

Unit 9

Email Protocols

Although the format of a mail message, as transmitted from one machine to another, is rigidly defined, different mail protocols transfer and store messages in slightly different ways. The mail system you are probably used to, employs a combination of SMTP and POP 3 to send and receive mail respectively. Others may use IMAP4 to receive mail, especially where bandwidth is limited or expensive.

Simple Mail Transfer Protocol

SMTP is used to transfer messages between one mail server and another. It is also used by email programs on PCs to send mail to the server. SMTP is very straightforward, providing only facilities to deliver messages to one or more recipients in batch mode. Once a message has been delivered, it can't be recalled or cancelled. It is also deleted from the sending server once it has been delivered. SMTP uses 'push' operation, meaning that the connection is initiated by the sending server rather than the receiver. This makes it unsuitable for delivering messages to desktop PCs, which are not guaranteed to be switched on at all times. Received messages are stored locally and retrieved from the local file system by the mail program. In the case of Web mail, the message is then translated into HTML and transmitted to your browser. SMTP is the only protocol for transferring messages between servers. How they are then stored varies from system to system.

Post Office Protocol

POP is a message -retrieval protocol used by many PC mail clients to get messages from a server, typically your ISP's mail server. It only allows you to download all messages in your mailbox at once: It works in 'pull' mode, the receiving PC initiating the connection. PC-based POP 3 mail clients can do this automatically at a preset interval.

When you use your Web mail account to access a POP 3 mailbox, the mail server opens a connection to POP 3 server just as a PC-based application would. The messages are then copied into your Web mailbox and read via a browser.

Since POP 3 downloads all the messages in your mailbox, there is an option to leave messages on the server, so that they can be picked up from different machines without losing any. This does mean that you will get every message downloaded every time you connect to the server. If you don't clean out your mailbox regularly, this could mean long downloads. When using a Web mail account to retrieve POP 3 mail, be careful about leaving messages on the server - if too many build up, each download will take a long time and fill up your inbox. Many Web email system won't recognize messages you have already downloaded, so you will get duplicates of ones you have not deleted.

Internet Mail Access Protocol

IMAP is similar in operation to POP, but allows you more choice over what messages you download. Initially only message headers are retrieved, giving information about the sender and subject. You can then download just those messages you want to read. You can also delete individual messages from the server.