This sequence diagram was generated with EventStudio 2.5 (http://www.EventHelix.com/EventStudio).

This tutorial explains the operations of a POP3 (Post Office Protocol) e-mail exchange via a sequence diagram. All the message interactions between the POP3 client and server for retrieving one e-mail message from a POP3 mailbox have been described.

The message flow described here corresponds to the following communication between a POP3 client and server:

Server: +OK X1 POP3 Server pop3.anydomain.com
Client: USER john.doe@anydomain.com
Server: +OK send your password
Client: PASS abcxyz
Server: +OK maildrop locked and ready
Client: STAT
Server: +OK 1 1317
Client: UIDL
Server: +OK 1 messages (1317 octets)
Client: LIST
Server: +OK 1 messages (1317 octets)
Client: RETR 1
Server: +OK 1317 octets
Client: DELE 1
Server: +OK msg deleted
Client: QUIT
Server: +OK POP3 Server saying Good-Bye

Copyright © 2005 EventHelix.com Inc. All Rights Reserved.
The POP3 server indicates that it has an e-mail with ID 1 and length 1317 bytes.

The unique id associated with the message is sent. A dot on the next line signifies end of UIDL list.

The POP3 client issues a LIST command for all the messages.

The POP3 server responds to the list command with the total number of messages and size of the mailbox.

The POP3 server sends the list entry number and the size of the message in the mailbox. The ASCII DOT (.) signifies the end of the listing.

The client requests the server to retrieve message 1. This is a request to get message 1 from the mailbox.

The POP3 server acknowledges the request and indicates that a 1317 byte message follows.

The 1317 byte e-mail message is transported in one TCP segment. The actual segment length is 1322 as it includes the <cr><nl>,<cr><nl> sequence at the end. Again, the ASCII DOT (.) specifies the end of the message.

The e-mail has now been stored in the e-mail client so it is requests a delete for e-mail message 1 from the mailbox.

The POP3 server acknowledges the delete the of the message to the client.

The POP3 client sends QUIT command to initiate the release of the session.

The server acknowledges the QUIT command.

The POP3 client sends FIN to signal the release of the client side of the TCP connection.

Server acknowledges FIN.

The POP3 server sends FIN to signal the release of the server side of the TCP connection.

Server acknowledges FIN.