

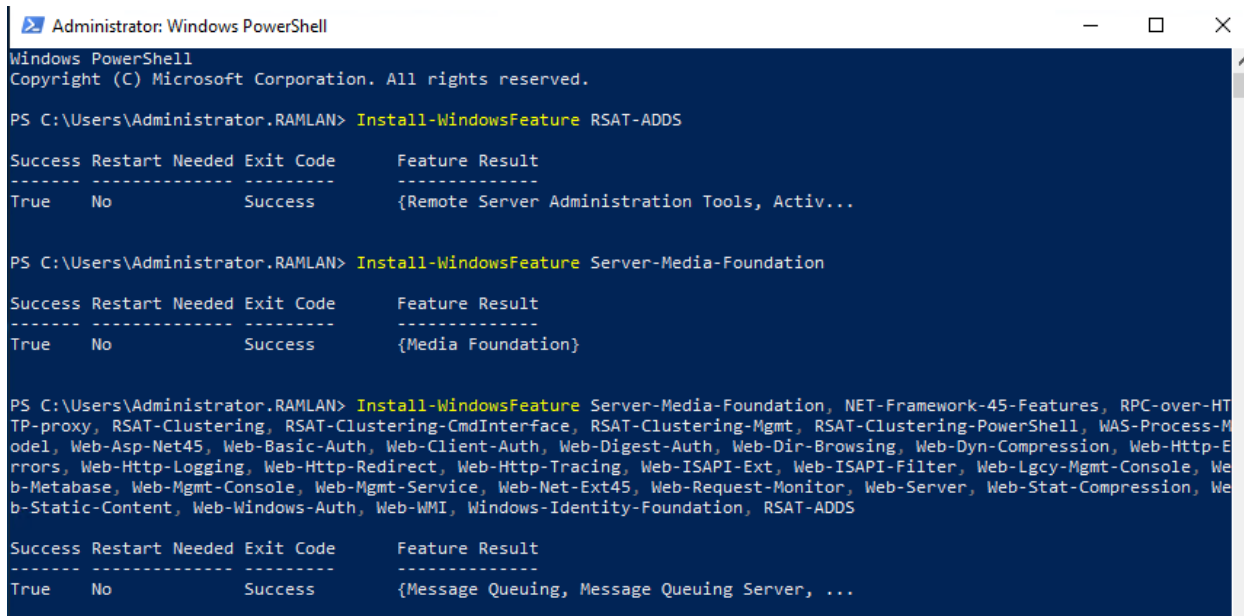
## INSTALLING EXCHANGE SERVER 2019 ON WINDOWS SERVER 2019

In this post, I will show you how to install and configure Exchange Server 2019 on Windows Server 2019.

To start with build a Windows Server 2019 and install all the updates. It can be a physical or virtual machine. Make sure you have enough space and memory.

My Exchange Server is running on Lenovo T430 with 500GB SSD Hard Disk and 16GB Memory. I have installed the OS and all the updates. Restarted the system and completed the following.

1. .NET Framework 4.7.2 - <https://go.microsoft.com/fwlink/p/?linkid=863265> - **Not required, if you are running Windows Server 2019**
2. C++ 2013 - <https://go.microsoft.com/fwlink/?linkid=2002913>
3. Install-WindowsFeature RSAT-ADDS
4. Install-WindowsFeature Server-Media-Foundation
5. Unified Communications API 4.0 - <https://www.microsoft.com/download/details.aspx?id=34992>
6. 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



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

PS C:\Users\Administrator.RAMLAN> Install-WindowsFeature RSAT-ADDS

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

PS C:\Users\Administrator.RAMLAN> Install-WindowsFeature Server-Media-Foundation

Success Restart Needed Exit Code      Feature Result
-----
True      No             Success      {Media Foundation}

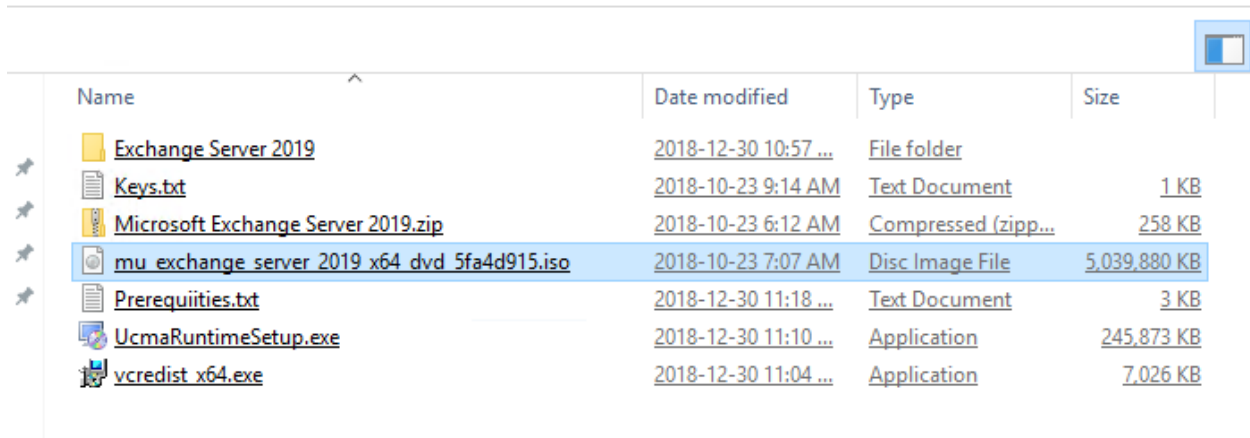
PS C:\Users\Administrator.RAMLAN> Install-WindowsFeature Server-Media-Foundation, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, WAS-Process-Model, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, 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








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

With above pre req completed, we are ready to install Exchange Server 2019.

Mount the ISO and run setup.exe

EX2019 > Downloads > EX



Name	Date modified	Type	Size
 Exchange Server 2019	2018-12-30 10:57 ...	File folder	
 Keys.txt	2018-10-23 9:14 AM	Text Document	1 KB
 Microsoft Exchange Server 2019.zip	2018-10-23 6:12 AM	Compressed (zipp...	258 KB
 mu_exchange_server_2019_x64_dvd_5fa4d915.iso	2018-10-23 7:07 AM	Disc Image File	5,039,880 KB
 Prerequiities.txt	2018-12-30 11:18 ...	Text Document	3 KB
 UcmaRuntimeSetup.exe	2018-12-30 11:10 ...	Application	245,873 KB
 vcredist_x64.exe	2018-12-30 11:04 ...	Application	7,026 KB

MICROSOFT EXCHANGE SERVER 2019

? X

## 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

 Exchange

next

## Downloading Updates...

No updates found, click next to continue with setup.



next

## Copying Files...

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

Copying files...

0%



## 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

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

[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](#)

## 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](#)

## Installation Space and Location

Disk space required: 5734.1 MB

Disk space available: 432538.3 MB

Specify the path for the Exchange Server installation:

[browse](#)[back](#)[next](#)

## Exchange Organization

Specify the name for this Exchange organization:

☐ Apply Active Directory split permissions security model to the Exchange organization

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

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

[back](#)[next](#)

## 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](#)

## Readiness Checks

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

Configuring Prerequisites

78%



back

install

## Readiness Checks

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

Prerequisite Analysis

100%



**Warning:**

Setup will prepare the organization for Exchange Server 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](http://technet.microsoft.com/library(EXCHG.150)/ms.exch.setupreadiness.NoE16ServerWarning.aspx)

**Warning:**

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](http://technet.microsoft.com/library(EXCHG.150)/ms.exch.setupreadiness.NoE15ServerWarning.aspx)



install

## 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](#)

### Verify Exchange Server 2019 Installation:

After you install Exchange Server 2019, Microsoft recommend that you verify the installation by running the Get-ExchangeServer |ft \_AutoSize cmdlet.

```
[PS] C:\Windows\system32>Get-ExchangeServer |ft -AutoSize
```

Name	Site	ServerRole	Edition	AdminDisplayVersion
EX2019	RAMLAN.CA/Configuration/Sites/Default-First-Site-Name	Mailbox	StandardEvaluation	Version 15.2 (Build 221.12)

Machine: EX2019.RAMLAN.CA

```
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 EX2019.RAMLAN.CA.
VERBOSE: Connected to EX2019.RAMLAN.CA.
[PS] C:\Windows\system32>Get-ExchangeServer
```

Name	Site	ServerRole	Edition	AdminDisplayVersion
EX2019	RAMLAN.CA/Configu...	Mailbox	Standard...	Version 15.2 (Bu...

## 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

EX2019 > OS (C:) > ExchangeSetupLogs				
Name	Date modified	Type	Size	
 <a href="#">AdminToolsPrereqs.log</a>	<a href="#">2018-12-30 11:34 ...</a>	<a href="#">LOG File</a>	<a href="#">1 KB</a>	
 <a href="#">ExchangeSetup.log</a>	<a href="#">2018-12-31 12:40 ...</a>	<a href="#">LOG File</a>	<a href="#">6,750 KB</a>	
 <a href="#">ExchangeSetup.msilog</a>	<a href="#">2018-12-30 11:53 ...</a>	<a href="#">MSILOG File</a>	<a href="#">1 KB</a>	
 <a href="#">ExchangeSetupBootStrapper.log</a>	<a href="#">2018-12-31 12:41 ...</a>	<a href="#">LOG File</a>	<a href="#">2 KB</a>	

## Activate Exchange Server 2019:

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

```
Machine: EX2019.RAMLAN.CA

[PS] C:\Windows\system32>Get-ExchangeServer |ft name,admindisplay*

Name      AdminDisplayVersion
----      -
EX2019    Version 15.2 (Build 221.12)

[PS] C:\Windows\system32>Set-ExchangeServer EX2019 -ProductKey [REDACTED]
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.

[PS] C:\Windows\system32>Get-ExchangeServer EX2019 | Format-List Name,Edition,*Trial*

Name              : EX2019
Edition           : Enterprise
IsExchangeTrialEdition : False
IsExpiredExchangeTrialEdition : False
RemainingTrialPeriod  : 00:00:00

[PS] C:\Windows\system32>Get-ExchangeServer | Format-Table -Auto Name,Edition,*Trial*

Name      Edition IsExchangeTrialEdition IsExpiredExchangeTrialEdition RemainingTrialPeriod
----      -
EX2019    Enterprise                False                        False 00:00:00
```

## 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.

Login to Exchange Admin Center.

Navigate to Exchange Admin Center → Servers → Databases

Select the database and click on Edit

The image shows two screenshots from the Exchange Admin Center. The top screenshot is the 'Exchange admin center' interface, specifically the 'databases' tab under 'servers'. It displays a table of mailbox databases. The bottom screenshot is a detailed view of a mailbox database configuration window titled 'Mailbox database - Internet Explorer'.

**Exchange Admin Center - Databases Table:**

NAME	ACTIVE ON SERVER	SERVICES WITH COPIES	STATUS	BAD COPY COUNT
Mailbox Database 0310944151	EX2019	EX2019	Mounted	0

**Mailbox Database 0310944151 - Configuration Details:**

- Name:** DB01
- Database path:** C:\Program Files\Microsoft\Exchange Server\V15\Mailbox\M.
- Last full backup:**
- Last incremental backup:**
- Status:** Mounted
- Mounted on server:** EX2019.RAMLAN.CA
- Master:** EX2019
- Master type:** Server
- Modified:** 2018-12-31 12:07 AM

A callout box points to the 'Name' field with the text: "The name of your new database."

Buttons: Save, Cancel

Footer: Local intranet | Protected Mode: Off | 100%

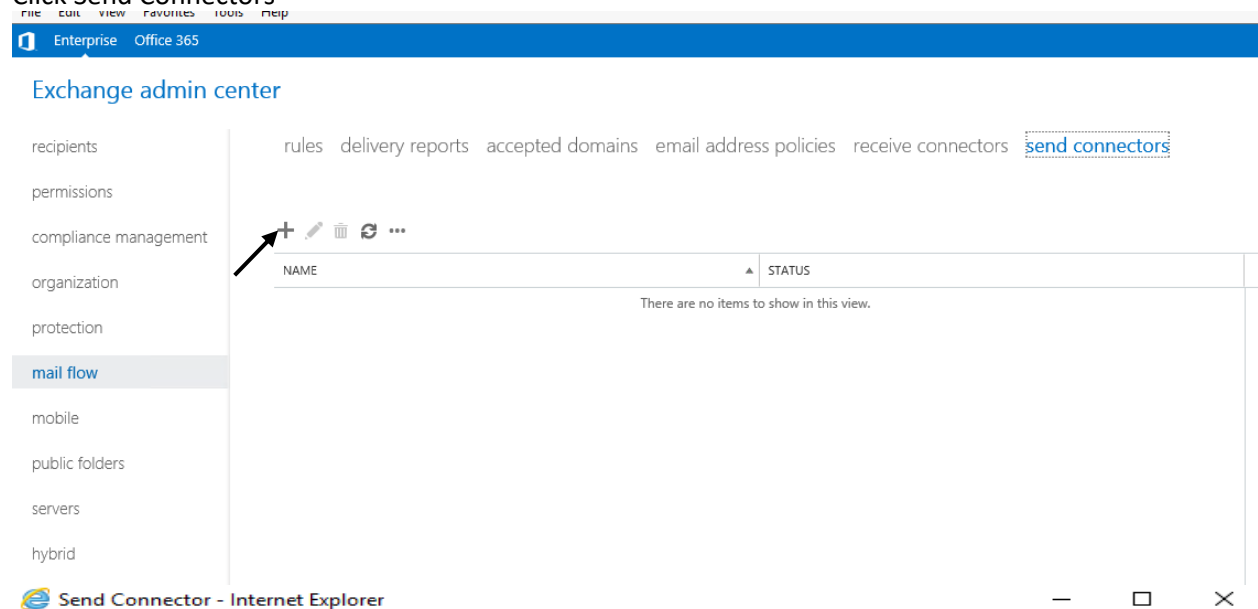
## Send Connector:

Since, I have setup Exchange at home in the lab, I have to use SmartHost to send email through this Exchange Server because Port 25 is blocked by ISP (Rogers). I will be using Port 2525 through SmartHost.

Login to Exchange Admin Center

Click Mail Flow

Click Send Connectors



## 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:

DNS|Exit

Create a meaningful, distinguishable name.

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

Network Settings -- Webpage Dialog

×

Add smart host

Specify the smart host's fully qualified domain name (FQDN) or IPv4 address.  
\*Example: myhost.contoso.com or 192.168.3.2

relay.dnsexit.com

×

Specify the fully qualified domain name.

↑

↓

Save

Cancel

Send Connector - Internet Explorer

—

□

×

new send connector

A send connector can route mail directly through DNS or redirect it to a smart host. [Learn more...](#)

\*Network settings:  
Specify how to send mail with this connector.

☐ MX record associated with recipient domain

☒ Route mail through smart hosts

+ ✎ −

SMART HOST

relay.dnsexit.com

☐ Use the external DNS lookup settings on servers with transport roles

Back

Next

Cancel

Local intranet | Protected Mode: Off

100%

▼

## new send connector

Configure smart host authentication. [Learn more...](#)

Smart host authentication:

☐ None

☒ Basic authentication

☐ Offer basic authentication only after starting TLS

\*User name:

ramg1967

\*Password:

••••••••

Note: all smart hosts must accept the same username and password.

☐ Exchange Server authentication

☐ Externally secured (for example, with IPsec)

Back

Next

Cancel

Local intranet | Protected Mode: Off 100%

## add domain

\*Type:

SMTP

\*Full Qualified Domain Name (FQDN):

\*

\*Cost:

1

Save

Cancel

## 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

Local intranet | Protected Mode: Off 100%

NAME	SITE	ROLE	VERSION
EX2019	RAMLAN.CA/Configuration/Si...	Mailbox	Version 15.2 (Buil...
1 selected of 1 total			

add -&gt;

EX2019 [\[remove\]](#);

OK

Cancel

## 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
EX2019	RAMLAN.CA/Configuration/Sites/Default-First-Si...	Mailbox

[Back](#)[Finish](#)[Cancel](#)

File Edit View Favorites Tools Help

Enterprise Office 365

## 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](#)

NAME	STATUS	
DNS Exit	Enabled	<div>DNS Exit</div> <div>Last modified: 2018-12-31 9:19:33 AM</div> <div>Connector status - Enabled</div> <div><a href="#">Disable</a></div> <div>Logging - Off</div> <div><a href="#">On</a></div> <div>Maximum send message size (MB): 35</div>

Open Exchange Management Shell and run this command to set Send Connector to Port 2525.

Set-SendConnector -Identity "DNS Exit" -port 2525

```
Machine: EX2019.RAMLAN.CA

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 EX2019.RAMLAN.CA.
VERBOSE: Connected to EX2019.RAMLAN.CA.
[PS] C:\Windows\system32>Set-SendConnector -Identity "DNS Exit" -port 2525
[PS] C:\Windows\system32>
```

When you enter above command you should not see any error message. If there is no error message the command will return **No Message**. That means the send connector is set and working to send email from this exchange server on port 2525.

### 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. I will be using PowerShell command to change everything in one attempt.

 <a href="#">GetExchangeURLs.ps1</a>	<a href="#">2015-12-21 10:45 ...</a>	<a href="#">Windows PowerS...</a>	<a href="#">5 KB</a>
 <a href="#">ConfigureExchangeURLs.ps1</a>	<a href="#">2015-12-21 10:45 ...</a>	<a href="#">Windows PowerS...</a>	<a href="#">9 KB</a>

I used GetExchangeurls.ps1 to get the following.

```
-----
Querying EX2019
-----

Outlook Anywhere
- Internal: ex2019.ramlan.ca
- External:

Outlook Web App
- Internal: https://ex2019.ramlan.ca/owa
- External:

Exchange Control Panel
- Internal: https://ex2019.ramlan.ca/ecp
- External:

Offline Address Book
- Internal: https://ex2019.ramlan.ca/OAB
- External:

Exchange Web Services
- Internal: https://ex2019.ramlan.ca/EWS/Exchange.asmx
- External:

MAPI
- Internal: https://ex2019.ramlan.ca/mapi
- External:

ActiveSync
- Internal: https://ex2019.ramlan.ca/Microsoft-Server-ActiveSync
- External:

WARNING: The Get-ClientAccessServer cmdlet will be removed in a future version of Exchange. Use the
Get-ClientAccessService cmdlet instead. If you have any scripts that use the Get-ClientAccessServer cmdlet, update them
to use the Get-ClientAccessService cmdlet. For more information, see http://go.microsoft.com/fwlink/p/?LinkId=254711.
Autodiscover
- Internal SCP: https://ex2019.ramlan.ca/Autodiscover/Autodiscover.xml
```

Now, I will use ConfigureExchangeURLs.ps1 to change everything to mail.ramlan.ca

.\ConfigureExchangeURLs.ps1 -Server ex2019 -InternalURL mail.ramlan.ca -ExternalURL mail.ramlan.ca

```
[PS] C:\Users\Administrator\RAMLAN\Downloads> .\ConfigureExchangeURLs.ps1 -Server ex2019 -InternalURL mail.ramlan.ca -ExternalURL mail.ramlan.ca

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 EX2019.RAMLAN.CA.
VERBOSE: Connected to EX2019.RAMLAN.CA.
-----
Configuring ex2019
-----
Values:
- Internal URL: mail.ramlan.ca
- External URL: mail.ramlan.ca
- Outlook Anywhere default authentication: NTLM
- Outlook Anywhere internal SSL required: True
- Outlook Anywhere external SSL required: True

Configuring Outlook Anywhere URLs
Configuring Outlook Web App URLs
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.
Configuring Exchange Control Panel URLs
Configuring ActiveSync URLs
Configuring Exchange Web Services URLs

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"): y

Confirm
The host specified for the "ExternalUrl" 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"): y

Configuring Offline Address Book URLs
Configuring MAPI/HTTP URLs
Configuring Autodiscover
WARNING: The Get-ClientAccessServer cmdlet will be removed in a future version of Exchange. Use the Get-ClientAccessService cmdlet instead. If you have any scripts that use the Get-ClientAccessServer cmdlet, update them to use the Get-ClientAccessService cmdlet. For more information, see http://go.microsoft.com/fwlink/p/?LinkId=254711.
WARNING: The Set-ClientAccessServer cmdlet will be removed in a future version of Exchange. Use the Set-ClientAccessService cmdlet instead. If you have any scripts that use the Set-ClientAccessServer cmdlet, update them to use the Set-ClientAccessService cmdlet. For more information, see http://go.microsoft.com/fwlink/p/?LinkId=254711.

Finished processing all servers specified. Consider running Get-CASHealthCheck.ps1 to test your Client Access namespace and SSL configuration.
```

Now, I will run .\GetExchangeURLs.ps1 to make sure everything changed as per above.

```
-----
Querying ex2019
-----

Outlook Anywhere
- Internal: mail.ramlan.ca
- External: mail.ramlan.ca

Outlook Web App
- Internal: https://mail.ramlan.ca/owa
- External: https://mail.ramlan.ca/owa

Exchange Control Panel
- Internal: https://mail.ramlan.ca/ecp
- External: https://mail.ramlan.ca/ecp

Offline Address Book
- Internal: https://mail.ramlan.ca/OAB
- External: https://mail.ramlan.ca/OAB

Exchange Web Services
- Internal: https://mail.ramlan.ca/EWS/Exchange.asmx
- External: https://mail.ramlan.ca/EWS/Exchange.asmx

MAPI
- Internal: https://mail.ramlan.ca/mapi
- External: https://mail.ramlan.ca/mapi

ActiveSync
- Internal: https://mail.ramlan.ca/Microsoft-Server-ActiveSync
- External: https://mail.ramlan.ca/Microsoft-Server-ActiveSync

WARNING: The Get-ClientAccessServer cmdlet will be removed in a future version of Exchange. Use the Get-ClientAccessService cmdlet instead. If you have any scripts that use the Get-ClientAccessServer cmdlet, update them to use the Get-ClientAccessService cmdlet. For more information, see http://go.microsoft.com/fwlink/p/?LinkId=254711.
Autodiscover
- Internal SCP: https://mail.ramlan.ca/Autodiscover/Autodiscover.xml
```

## Exchange Certificate:

The last step in to complete CSR for SSL certificate. I am using third party Comodo SSL for Exchange. I will submit CSR to Comodo and get the SSL certificate issued on behalf of mail.ramlan.ca

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

Select server: EX2019.RAMLAN.CA



NAME	STATUS	EXPIRES ON
Microsoft Exchange Server Auth Certificate	Valid	2023-12-04
Microsoft Exchange	Valid	2023-12-30
WMSVC-SHA2	Valid	2028-12-27

Exchange Certificate - Internet Explorer



### new Exchange certificate

This wizard will create a new certificate or a certificate request file.

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

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

You can create a self-signed certificate or request a certificate from a certification authority.

[Learn more](#)

Next

Cancel

## new Exchange certificate

\*Friendly name for this certificate:

Exchange 2019 Certificate

The friendly name is the display name for the certificate.

Back

Next

Cancel

Local intranet | Protected Mode: Off 100%

## 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:

Back

Next

Cancel

Local intranet | Protected Mode: Off 100%

## new Exchange certificate

\*Store certificate request on this server:

EX2019



Browse...

Typically, the certificate request is stored on the server where you want to install the certificate. You can store the certificate request on any Client Access server or Mailbox server in your Exchange organization.

Back

Next

Cancel

## new Exchange certificate

Based on your selections, the following domains (host names) will be included in your certificate. You can add, remove, or modify values here. [Learn more](#)



DOMAIN

mail.ramlan.ca

AutoDiscover.RAMLAN.CA

RAMLAN.CA

Back

Next

Cancel

## new Exchange certificate

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

\*Organization name:

RAMLAN INC

\*Department name:

INFORMATION TECHNOLOGY

\*City/Locality:

TORONTO

\*State/Province:

ONTARIO

\*Country/Region name:

Canada

Back

Next

Cancel

## new Exchange certificate

\*Save the certificate request to the following file:

\\ex2019\temp\exchange2019certificate.req

You need to submit the contents of the certificate request file to a certification authority.

After you get the certificate file from the certification authority, click Complete in the certificate request to install the certificate. [Learn more](#)

Back

Finish

Cancel

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

Select server: EX2019.RAMLAN.CA

+ / ✕ ↺ ⋮

NAME	STATUS	EXPIRES ON	
Exchange 2019 Certificate	Pending request	2019-12-31	Exchange 2019 Certificate
Microsoft Exchange Server Auth Certificate	Valid	2023-12-04	Certification authority-signed certificate Issued: C=CA, S=ONTARIO, L=TORONTO, O=RAMLAN INC, OU=INFORMATION TECHNOLOGY, CN=mail.ra mlan.ca
Microsoft Exchange	Valid	2023-12-30	
WMSVC-SHA2	Valid	2028-12-27	
			Status
			Pending request Expires on: 2019-12-31 <a href="#">Complete</a>
			Assigned to services
			NONE

## 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:

\\ex2019\temp\69011939repl\_7.crt

OK

Cancel

## Exchange 2019 Certificate

general

► [services](#)

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

- ☒ SMTP
- ☐ IMAP
- ☐ POP
- ☒ IIS

Save

Cancel

## Warning

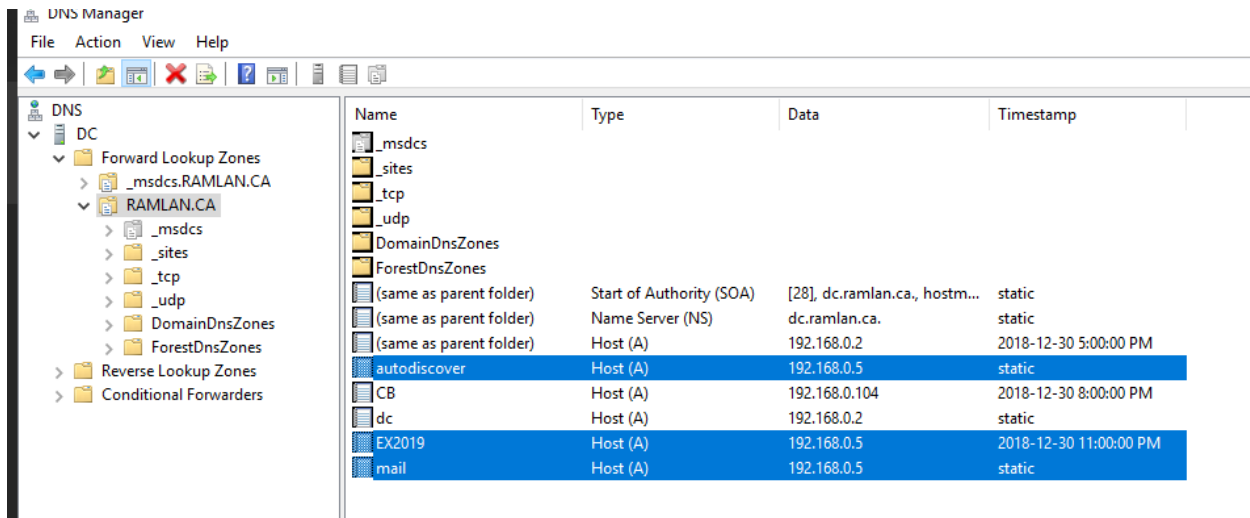
Overwrite the existing default SMTP certificate? Current certificate: '08AEB67E3BB4667A3D5F7FBBF9D2FF2C5F9D9467' (expires 2023-12-30 11:58:16 PM) Replace it with certificate: '9DDCC55F3A80BD5C4C5C7C918F32E48F282E43ED' (expires 2019-05-06 7:59:59 PM)

Yes

No

## DNS Entry:

Make sure to create these entries within DNS Manager.




Name	Type	Data	Timestamp
_msdcs			
_sites			
_tcp			
_udp			
DomainDnsZones			
ForestDnsZones			
(same as parent folder)	Start of Authority (SOA)	[28], dc.ramlan.ca., hostm...	static
(same as parent folder)	Name Server (NS)	dc.ramlan.ca.	static
(same as parent folder)	Host (A)	192.168.0.2	2018-12-30 5:00:00 PM
autodiscover	Host (A)	192.168.0.5	static
CB	Host (A)	192.168.0.104	2018-12-30 8:00:00 PM
dc	Host (A)	192.168.0.2	static
EX2019	Host (A)	192.168.0.5	2018-12-30 11:00:00 PM
mail	Host (A)	192.168.0.5	static


## Connectivity Test:

Select the test you want to run.


Exchange Server | SfB / Lync | Office 365 | Client | Message Analyzer

 **Microsoft Exchange ActiveSync Connectivity Tests**


- ☐ Exchange ActiveSync
- ☐ Exchange ActiveSync Autodiscover

 **Microsoft Exchange Web Services Connectivity Tests**

- ☐ Synchronization, Notification, Availability, and Automatic Replies
- ☐ Service Account Access (Developers)

 **Microsoft Office Outlook Connectivity Tests**

- ☐ Outlook Connectivity
- ☐ Outlook Autodiscover

 **Internet Email Tests**

- ☒ Inbound SMTP Email
- ☐ Outbound SMTP Email
- ☐ POP Email
- ☐ IMAP Email

**Inbound SMTP**

This test walks through the steps an Internet email server uses to send inbound SMTP email to your domain.

## Inbound SMTP Email

Email address:

administrator@ramlan.ca

## Verification

You have already been verified for this browser session (30 minute maximum).

## Notice



Connectivity Test Successful

### Test Details

- ✓ Testing inbound SMTP mail flow for domain 'administrator@ramlan.ca'.  
Inbound SMTP mail flow was verified successfully.
  - ✦ Additional Details
    - Elapsed Time: 6641 ms.
  - ✦ Test Steps
    - ✓ Attempting to retrieve DNS MX records for domain 'ramlan.ca'.  
One or more MX records were successfully retrieved from DNS.
      - ✦ Additional Details
        - MX Records Host mail.ramlan.ca, Preference 0
        - Elapsed Time: 28 ms.
    - ✓ Testing Mail Exchanger mail.ramlan.ca.  
This Mail Exchanger was tested successfully.
      - ✦ Additional Details
        - Elapsed Time: 6612 ms.
      - ✦ Test Steps
        - ✓ Attempting to resolve the host name mail.ramlan.ca in DNS.  
The host name resolved successfully.
          - ✦ Additional Details
            - IP addresses returned: [REDACTED]
            - Elapsed Time: 34 ms.
        - ✓ Testing TCP port 25 on host mail.ramlan.ca to ensure it's listening and open.  
The port was opened successfully.
          - ✦ Additional Details
            - Banner received: 220 EX2019.RAMLAN.CA Microsoft ESMTP MAIL Service ready at Mon, 31 Dec 2018 12:18:48 -0500
            - Elapsed Time: 218 ms.
        - ✓ Analyzing SMTP Capabilities for server mail.ramlan.ca:25  
SMTP Capabilities were analyzed successfully.
          - ✦ Additional Details
            - SMTP Capabilities were analyzed successfully.
            - 250-EX2019.RAMLAN.CA Hello [40.85.91.8]
            - 250-SIZE 37748736
            - 250-PIPELINING
            - 250-DSN
            - 250-ENHANCEDSTATUSCODES
            - 250-STARTTLS
            - 250-X-ANONYMOUSTLS
            - 250-AUTH NTLM
            - 250-X-EXPS GSSAPI NTLM
            - 250-8BITMIME
            - 250-BINARYMIME
            - 250-CHUNKING
            - 250-SMTPUTF8
            - 250-XRDST
          - Elapsed Time: 374 ms.
        - ✓ Attempting to send a test email message to administrator@ramlan.ca using MX mail.ramlan.ca.  
The test email message was delivered successfully.
          - ✦ Additional Details
            - Elapsed Time: 787 ms.
        - ✓ Testing the MX mail.ramlan.ca for open relay by trying to relay to user Admin@TestExchangeConnectivity.com.  
The Open Relay test passed. This MX isn't an open relay.
          - ✦ Additional Details
            - The open relay test message delivery failed, which is a good thing.
            - The exception detail:
            - Exception details:

Select the test you want to run.

Exchange Server Sfb / Lync Office 365 Client Message Analyzer



#### Microsoft Exchange ActiveSync Connectivity Tests

- ☐ Exchange ActiveSync
- ☐ Exchange ActiveSync Autodiscover



#### Microsoft Exchange Web Services Connectivity Tests

- ☐ Synchronization, Notification, Availability, and Automatic Replies
- ☐ Service Account Access (Developers)



#### Microsoft Office Outlook Connectivity Tests

- ☐ Outlook Connectivity
- ☐ Outlook Autodiscover



#### Internet Email Tests

- ☐ Inbound SMTP Email
- ☒ Outbound SMTP Email
- ☐ POP Email
- ☐ IMAP Email

#### Outbound SMTP

This test checks your outbound IP address for certain requirements. This includes Reverse DNS, Sender ID, and RBL checks.

#### Outbound SMTP Email

Outbound IP address:

[Redacted IP Address]

- ☒ Perform reverse DNS check
- ☒ Perform RBL check
- ☒ Perform Sender ID check

Email address:

administrator@ramlan.ca

#### Verification

You have already been verified for this browser session (30 minute maximum).

#### Notice



## Connectivity Test Successful with Warnings

### Test Details

- ✓ Performing Outbound SMTP Test
  - The outbound SMTP test was successful.
  - ▲ Additional Details
    - Elapsed Time: 300 ms.
  - ▲ Test Steps
    - ✓ Attempting reverse DNS lookup for IP address [REDACTED]
      - The Microsoft Connectivity Analyzer successfully resolved IP address [REDACTED] via reverse DNS lookup.
      - ▲ Additional Details
        - The Microsoft Connectivity Analyzer resolved IP address 99.229.205.165 to host CPEbcc81000738a-CMbcc810007387.cpe.net.cable.rogers.com.
        - Elapsed Time: 118 ms.
  - ✓ Performing Real-Time Black Hole List (RBL) Test
    - Your IP address wasn't found on any of the block lists selected.
    - ▲ Additional Details
      - Elapsed Time: 180 ms.
    - ▲ Test Steps
      - ✓ Checking Block List "SpamHaus Block List (SBL)"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 30 ms.
      - ✓ Checking Block List "SpamHaus Exploits Block List (XBL)"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 19 ms.
      - ⚠ Checking Block List "SpamHaus Policy Block List (PBL)"
        - The test passed with some warnings encountered. Please expand the additional details.
        - ▲ Additional Details
          - An unexpected status code was received from RBL: 11
          - Elapsed Time: 33 ms.
      - ✓ Checking Block List "SpamCop Block List"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 88 ms.
      - ✓ Checking Block List "NJABL.ORG Block List"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 2 ms.
      - ✓ Checking Block List "SORBS Block List"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 2 ms.
      - ✓ Checking Block List "MSRBL Combined Block List"
        - The address isn't on the block list.
        - ▲ Additional Details
          - IP address [REDACTED] wasn't found on RBL.
          - Elapsed Time: 1 ms.
      - ✓ Checking Block List "UCEPROTECT Level 1 Block List"
        - The address isn't on the block list.
        - ▲ Additional Details
          -

This concludes the installation of Exchange Server 2019.

Thanks

Ram

31<sup>st</sup> Dec 2018