceed, the CA might not care about certain fields (for example, **Department name**), while other fields are very important (for example, **Country/Region name** and **Organization name**). Check the **Subject** field requirements of your CA.

Exchange Certificate - Internet Explorer

new Exchange certificate

Provide information about your organization. This X.500 information is included in the certificate's Subject field. [Learn more](#)

\*Organization name:

\*Department name:

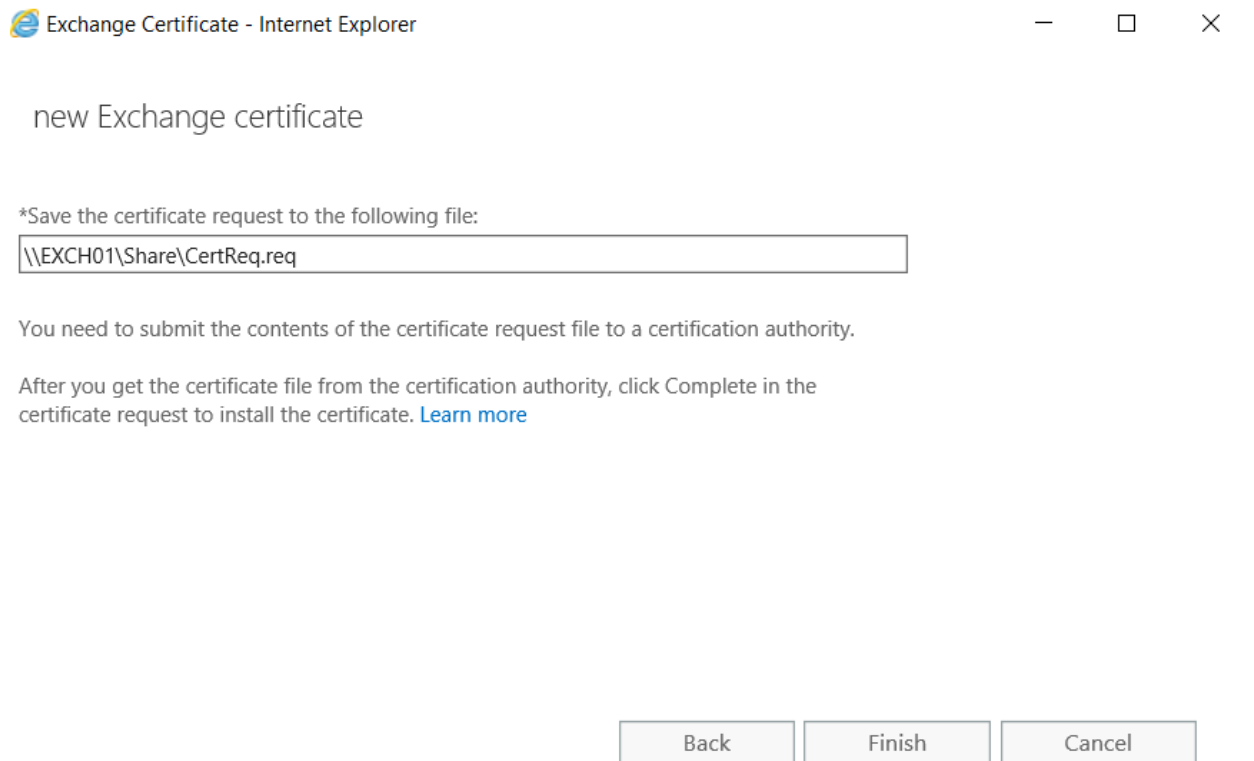
\*City/Locality:

\*State/Province:

\*Country/Region name:

Back Next Cancel

- When you're finished, click **Next**.
- On the **Save the certificate request to the following file** page, enter the UNC path and filename for the certificate request. For example, \\FileServer01\Data\ExchCertRequest.req. When you're finished, click **Finish**.



## Complete SSL Certificate Request for Exchange Server

- Open the EAC and navigate to **Servers > Certificates**.
- In the **Select server** list, select the Exchange server that holds the pending certificate request.

servers databases database availability groups virtual directories [certificates](#)

Select server: EXCH01.MSEXPERTTALK.COM



| NAME                                       | STATUS                 | EXPIRES ON       |
|--|------------------------|------------------|
| <b>Exchange Server 2019 SSL</b>            | <b>Pending request</b> | <b>12/8/2019</b> |
| Microsoft Exchange Server Auth Certificate | Valid                  | 11/9/2023        |
| Microsoft Exchange                         | Valid                  | 12/5/2023        |
| WMSVC-SHA2                                 | Valid                  | 12/2/2028        |

- A pending certificate request has the following properties:
  - In the list of certificates, the value of the **Status** field is **Pending request**.
  - When you select the certificate request from the list, there's a **Complete** link in the details pane.

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- Select the pending certificate request that you want to complete, and then click **Complete** in the details pane.
- On the **Complete pending request** page that opens, in the **File to import from** field, enter the UNC path and filename for the certificate file. For example, When you're finished, click **OK**.

Exchange Certificate - Internet Explorer

## Complete pending request

This action imports the certificate file that you received from the certification authority. After you import the certificate on the server, you need to assign the certificate to one or more Exchange services. [Learn more](#)

\*File to import from:

The UNC path is required.  
For example:  
\\server\share\MyCertificate.CER

OK Cancel

- Once the certificate request is completed. Next Step is to assign the services to the SSL certificate. To assign the services, Select the SSL certificate and click on Edit and select the services under services tab and click Save.

general  
▶ **services**

Specify the Exchange services that you want to assign this certificate to. [Learn more](#)

- SMTP
- IMAP
- POP
- IIS