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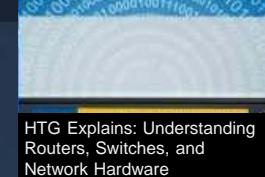
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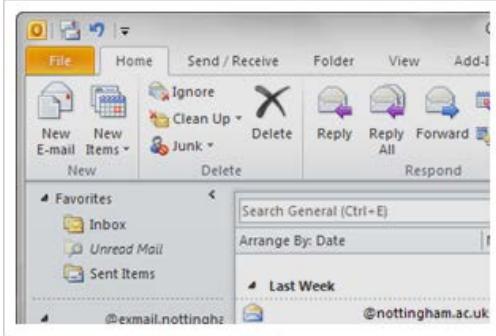
Email: What's the Difference Between POP3, IMAP, and Exchange?



We send a lot of email these days—at work, at home, on our phones... But do you know what all the email jargon means? Keep reading to find out more about the difference between the various ways to receive email.

Whether you use Gmail, Hotmail, Yahoo mail, or email configured on your own website—there's more to receiving email than it might seem like on the surface. Today, we'll be focusing on some answering some of the most common stumbling blocks when it comes to setting up new email accounts, and explaining the difference in clear language. For our geekier readers that already know that stuff, feel free to join in the discussion—let us know how you explain to relatives and tech-challenged coworkers the difference in common email setups... or simply share this guide and save yourself the trouble of explaining it!

Email Clients vs Webmail



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MEET THE AUTHOR

Eric Z Goodnight is an Illustrator and Graphics Geek that hopes to make Photoshop more accessible to How-To Geek readers. When he's not headbanging to heavy metal or geeking out over manga, he's often off screen printing T-Shirts.



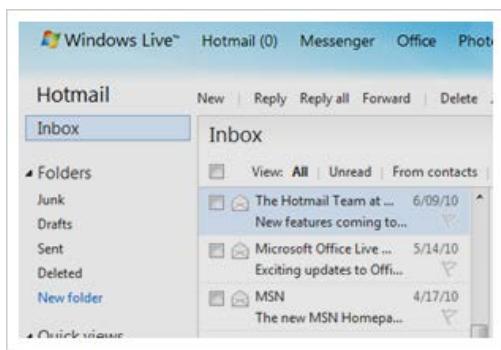
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Before we explain the different protocols used to download emails, let's take a few minutes to understand the simpler stuff—the difference between *email clients* and *webmail*. If you've ever started a Gmail, Hotmail, or other email account, chances are you've used webmail. If you work in an office and use a program like Microsoft Outlook, Windows Live Mail, or Mozilla Thunderbird to manage your emails, you're using an email client.



Both webmail and email clients are applications for sending and receiving email, and they use similar methods for doing this. Webmail is an application that is written to be operated over the internet through a browser, usually with no downloaded applications or additional software necessary. All of the work, so to speak, is done by remote computers (i.e. servers and machines you connect to through the internet).



Email clients are programs that are installed on local machines (i.e. your computer, or the computers in your office) to interact with remote email servers to download and send email to whomever you might care to. Some the back end work of sending email and all of the front end work of creating a user interface (what you look at to receive your email) is done on your computer with the installed application, rather than by your browser with instructions from the remote server. However, many webmail providers allow users to use email clients with their service—and here's where it may start to get confusing. Let's run through a quick example to explain the difference.

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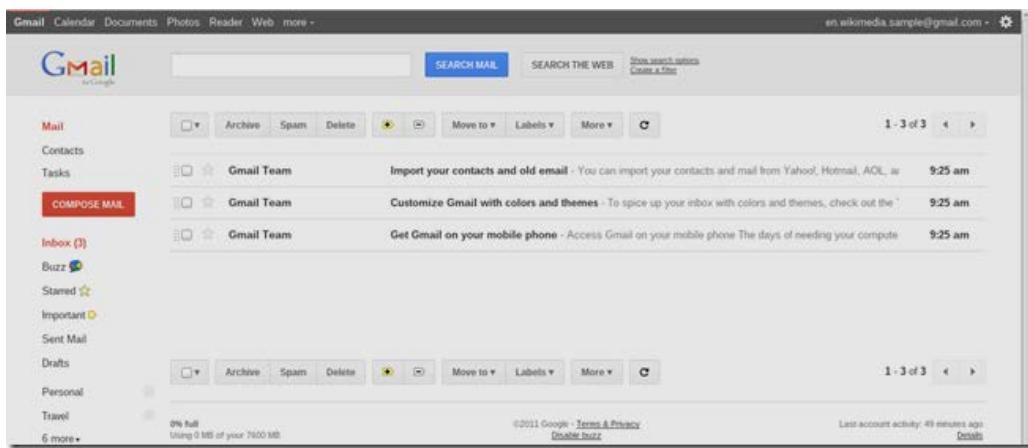
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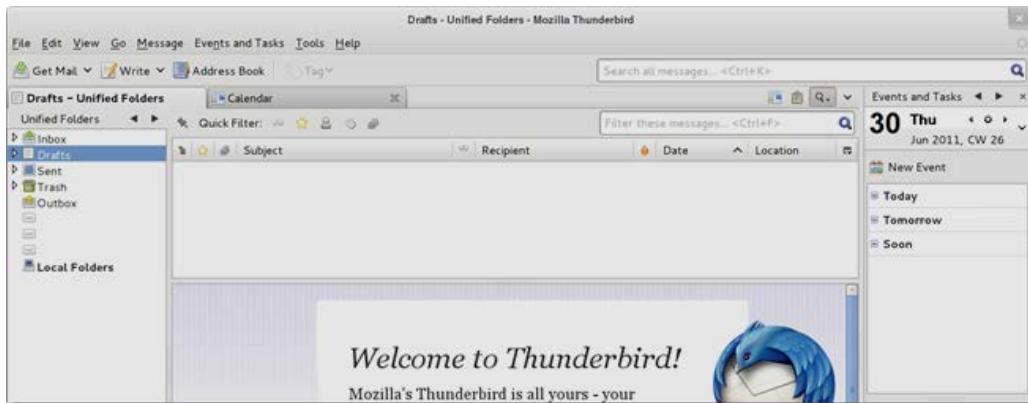
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Microsoft Exchange 2010

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But, we might decide that we don't like Google's new look for Gmail, so we decide to switch to an email client, like the free program *Thunderbird*. Instead of using our web based client (Gmail's web interface) to interact with Google's Gmail servers (the mail server backend), we use a program installed on our computers (in this case, Thunderbird) to contact the mail server backend ourselves, and sidestep webmail altogether. Google (and other webmail providers) offer all of these products, including the web frontend and the mail server backend. You can use *both of them* or *only* the mail server backend and still be using "Gmail." And with that confusion dispelled, let's take a look at the common email protocols you'll run into using email clients or mobile phones.

POP3, Post Office Protocol



POP, or Post Office Protocol, is a way of retrieving email information that dates back to a very different internet than we use today. Computers only had limited, low bandwidth access to remote computers, so engineers created POP in an effort to create a dead simple way to download copies of emails for offline reading, then remove those mails from the remote server. The first version of POP was created in 1984, with the POP2 revision created in early 1985.

POP3 is the current version of this particular style of email protocol, and still remains one of the most popular. Since POP3 creates local copies of emails and deletes the originals from the server, the emails are tied to that specific machine, and cannot be accessed via any webmail or any separate client on other computers. At least, not without doing a lot of email forwarding or porting around mailbox files.

While POP3 is based on an older model of offline email, there's no reason to call it obsolete technology, as it does have its uses. POP4 has been proposed, and may be developed one day, although there's not been much progress in several years.

IMAP, Internet Message Access Protocol



IMAP was created in 1986, but seems to suit the modern day world of omnipresent, always-on internet connectivity quite well. The idea was keep users from having to be tied to a single email client, giving them the ability to read their emails as if they were "in the cloud."

Compared to POP3, IMAP allows users to log into many different email clients or webmail interfaces and view the same emails, because the emails are kept on remote email servers until the user deletes them. In a world where we now check our email on web interfaces, email clients, and on mobile phones, IMAP has become extremely popular. It isn't without its problems, though.

Because IMAP stores emails on a remote mail server, you'll have a limited mailbox size depending on the settings provided by the email service. If you have huge numbers of emails you want to keep, you could run into problems sending and receiving mail when your box is full. Some users sidestep this problem by making local archived copies of emails using their email client, and then deleting them from the remote server.

Microsoft Exchange, MAPI, and Exchange ActiveSync

The image shows the Microsoft Exchange homepage. At the top left is the Microsoft Exchange logo, featuring a stylized globe icon next to the word "Exchange". To the right of the logo is a search bar with the placeholder text "Search Exchange". Below the logo is a horizontal navigation bar with five items: "PRODUCTS", "RESOURCES", "TECHNOLOGIES", "TRY", and "BUY". The "TRY" button is highlighted with a yellow background and white text. The main headline below the navigation bar reads "Business email, calendar and contacts on your PC, phone or browser". A call-to-action button at the bottom left says "Do more than communicate" and "Learn about Microsoft Exchange and how".

Microsoft began developing MAPI (sometimes called Messaging API) not long after IMAP and POP were first developed, although it has uses beyond simple email. Thoroughly comparing IMAP and POP to MAPI is pretty technical, and out of scope for many readers of this article. Simply put, MAPI is a way for applications and email clients to communicate with Microsoft Exchange servers, and is capable of IMAP style syncing of emails, contacts, calendars, and other features, all tied into local email clients or applications. This function of syncing emails is branded by Microsoft as "Exchange ActiveSync." Depending on what device, phone, or client you use, this same technology might be called any of the three Microsoft products (Microsoft Exchange, MAPI, or Exchange ActiveSync), but will offer the same cloud-based email syncing as IMAP.

Because Exchange and MAPI are Microsoft products, only companies that own their own Exchange mail servers or use Windows Live Hotmail will be able to use Exchange. Many clients, including the default Android mail client and iPhone, are Exchange ActiveSync capable, giving Hotmail users IMAP style cloud-based email, despite Hotmail not offering true IMAP functionality.

Other Email Protocols



Yes, there are [other protocols for sending, receiving, and using email](#), but most of us that are using plain old free webmail and mobile phones will be using one of these three major ones. Since these three technologies cover the needs of nearly all HTG readers, we won't be spending time today talking about the others. If you have any experience using email protocols not listed here, we're interested to hear about it—feel free to discuss them in the comments.

In Short: Which Do I Use to Set Up My Email?

Depending on your personal style of communicating and whom you prefer to get your email service from, you can pretty quickly narrow down how you should use your email.

- If you use check your email from a lot of devices, phones, or computers, set up your email clients to use IMAP.
 - If you use mostly webmail and want your phone or iPad to sync with your webmail, use IMAP, as well.
 - If you're using one email client on one dedicated machine (say, in your office), you might be fine with POP3.
 - If you have a huge history of email, you may want to use POP3 to keep from running

out of space on the remote email server.

- If you use Hotmail or an Exchange Server Email, MAPI or Exchange ActiveSync will give you similar cloud-based syncing, like IMAP.
- If you don't use Hotmail and you want email sync, use IMAP. If you do use it and want email sync, use MAPI/Exchange ActiveSync.

Hopefully that's dispelled a lot of your questions regarding these common ways we receive email data with our phones and computers. If not, let us know in the comments section below or address your questions to ericgoodnight@howtogeek.com.

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By Eric Z Goodnight on 12/5/11

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Comments (14)

 karttikeyabihani

December 5, 2011 8:05 am

Finally Explained. Thanks.

 Dan

December 5, 2011 8:58 am

I have 2 gmail accounts, 5 google apps email accounts, 2 hotmail accounts, an AOL account, and my ISP account, and I access all of these via POP3 using a portable email client. IMAP just ain't my thing. I also have a couple of Yahoo email accounts but I rarely log in to check them. If only they give free POP3 access again.

 ScapS

December 5, 2011 9:02 am

Nice Thx!

 afuhnk

December 5, 2011 9:21 am

Very interesting article.
However, it is important to note that Microsoft Outlook (up to version 2003 – version 2007 and later do not have this issue) the [.pst] file (which store account info such as contacts, folders, messages etc) may (read: likely will) become corrupt once it reaches 2Gb. It is important to archive messages in order to avoid this limitation. This "corruption" issue is also valid for the [archive.pst] file.

 afuhnk

December 5, 2011 9:22 am

Excellent article.
However, it is important to note that Microsoft Outlook (up to version 2003 – version 2007

and later do not have this issue) the [.pst] file (which store account info such as contacts, folders, messages etc) may (read: likely will) become corrupt once it reaches 2Gb. It is important to archive messages in order to avoid this limitation. This is also valid for the archive.pst file.



phill

December 5, 2011 9:34 am

I have 3 hotmail accounts, 4 gmail accounts, and 1 yahoo account... I filter all my emails through all of them, and have them end up in one gmail account set up for IMAP, I NEVER see spam, unless of course I'm expecting an email from a new source and it gets caught in my security. :)



Howard

December 5, 2011 10:08 am

I use Thunderbird with POP3 to download all of my Gmail, along with several other email accounts. Once a year, I create a backup of my email (I have nearly enough to fill a DVD now, so I'm hoping for a better backup medium before I overflow that). While it's nice to have email-in-the-cloud, I don't want my email archives to be subject to the whim of "Don't be Evil (if convenient, or somebody is watching)" Google, or anybody else but me. I have archives, including several technical mailing lists, that I occasionally search for stuff that happened years ago. Some of them pre-date Google by several years.

If Google ever discontinues POP3 (or stops providing some way to download and locally archive my email), I will discontinue using Gmail. Currently, the main thing I use Gmail for is to consolidate email from dozens of accounts, and filter them for spam. It might be a little less convenient to handle that myself, but I did it before, and I can do it again.



eytan

December 5, 2011 10:49 am

I have a shared email account (for work) that multiple people read using Blackberries and Outlook. Any suggestions on the best way to set that up? I currently have it set up with POP.



Kathy

December 5, 2011 10:49 am

Thank you so much! Reposting for our customers. Good explanation!



Graycat

December 5, 2011 10:52 am

Thanks for the explanation.....easy to understand. I use Outlook 2010 but actually can't send emails over 2MB. I set up a Yahoo email account that allows me to send any size email but it is a pain to have to use 2 accounts because of this problem. Yes, I have contacted my ISP, Microsoft, and used many "solutions" from blogs etc.....even my computer repair service. I like Outlook but I'm ready to get rid of it.



iam_urz

December 5, 2011 11:01 am

i don't see the point of using Thunderbird or any email client. for one thing, it's another headache managing those mails, setting up folders, filters, etc.

emails come from the web so i use webmail (Gmail) and handle everything from there. don't have to mess with folders, filters, or backups on my laptops or the different computers i use to access email.

privacy concerns? i encrypt them files with Truecrypt. :p



Rod

December 5, 2011 11:04 am

Am I the only one that thinks this article is really badly written?
If you are trying to explain the different protocols to people that are not that conversant with technology you get a big F. While technically correct the information is confusing for a newbie. Your writing is not concise and to the point.

I used to be a technical writer and have been a network guy for over 25 years.

Next time you intend to write to an audience that needs this basic things explained think of the people that are going to read them or better yet run your article through some of your less tech savvy friends.

Badly done sir.



TomSr

December 5, 2011 11:30 am

I prefer IMAP since I use many devices: desktop, laptop, Android phone, iPad, iPod and once in a while the web interface for my Google Apps account.



Charlie

December 5, 2011 11:35 am

@Rod,

Actually, I believe you are the only one who thinks it's badly written.

I don't see at all where "the information is confusing." First it explains the difference between webmail and email clients and how each gets mail from the server. Then it goes through each of the types of email clients and explains how it works—get from the server and delete, get from the server and keep, work with an Exchange server.

Did you give any examples? Nope. Your criticism is badly written. I could with the same degree of validity say you are badly dressed without having said a word about your pants or your tie.

I used to be a technical writer, and I've been a network guy, Cisco guy, Windows guy, Linux guy, Macintosh guy, Wang guy, telephone-system guy, and overhead projector guy for almost 30 years. And I understand the difference between saying something and showing something.

And you need a comma between "done" and "sir."

The Death of the PC The days of paying for costly software upgrades are numbered. The PC will soon be obsolete. And *BusinessWeek* reports 70% of Americans are already using the technology that will replace it. Merrill Lynch calls it "a \$160 billion tsunami." Computing giants including IBM, Yahoo!, and Amazon are racing to be the first to cash in on this PC-killing revolution. Yet, two little-known companies have a huge head start. Get their names in a free report from The Motley Fool called, "The Two Words Bill Gates Doesn't Want You to Hear..."

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