

Exchange Server 2019-Step by Step Installation on Windows Server 2019

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About Author

Shakir is IT Consultant with over 13 years of extensive experience working with Microsoft Technologies AD, Exchange, O365, Windows Azure, PowerShell, Skype for Business, SQL, SharePoint and Microsoft public clouds, and providing solutions to different local & international Enterprise customers.

Shakir has been involved in Infrastructure Designing and Implementation, Virtualization, and Disaster Recovery. Extensive hands-on experience in Core Server Infrastructure, Cloud Computing, Virtualization/ Management and Information Protection. Analysis and Support of Microsoft Windows Server based Client / Server network, AD, Messaging, Skype for Business, SQL Always ON, Virtualization and System Center Infrastructure Products. Shakir has various industry certifications: MCT, MCTS, MCITP, MCSA, MCSE: Messaging, MCPS, MCSE: Cloud Platform and Infrastructure and also providing trainings on Microsoft Based Technologies.

Exchange Server 2019 Summary

Microsoft Exchange Team, pleased to announce a preview build of Exchange Server 2019 which is now available. You can download it from [Here](#). In Exchange Server 2019, Microsoft has done some major changes and remove unified communication role. Exchange Server 2019 has been tuned with more performance, security and better administration with management capabilities.

Exchange Server 2019 also has the support for Windows Server Core edition installation with Windows Server 2019. We can also install Exchange Server 2019 on Windows Server 2016 Core or with Desktop experience. You can read more about features from [Read More](#).

In this article we will walk through the installation of Microsoft Exchange Server 2019 with Desktop Experience on Windows Server 2019.

Exchange 2019 Lab Setup

This is a fully virtualized LAB on ESX 6.5 Server. You can deploy the same on VMware workstation or Hyper-V. We are also using Windows Server 2019 Preview edition with Desktop Experience in this LAB as Domain Controller. Following table shows the LAB environment.

Server Name	IP Address	Mask	GW	DNS	Role
DC2K19	172.16.110.229	24	172.16.110.1	172.16.110.229	DC
EX19	172.16.110.230	24	172.16.110.1	172.16.110.229	Exchange 2019

LAB Virtual Resources

RAM	vCPU	HDD	NIC
16	4	100 GB	1

You can specify the hardware resources as per your environment. This configuration will work for your lab setup and testing purpose.

Installation of Domain Controller on Server 2019

As Microsoft has release new Windows Server 2019 with more enhanced features and security related stuff. We have preview editions available to take a look and drive it to look more in depth.

Domain Controller has been installed on Windows Server 2019, you can download a separate HowTo from TechNet Gallery.

<https://gallery.technet.microsoft.com/Windows-Server-2019-Step-4c0a3678?redir=0>

Exchange Server 2019 Software Requirement

You can download preview edition of Exchange Server 2019 from Microsoft in ISO format.

[Download Exchange 2019 Public Preview.](#)

After you've installed the operating system roles and features, install the following software in the order shown:

1. .NET Framework 4.7.1
2. Unified Communications Managed API 4.0 Runtime

A reboot is required after all roles, features and software's installation.

Hardware Requirement

Minimum hardware requirement is mentioned above in Lab Setup only for testing purpose and Lab Environment. You can further study Microsoft recommendation for Exchange 2019 hardware requirements.

Server 2019 Server Properties

Here you can have a look to the basic setting such as time zone, IE security settings, firewall and remote desktop with server name etc.

PROPERTIES For EX19			
Computer name	EX19	Last installed updates	Never
Domain	mstechguru.ae	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Never
Windows Defender Firewall	Domain: Off	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC+04:00) Abu Dhabi, Muscat
Ethernet0	172.16.110.230	Product ID	Not activated
Operating system version	Microsoft Windows Server 2019 Datacenter	Processors	Intel(R) Xeon(R) CPU E5-2690 v2 @ 3.00GHz, Intel(R)
Hardware information	VMware, Inc. VMware Virtual Platform	Installed memory (RAM)	16 GB
		Total disk space	99.46 GB

Roles and Features Installation

At this point we have to install Windows Server 2019 roles and features on Exchange Server 2019 as prerequisites.

Install-WindowsFeature 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, RSAT-ADDS

```
Administrator: Windows PowerShell
PS C:\Users\administrator.MSTECHGURU> Install-WindowsFeature 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, RSAT-ADDS
```

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

Start Installation...
24%
[ooooooooooooooooooooooooooooo]

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
```

```
Administrator: Windows PowerShell

PS C:\Users\administrator.MSTECHGURU> Install-WindowsFeature 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-Clie
nt-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

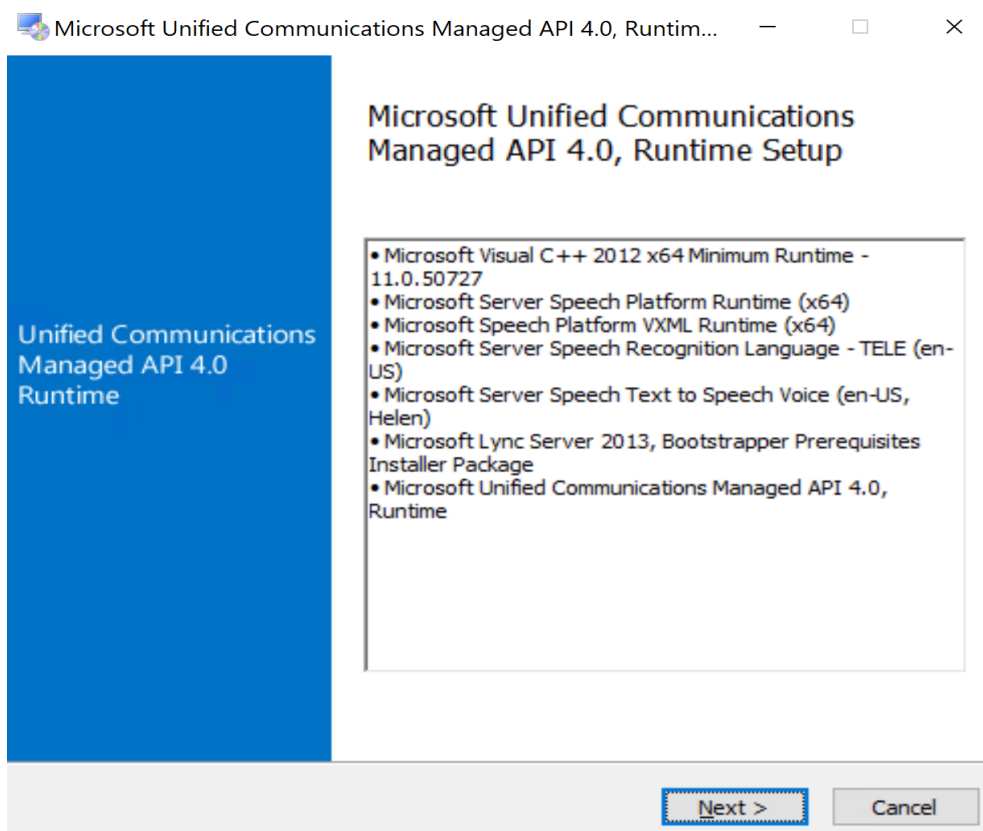
Success Restart Needed Exit Code      Feature Result
-----
True      No              Success          {Message Queuing, Message Queuing Server, ...

PS C:\Users\administrator.MSTECHGURU>
```

Windows Server 2019 roles and features are installed successfully, at this point you need to give a reboot to your Server.

Installation of UCM


We also need to install Unified Communication Manager on the Server to avoid any error for the installation of prerequisites.



Click on Next.

Microsoft Unified Communications Managed API 4.0, Runtime... - □ ×

Unified Communications Managed API 4.0, Runtime Setup
Please accept the license terms to continue.



MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT UNIFIED COMMUNICATIONS MANAGED API 4.0 RUNTIME

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

I have read and accept the license terms.

Yes, send information about my setup experiences to Microsoft Corporation.

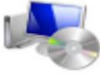
For more information, read the [Data Collection Policy](#).


Install **Cancel**


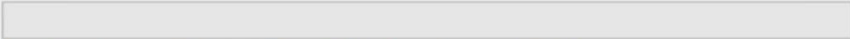
Accept Agreement and Click on Install.

Microsoft Unified Communications Managed API 4.0, Runtime... - □ ×

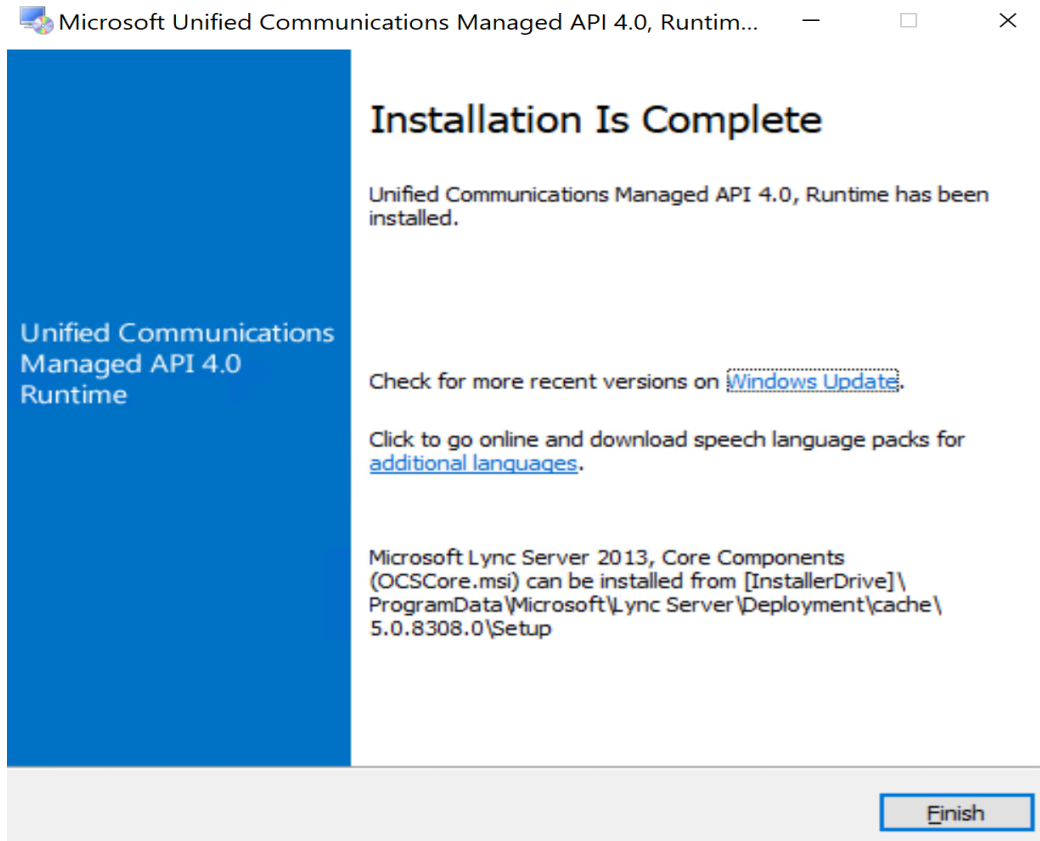
Installation Progress
Please wait while the Unified Communications Managed API 4.0, Runtime is being installed.



File verification:

All files verified successfully

Installation progress: 

Installing Microsoft Server Speech Platform Runtime (x64)

Cancel



Click Finish the setup and give a reboot to your Server.

Prepare Active Directory for Exchange 2019

Before you install Microsoft Exchange Server 2019, you need to prepare your Active Directory forest and domains. Here you need to mount Exchange Server 2019 ISO image and run CMD as administrator and move to ISO image location. D:\

This preparation will be done through the following 3 steps:

Extend the Active Directory schema

The first step in getting your organization ready for Exchange 2019 is to extend the Active Directory schema by running the following command:

“Setup.exe /PrepareSchema /IAcceptExchangeServerLicenseTerms”

```
Administrator: Command Prompt
D:\>Setup.exe /PrepareSchema /IAcceptExchangeServerLicenseTerms

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.

D:\>_
```

Prepare Active Directory

The second step that Exchange will create containers, objects, and other items in Active Directory that Exchange Server will use to store information by running the following command:

```
“Setup.exe /PrepareAD /OrganizationName:”MSTechGuru”
/IAcceptExchangeServerLicenseTerms”
```

```
D:\>Setup.exe /PrepareAD /OrganizationName:"MSTechNetGuru" /IAcceptExchangeServerLicenseTerms

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.

D:\>_
```

Prepare Active Directory domains

The final step is to prepare the Active Directory domains where Exchange will be installed or where mail-enabled users will be located by running the following command:

“Setup.exe /PrepareAllDomains /IAcceptExchangeServerLicenseTerms”

```
D:\>Setup.exe /PrepareAllDomains /IAcceptExchangeServerLicenseTerms

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

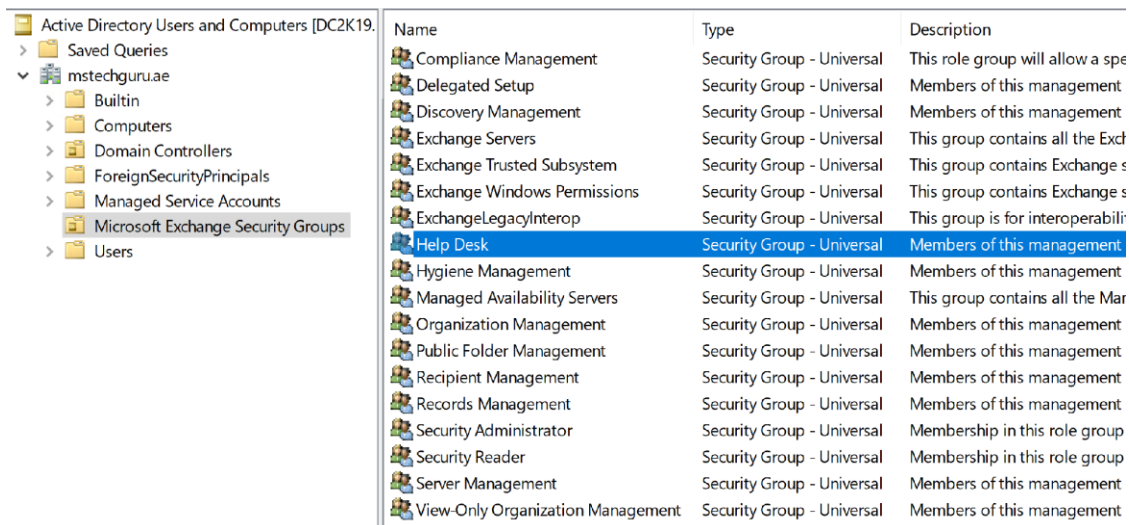
    Prepare Domain Progress                                                COMPLETED

The Exchange Server setup operation completed successfully.

D:\>_
```

At the end of these three steps, your Active Directory 2019 environment will be ready for Exchange Server 2019 installation.

As you can see the Active Directory is extended with Exchange Server security groups.



The screenshot shows the Active Directory Users and Computers console for a domain named mstechguru.ae. The left pane shows the hierarchy: Active Directory Users and Computers [DC2K19] > Saved Queries > mstechguru.ae > Microsoft Exchange Security Groups. The right pane displays a list of security groups with columns for Name, Type, and Description. The 'Help Desk' group is highlighted.

Name	Type	Description
Compliance Management	Security Group - Universal	This role group will allow a spe
Delegated Setup	Security Group - Universal	Members of this management
Discovery Management	Security Group - Universal	Members of this management
Exchange Servers	Security Group - Universal	This group contains all the Exch
Exchange Trusted Subsystem	Security Group - Universal	This group contains Exchange s
Exchange Windows Permissions	Security Group - Universal	This group contains Exchange s
ExchangeLegacyInterop	Security Group - Universal	This group is for interoperabili
Help Desk	Security Group - Universal	Members of this management
Hygiene Management	Security Group - Universal	Members of this management
Managed Availability Servers	Security Group - Universal	This group contains all the Mar
Organization Management	Security Group - Universal	Members of this management
Public Folder Management	Security Group - Universal	Members of this management
Recipient Management	Security Group - Universal	Members of this management
Records Management	Security Group - Universal	Members of this management
Security Administrator	Security Group - Universal	Membership in this role group
Security Reader	Security Group - Universal	Membership in this role group
Server Management	Security Group - Universal	Members of this management
View-Only Organization Management	Security Group - Universal	Members of this management

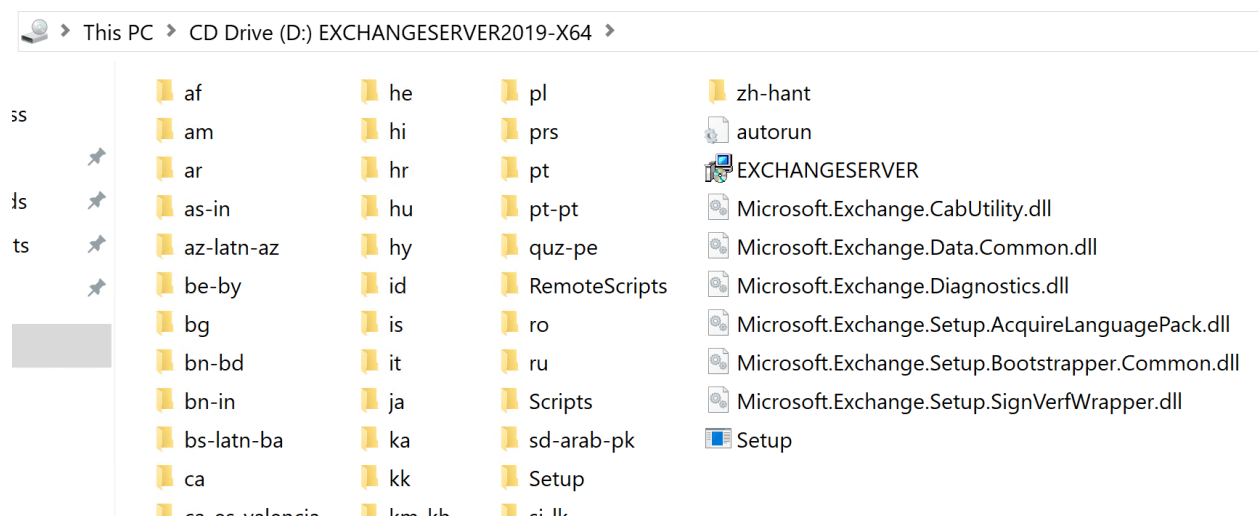
A reboot is required here.

Installation of Exchange Server 2019

Then we will install the first Mailbox server to our environment. Mount Exchange Server 2019 ISO image to your Server and open the drive and run Setup.exe.

✓ Open the Setup.exe

Check “Don’t check for update right now” and press next



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



next

Click Next

Copying Files...

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

Copying files...

73%



Initializing Setup...

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



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

Click Next to continue the installation

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, send your computer for information about Microsoft refund policies. See

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



next

Accept the 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

Select the first option and Click on 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

Select Mailbox role and Automatically install Windows Server roles & Features, Click Next

Installation Space and Location

Disk space required: 6352.4 MB
Disk space available: 88021.1 MB

Specify the path for the Exchange Server installation:

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



back

next

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

Keep going with default option and Click Next.

Readiness Checks

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

Configuring Prerequisites

52%



back

install

Readiness Checks

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

Prerequisite Analysis

100%



install

Click on Install when prerequisite analysis is completed 100%.

Setup Progress

Step 2 of 13: Copy Exchange Files

16%



Setup Progress

Step 12 of 13: Finalizing Setup

2%



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.



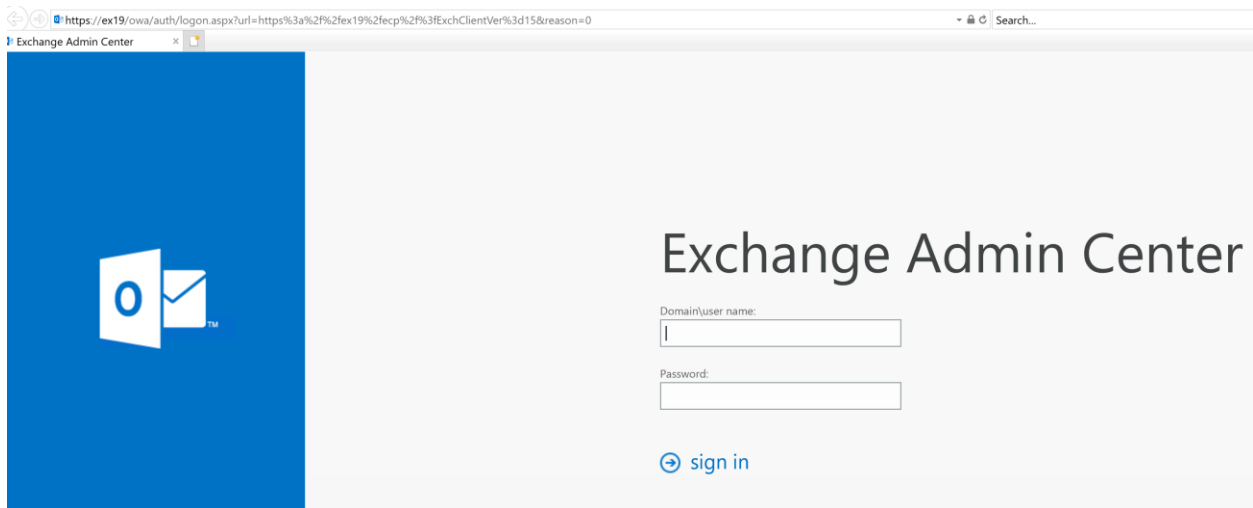
finish

Click on Launch and Click Finish.

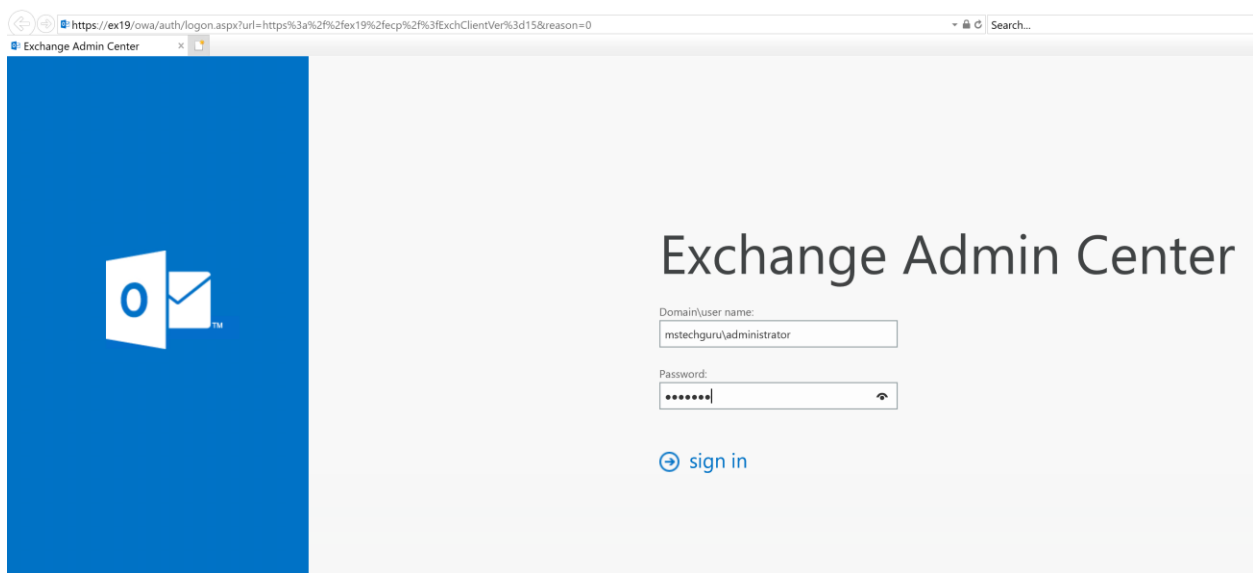
At this point we have successfully installed Microsoft Exchange Server 2019. Let's have a look to the Dashboard and we need to reboot the Exchange Server after first installation.

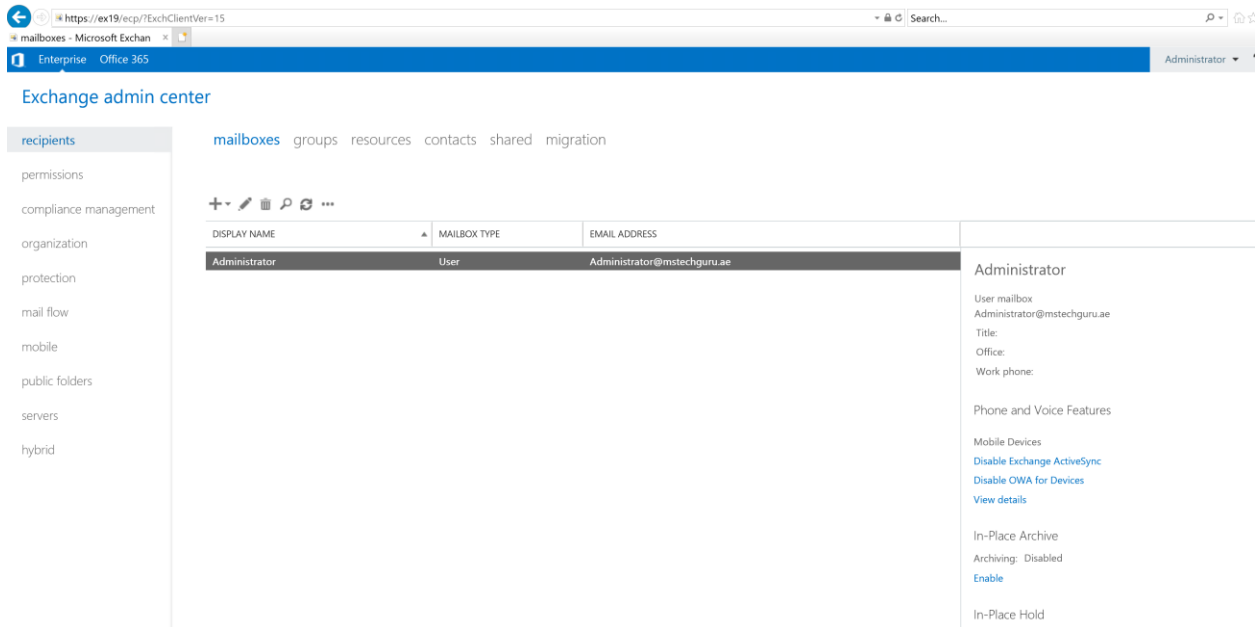
Accessing Exchange Server 2019

When you click on finish, Exchange 2019 login page will be opened on your Internet Explorer.



You need to provide administrative credentials with Domain as

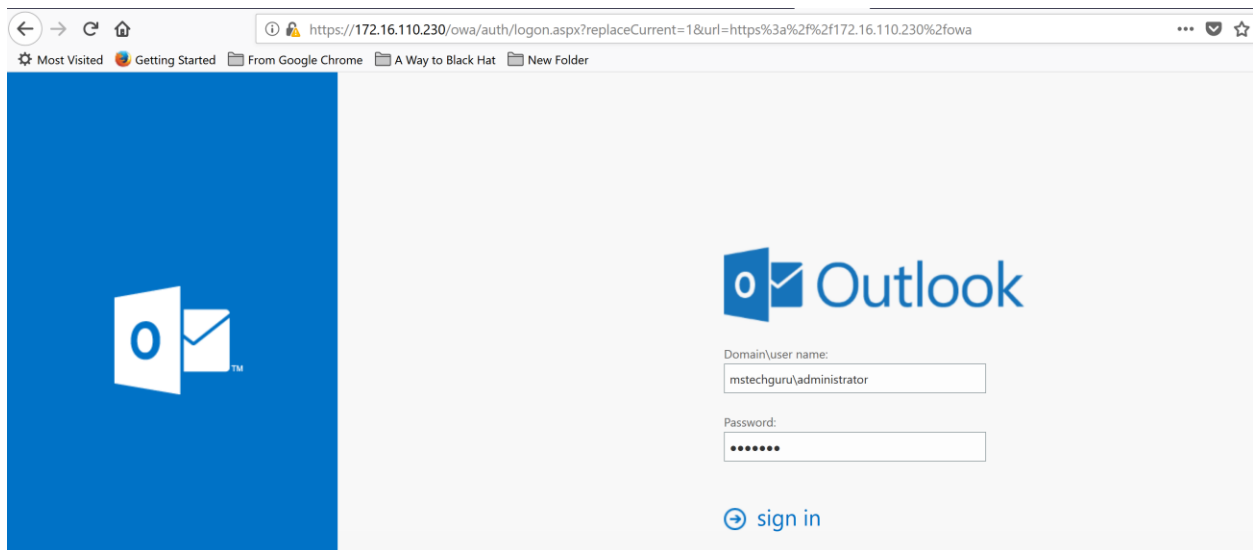




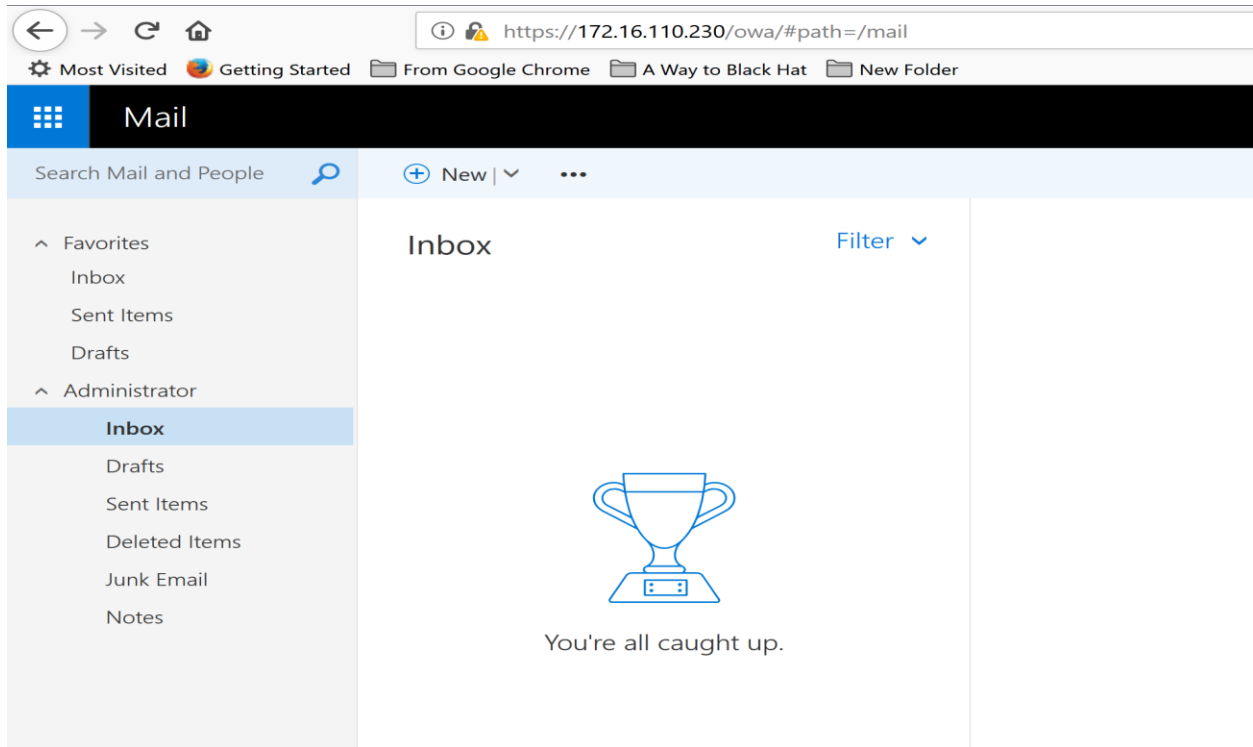
Here you will see the Dashboard of Microsoft Exchange Server 2019 with first mailbox of Administrator.

Let's try to login from OWA with Administrator credentials.

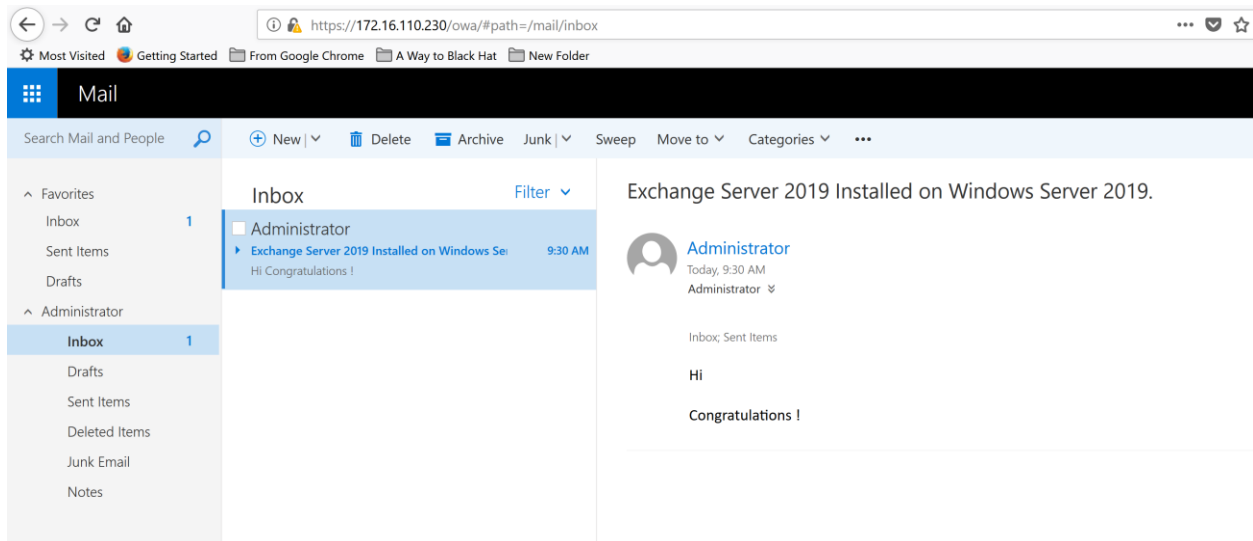
Exchange Server 2019 OWA



Provide credentials of administrator and click on sign in.



It looks almost same interface like Exchange Server 2016 but we need to explore the changes in features, security and performance. Let's send one test email from administrator to administrator.



At this point, we have installed Microsoft Exchange Server 2019 successfully and test one email from administrator account.

I hope you will enjoy this installation. I will keep posting next configurations such as, OWA Virtual Directories configuration, mailbox, DAG, SSL certificate and User's management with Exchange Server 2019 publishing.