

POST OFFICE PROTOCOL VERSION 3 (POP3)

An Internet standard protocol for storing and retrieving messages from Simple Mail Transfer Protocol (SMTP) hosts.

How It Works

SMTP provides the underlying transport mechanism for sending e-mail messages over the Internet, but it does not provide any facility for storing messages and retrieving them. SMTP hosts must be continuously connected to one another, but most users do not have a dedicated connection to the Internet.

Post Office Protocol version 3 (POP3) provides mechanisms for storing messages sent to each user and received by SMTP in a receptacle called a mailbox. A POP3 server stores messages for each user until the user connects to download and read them using a POP3 client such as Microsoft Outlook 98, Microsoft Outlook Express, or Microsoft Mail and News.

To retrieve a message from a POP3 server, a POP3 client establishes a Transmission Control Protocol (TCP) session using TCP port 110, identifies itself to the server, and then issues a series of POP3 commands:

- **stat:**
Asks the server for the number of messages waiting to be retrieved
- **list:**
Determines the size of each message to be retrieved
- **retr:**
Retrieves individual messages
- **Quit:**
Ends the POP3 session

After a POP3 client reads a message in its mailbox on a POP3 server, the message is deleted. Primarily because of this, POP3 is being supplanted by Internet Mail Access Protocol version 4 (IMAP4), which offers better support for mobile users. POP3 is supported by Microsoft Exchange Server.

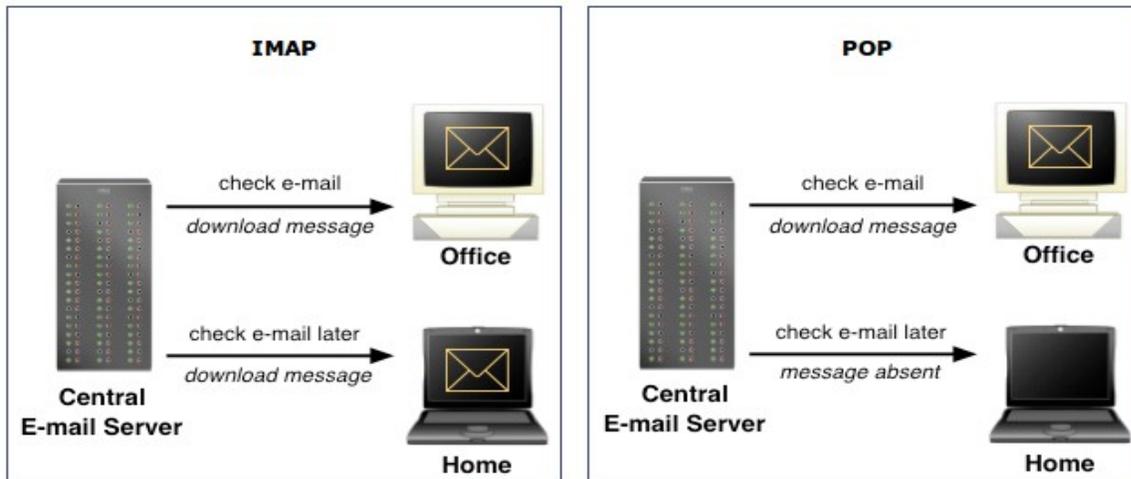
IMAP VS POP:

What's the difference?

The main difference, as far as we are concerned here, is the way in which IMAP or POP controls your e-mail inbox.

When you use IMAP you are accessing your inbox on the mail server. IMAP does not actually move messages onto your computer. You can think of an e-mail program using IMAP as a window to your messages on the server. Although the messages appear on your computer while you work with them, they remain on the central mail server.

POP does the opposite. Instead of just showing you what is in your inbox on the U's mail server, it checks the server for new messages, downloads all the new messages in your inbox onto your computer, and then deletes them from the server. This means that every time you use POP to view your new messages, they are no longer on the central mail server. Figure illustrates these concepts



IMAP makes it easier to view mail from home, work, and other locations

Because IMAP leaves all of your messages on the central mail server, you can view these messages from any location with Internet access. This means the U of M e-mail inbox you view from home will be the same one you see at work.

Since POP downloads new messages to your computer and removes them from the server, you will not be able to see those new messages on another computer when you check your inbox. Those messages exist only on the computer that downloaded them using POP.

However, if you use IMAP and create e-mail folders on the server, these folders are accessible from anywhere you read your e-mail using IMAP. If you use POP and create e-mail folders, they are stored locally, and you cannot access these folders from anywhere except the computer on which you created them.

POP can create problems if you alternate between it and IMAP. There is an option in many POP e-mail programs to leave copies of the messages on the server, but this option has complications. When you leave copies of the messages on the server, then access your e-mail using WebMail or another IMAP e-mail client, the POP client may create duplicate messages next time it accesses the inbox; you will see each of the messages more than once, and you will have to clean out (delete) the unwanted ones.

Feature	POP3	IMAP
Where is protocol defined	RFC 1939	RFC 2060
TCP port used	110	143
Where is e-mail stored	User's PC	Server
Where is e-mail read	Off-line	On-line
Connect time required	Little	Much
Use of server resources	Minimal	Extensive
Multiple mailboxes	No	Yes
Who backs up mailboxes	User	ISP
Good for mobile users	No	Yes
User control over downloading	Little	Great
Partial message downloads	No	Yes
Are disk quotas a problem	No	Could be in time
Simple to implement	Yes	No
Widespread support	Yes	Growing