



Adonai[®]



Microsoft Exchange 2016

(Unified Messaging Solution)

Better
Collaboration

Smarter Inbox

Mobile
Productivity

Simplified
Architecture

Security and
Compliance

Introducing Microsoft Exchange Server 2016

The growing volume of email coupled with email's mission-critical role in many businesses presents challenges to end users and places heavy demands on IT administrators.

End users need tools that help them focus on what's most important in their inboxes, schedules, and their collaborations with others. IT administrators require tools that help them manage, preserve, and protect the messaging environment.

Microsoft Exchange Server 2016 was designed to meet these challenges. It helps users be more productive and collaborate better through a deeper integration with other Office products.

It helps IT administrators be more efficient with a simplified architecture, additional recovery features, and enhanced compliance tools for protecting and preserving data.

This version of Exchange Server is special because it originated in the cloud. From back-end components like the transport pipeline to the most visible parts of the Outlook web user interface, the code that

makes up Exchange Server 2016 has already powered millions of mailboxes in Office 365. Before this code was packaged up for on-premises delivery, it was proven and hardened in a high-scale, distributed, worldwide messaging environment.

Exchange Server 2016 is an evolution and refinement of what was delivered in Exchange Server 2013, with an emphasis on simplicity. Along with a new simplified architecture, there are performance and reliability improvements, hybrid enhancements, and a variety of cloud services that can enhance your on-premises Exchange experience.

This version of Exchange is also designed to work well with other products and delivers outstanding user experiences by being better connected with other technologies including SharePoint and OneDrive for Business as well as 3rd party applications and services.

Exchange 2016 is a messaging foundation that meets your current needs while being ready for changes that may occur in your business in the years to come.

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Better Collaboration



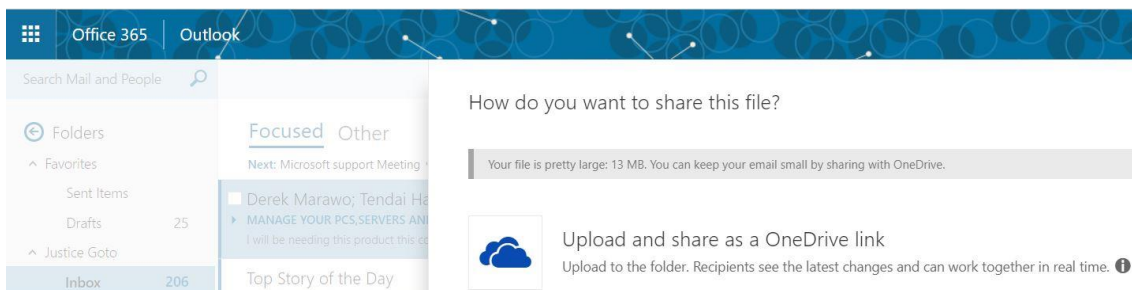
The tools for working together on documents have come a long way. Still, most people collaborate on documents by sending them as attachments because it's the simplest way to start collaborating. But things can go badly when people need to work on a document at the same time, the size of a group is large, or when people reply out of order.

The tools to solve this problem are already available in Microsoft SharePoint. But people are reluctant to leave their inboxes to upload files, or they have trouble remembering the right SharePoint URL, or they struggle to set up the appropriate sharing permissions, so they stick with the habit of sending documents as email attachments. Wouldn't it be great if there were a way out of this?

The solution is here—Microsoft has brought Exchange together with other members of the Office family to solve this problem in an elegant way.

Sharing Documents

Upload and Share. Exchange Server 2016 allows you to upload documents to OneDrive for Business or SharePoint Server 2016 right from your Outlook on the web inbox. The process feels much like sending a traditional attachment, but the document is stored in a central location, instead of each person having a copy in their inbox. This enables more effective collaboration—everyone has access to the latest version, multiple people can co-author documents together, and you can avoid the headaches associated with merging multiple versions together.



Attach Existing Files.

If the file you want to send is already stored on SharePoint or OneDrive for Business, you can easily browse to those documents in Outlook on the web or Outlook 2016 and send them as links. A recent files list makes it easy to access files you have worked with recently, and you can also browse the full contents of your files stored in SharePoint or OneDrive for Business.

Minimal Changes to User Experience.

When an attachment is sent as a link, it appears just like a traditional attachment in Outlook 2016 and Outlook on the web. The attachment includes a cloud icon, which indicates the document is stored remotely. In older versions of Outlook, or in non-Outlook email systems, the link is shown as a specially formatted link.

Automatic Permissions.

When you send a file as a document link; the permissions are set automatically, giving recipients of the email the ability to access the document, just as if it were a traditional attachment. You can also adjust the permissions before you send the email. For example, you can change whether people can edit the document or just view it.

Receiving and Editing Documents

Side-by-Side View.

Exchange 2016 integrates with Office Online Server to give you a better experience when viewing documents in Outlook on the web. When you click a Word, Excel, or PowerPoint attachment, the document is rendered with high fidelity in the same web browser window for easy viewing.

The document and the email conversation are placed side-by-side, which reduces the need to toggle back and forth between them.

Edit and Reply.

In Outlook on the web, you can edit a document and respond to the conversation all without leaving the web browser.

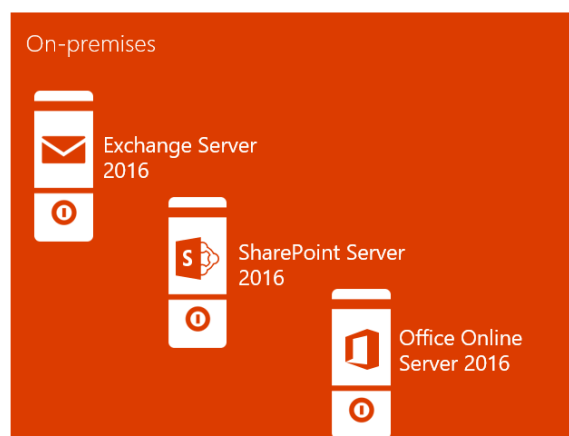
When you reply to a message, Exchange 2016 automatically places a copy of the document in your drafts folder, and once you send the message, it attaches the modified file. There is no longer a need to download an attachment locally, open it, make edits, re-attach the file, and reply.

Infrastructure Options for Document Collaboration

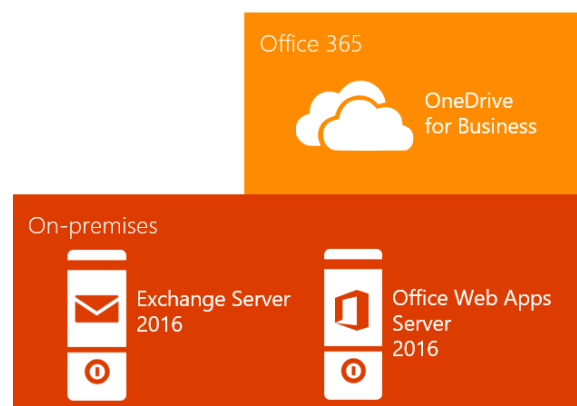
There are two infrastructure options for enabling these document collaboration features. If you require a fully on-premises infrastructure, you can deploy SharePoint 2016 on-premises for document storage. Or, you can store documents in the cloud with OneDrive for Business (as part of an Office 365 tenant) instead of an on-premises SharePoint Server.

Either of these two topologies enables you to share documents as links in Outlook 2016 and Outlook on the web. To enable the viewing and editing of Office documents from Outlook on the web, an on-premises deployment of Office Online Server is required. Office Online Server is new version of Office Web Apps server, and provides the web-based versions of Word, PowerPoint and Excel.

Fully on-premises
(documents stored in SharePoint 2016)



Hybrid
(documents stored in Office 365)



Smarter Inbox



As users receive more and more email, it becomes increasingly challenging for them to keep up with the messages that accumulate in their inboxes. Strategies for managing email vary greatly, with some people choosing to file old messages into folders, and others leaving old messages in the inbox.

Some people pursue a goal of “inbox zero” by deleting or archiving old messages, and others let old emails accumulate in the inbox. Regardless of your personal email style, chances are that you would appreciate it if your inbox to be more intelligent and helpful. That’s why Exchange 2016 includes new capabilities that help you focus on what’s important and work more efficiently.

Sharing Documents

Faster Results.

Exchange 2016 includes refinements to the product’s core search architecture that are based on learnings from Office 365 search instrumentation and telemetry. This enables the product to return lightning fast results, with most queries generating results in less than a second.

Server-Powered Search in Outlook.

When Outlook 2016 is online, it uses the speed and robust indexes of the server to provide query results.

The full mailbox is searched whenever the server is online. In situations when the server is unavailable, cached search performance is also improved due to changes in the way Outlook 2016 handles local indexing.

Search and People Suggestions.

As you begin to type a search in Outlook on the web and Outlook 2016, intuitive search suggestions appear, based on people you communicate with, your mailbox content and your query history.

Search Refiners.

In Outlook on the web, search refiners appear next to the search result set, whether there is an attachment, which folder it is in, or the date. Powerful, personalized search is now accessible to everyone.

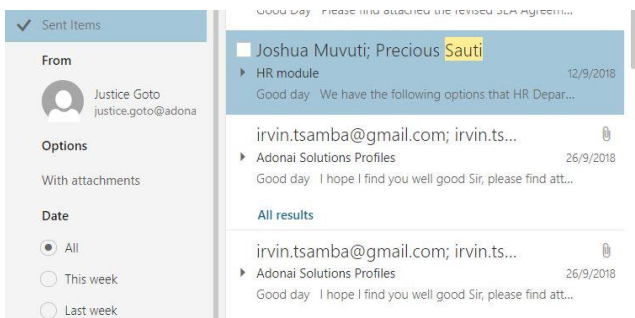
Fuzzy matching.

The updated search capabilities in Exchange 2016 help when you don’t quite spell a person’s name or a word just right. This applies to both people names and keyword searches.

Inbox Enhancements

Inline Preview for URLs

When you compose a new email message and type the URL for an external web page, Outlook on the web automatically generates a rich preview that lets you and your recipients peek into the contents of the site. There's no need for you to leave your inbox to get a sense of what the web page is about.



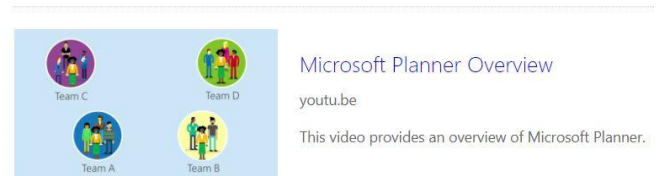
Inline Video Player

Outlook on the web saves you time by letting you view videos in the context of their conversations. An inline preview of a video automatically appears when you insert a video URL. You can click the video thumbnail to view it in an embedded player without leaving your inbox, helping you stay focused on the task at hand.

Option 1

Applications that are found in Office 365 Subscription

1 Microsoft Planner
<https://youtu.be/o4A3Ftz3YRc>



Intelligent recipient selection and people search

This allows you to quickly select recipients when replying to email and composing new messages. When you click the (To: line), a list of the people you have emailed most recently appears. As you are typing, the list is filtered to reflect the people with matching names in your personal and company address book, and the list is ordered based on the people you interact with the most.

Outlook Add-ins

Exchange Server 2016 provides powerful customization and extensibility using Outlook add-ins. Our continuing goal is to make extending Outlook easier than ever and to connect to modern services and your own internal line of business applications. Add-ins can now integrate with UI components in several new ways.

New ways of rolling out apps to users. To make it easier to share and test add-ins before they are published, you can now side-load add-ins with a user-to-user sharing model. You can also install apps directly from the Office store or the Outlook ribbon.

Mobile Productivity



A recent study by POTRAZ found that 60% of Zimbabweans own a smartphone. Checking that phone is the first thing most people do in the morning, last thing they do at night, and in between, they look at their phones 150 times on average.

So it's no surprise that these days, 20% of emails are first opened on phones or tablets. Unfortunately, for many people, opening emails is pretty much all they do – they read them, perhaps do some lightweight triage like marking something as unread, or occasionally a quick reply. In today's world, too many email and calendaring tasks are deferred until people get back to their desks. There's plenty of mobile usage but not enough mobile productivity.

Exchange Server 2016 powers rich Outlook experiences—on the desktop, on the web, on phones, and on tablets. This enables people to be productive at their desks and wherever they go.

Outlook 2016

Rich calendar appointments and meetings.

Appointments and Meetings now offer all the rich HTML formatting and attachment capabilities Outlook users are familiar with in email messages.

Support for small screen portrait layouts.

Outlook adapts to smaller screens with a dynamic layout. For portrait devices like tablets, the Ribbon, Navigation Pane and Reading Pane automatically adjust and a new back button allows you to toggle easily.

Easy access to recent files.

Easily locate and attach recently accessed files with the new Recent Items dropdown list. Access files stored anywhere on your computer or in the cloud with OneDrive, OneDrive for Business and SharePoint Online.

Modern help with TellMe.

Find the right command, fast, without searching through the Ribbon. Just type what you want to do in the Tell Me box at the top of Outlook and TellMe takes you directly to the feature you need.

Smart Lookup.

Smart Lookup finds contextual information from the web about the contents of your email. Highlighting keywords, like people or places, in your inbox and selecting 'Smart Lookup' provides useful information from Bing, Wikipedia and Oxford right in your inbox.

New Office themes.

Outlook 2016 now supports the new Colourful theme, in addition to White and Dark Grey.

High DPI screen support

Outlook renders better on devices with high resolution screens.

E-mail address internationalization.

Outlook now supports more international characters, expanding support for email addresses from more languages (e.g. üñîçøðé@üñîçøðé.com)

Foreground network calls eliminated.

Outlook no longer uses foreground network calls to ensure that Outlook stays responsive on unreliable networks.

Email delivery performance.

MS Exchange reduced the amount of time it takes to download messages, display the message list, and show new email after resuming from hibernation, that means more time to focus on what is important.

Lean storage footprint.

MS Exchange added settings that allow users to better manage storage by only retaining 1, 3, 7, 14 or 30 days of mail on the device. On devices with smaller hard drives, Outlook will recognize the available disk space and automatically set a smaller sync timeframe.

Outlook on the Web

Optimized for tablets and smartphones.

For situations in which you don't want to install the Outlook app on a tablet or smartphone, such as when you are borrowing someone's device, Outlook on the web has a user interface that is optimized for mobile devices. This includes platform-specific experiences for phones for both iOS and Android.

Performance improvements

have been made in several areas, including creating calendar events, composing, loading messages in the reading pane, popouts, search, start-up, and switching folders.

An action pane

across the top of the browser window allows you to quickly click those actions you most

commonly use such as New, Reply all, and Delete.

Pin.

You can now pin any message in your inbox to have it highlighted in yellow and kept at the top of your inbox. Pins are a terrific way to keep important messages handy and prevent them from getting buried in your inbox.

Sweep.

Sweep provides a simple set of actions to manage emails from specific senders. It is great for managing reoccurring messages like newsletters, digital coupons, and other email received on a regular basis. With Sweep, you can choose to keep messages from a specific sender for a specified number of days, only keep the latest message, or delete all messages from the sender.

Outlook for iOS and Android

For many years, users with iOS and Android phones and tablets accessed their Exchange mailboxes through the built-in email and calendar apps. With the introduction of Outlook for iOS and Android in January 2015, rich Outlook experience became available on these devices.

Focused Inbox

Schedule

Send Availability

Quick Access to files

Rich people and directory search

Automatic replies

Simplified Architecture



Microsoft Exchange Server 2016 builds upon the architectural foundation of Exchange Server 2013, with carefully selected refinements and simplifications. Several performance and reliability improvements which originated in Office 365 are included in Exchange 2016.

Exchange 2016 also includes hybrid enhancements, and a variety of cloud services that can enhance your on-premises Exchange infrastructure. Exchange 2016 was designed to be a flexible messaging foundation—one that meets your current needs while being ready for changes that may occur in your business in the years to come.

Simplified Architecture

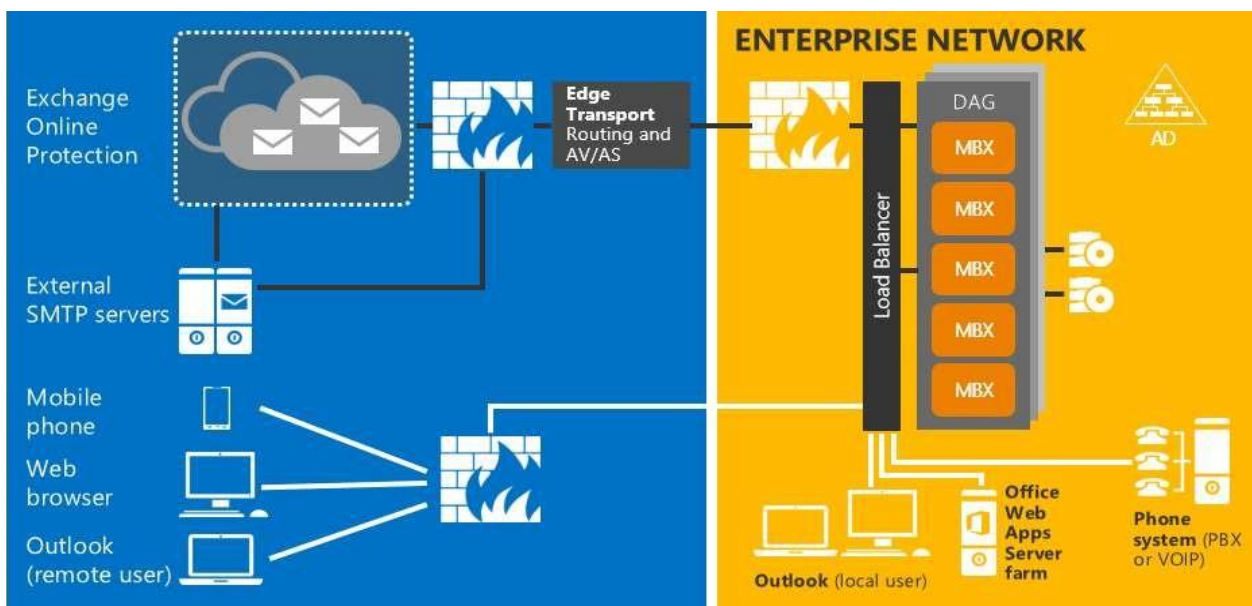
Microsoft has removed the Client Access server (CAS) role and added the client access services to the Mailbox role. The system maintains loose coupling in terms of functionality, versioning, user partitioning and geographical affinity.

This new architecture, the building block model, is based on the way we run Exchange in Office 365. Removal of the separate CAS role does not affect how communication

occurs between servers, and load balancer configuration is also not affected by this architectural change.

Communication between servers still occurs at the protocol layer, effectively ensuring that every server is an island.

For a given mailbox's connectivity, the protocol being used is always served by the protocol instance that is local to the active database copy.



Performance and Reliability

Database Divergence Detection

Database maintenance activities have been improved by comparing active and passive copies to detect logical corruption and data divergence.

Exchange can now deterministically find logic corruption due to controller failures, battery failures for storage caches, hardware firmware bugs, and transient memory corruptions.

Get-Mailbox Server Redundancy.

This new PowerShell cmdlet helps you prioritize hardware repairs and makes upgrades easier, by helping you maintain desired levels of database redundancy as servers come in and out of operation.

Resilient File System.

Supported in previous Exchange releases, Resilient File System (ReFS) is an operating system feature that is now the new recommendation for all volumes that contain databases and logs. Use of ReFS should result in less corruption, less reseeds and less rebuilds.

Replay Lag Manager

The Replay Lag Manager automatically play down replication logs when insufficient database copies are found.

It was introduced in Exchange 2013 in a Cumulative Update in a default off state and is now on by default in Exchange 2016.

DAG management service

This service makes is easier to manage servers and replicated database copies. It shipped to Exchange 2013 customers in a CU and is included in Exchange 2016.

MAPI/HTTP as default protocol

The MAPI/HTTP protocol was introduced in Exchange 2013 as a successor to RPC/HTTP. It provides improved performance and troubleshooting. In Exchange 2016 this protocol is now set as default way that Outlook clients connect to Exchange.

Loose truncation.

Ensures active database stay mounted during outages while seeding passive database. This feature was added to Exchange 2013 in Service Pack 1 and is included in Exchange 2016.

Hybrid Capabilities

Exchange Server 2016 can be deployed in a hybrid configuration with Office 365, in which user mailboxes are on-premises and some are in the cloud. It also gives you options to tap into cloud services that enhance your on-premises environment with user mailboxes that remain on-premises.

Exchange Server 2016 was built on hybrid capabilities introduced in previous versions of Exchange and is 100% cloud ready. The Hybrid Configuration Wizard is now cloud-deployed and works with both Exchange Server 2013 and Exchange Server 2016, independent of CU.

Your future might be 100% on-premises, or, during the life of your Exchange deployment it might include a merger, acquisition, or partial transition to the cloud so it should be hybrid-ready. It should also let you to keep your mailboxes on-premises while tapping into cloud services to enhance your environment.

Cloud-connection options.

Connecting your on-premises Exchange environment to cloud services can enhance your deployment even if business or technical reasons require you to keep all user mailboxes on-premises. For example, deploying a File Share Witness in Azure allows you to leverage a three AD Site spread DAG even if you only have two datacenters.

Some of these cloud services currently available to enhance your on-premises deployment include Exchange Online Protection, Exchange Online Archiving, Azure Rights Management, and Office 365 Message Encryption.

Another new service recently added is **Advanced Threat Protection (ATP)** which protects against zero-day virus attacks.

Security and Compliance



Today, IT is not just responsible for keeping a messaging environment up and running. You are also charged with protecting your organization's data and helping your organization comply with legal and regulatory requirements.

Exchange 2016 includes protection and compliance features that are integrated and easy to use. Building on previous investments in these areas, it brings expansion of built-in data loss prevention technologies, enhancements to audit reporting, and improvements in built-in eDiscovery capabilities.

Data Loss Prevention (DLP) Improvements

DLP helps protect sensitive data from being accidentally, or intentionally, shared with unauthorized users through deep content inspection within email and attachments. Policy Tips appear in Outlook desktop and Outlook on the web to warn your workers that they may be about to send sensitive information.

This helps users be involved in your compliance process, rather than frustrated by it. **DLP beyond Exchange:** The DLP capabilities that originated in Exchange are being introduced in the new versions of SharePoint and OneDrive for Business, to help protect documents stored outside of email.

Enhanced transport rules: In the Exchange 2016 release, transport rules have been improved in 3 ways:

- New condition: 'Any attachment has these properties, including any of these words' has been added
- New action: 'Notify the recipient with a message' has been added
- The Transport action 'Generate incident report and send it to' has been updated so that reports can now be sent to multiple distribution lists

Enhanced Auditing

Exchange Server 2016 allows you to store and run reports on 3 types of audit data:

- Non-owner mailbox access [logs whenever a delegate or an administrator or anyone besides the owner accesses a mailbox]
- Owner mailbox access [logs any action users do in their own mailboxes]
- Administrator actions [logs any cmdlet run by an admin – whether via UI or PowerShell]

Exchange 2016 introduces a new auditing data export that enables better reporting and easier integration with third party tools. This audit data export is a format used by SharePoint as well, so it is easier to combine data from these products into a unified view.

eDiscovery Improvements

Improved eDiscovery performance:

In Exchange 2016, the search architecture has been redesigned. The new architecture is asynchronous and decentralized so that it distributes the work across multiple servers and keeps retrying if any servers are too busy. The result is an eDiscovery pipeline that returns results more reliably and faster.

Increased scale:

Another advantage of the new architecture is that search scalability is improved. The number of mailboxes you can search at once using the console has increased from 5,000 to 10,000 mailboxes. You can also search an unlimited number of mailboxes when using Exchange Management Shell.

Search and hold public folder data:

Exchange Server 2016 allows you to search, hold, and export across all public folders in your organization. Placing public folder data on hold lets you preserve it for long term retention or eDiscovery purposes.

Protection and Compliance

Advanced Threat Protection, or ATP

ATP is a service that works in conjunction with Exchange Online Protection and protects against zero-day virus attacks. Using a feature called Safe Attachments, all messages and attachments that don't have a known virus/malware signature are routed to a special hypervisor environment, where a behaviour analysis is performed using a variety of machine learning and analysis techniques to detect malicious intent.

Equivio Analytics

Equivio Analytics is an Office 365-based service helps reduce eDiscovery costs by helping you analyse unstructured data, perform more efficient email and document review, and make decisions to reduce data for eDiscovery. When the service becomes generally available, you will be able to use on-premises eDiscovery tools to identify the data relevant to a Legal or HR matter and export the data into a secure cloud environment for analysis and data reduction.

CONCLUSION

Email and calendaring are the productivity backbone of most organizations, and it is essential to have a messaging infrastructure built for today's challenges and opportunities. Exchange Server 2016 helps you have a modern email and calendar toolset and provides a future-ready foundation for your email and calendar infrastructure. This release brings Exchange bits that have already powered millions of Office 365 mailboxes to your on-premises environment, enabling better collaboration, a smarter inbox, mobile productivity, simplified architecture, and built-in security and compliance.