

Post Office Protocol Version 3 RFC 1939

Introduction:

On certain types of smaller nodes in the Internet it is often impractical to maintain a message transport system (MTS). For example, a workstation may not have sufficient resources (cycles, disk space) in order to permit a SMTP server [RFC821] and associated local mail delivery system to be kept resident and continuously running.

Despite this, it is often very useful to be able to manage mail on these smaller nodes, and they often support a user agent (UA) to aid the tasks of mail handling.

The Post Office Protocol - Version 3 (POP3) is intended to permit a workstation to dynamically access a maildrop on a server host in a useful fashion. Usually, this means that the POP3 protocol is used to allow a workstation to retrieve mail that the server is holding for it.

Commands:

The following are the commands which are necessary, even in a minimal POP3 implementation:

- 1.USER
- 2.PASS
- 3.STAT
- 4.LIST
- 5.RETR
- 6.DELE
- 7.RSET
- 8.NOOP
- 9.QUIT

Basic Operation:

Initially, the server host starts the POP3 service by listening on TCP port 110. When a client host wishes to make use of the service, it establishes a TCP connection with the server host. When the connection is established, the POP3 server sends a greeting. The client and POP3 server then exchange commands and responses (respectively) until the connection is closed or aborted.

Design:

The client connects to the POP3 server, securing a lock, and is greeted by a message, entering the AUTHORIZATION state. Information about users is stored in a directory, Users, and every user has a file associated with him in this directory.

Clients enter commands and are greeted with either positive responses(+OK) or negative ones (-ERR).

1.USER

The client enters this command followed by his username. The server then checks if the filename is present in the Users directory and if so, the server asks for the password.

2.PASS

The PASS command takes the user's password as argument. The password is stored in the first line of the user's file, and is compared against the entered password. If everything goes well, the user moves to the TRANSACTION state.

3.STAT

This command, when entered in the TRANSACTION state, displays the number of messages, as well as the size of the user's mailbox.

4.LIST

This command simply lists the message ID's of the user's messages.

5.RETR

Followed by a message ID as argument, this command retrieves the message from the user's file and displays it.

6.DELE

This command marks the specified message as one that has to be deleted. Such messages do not show up in any of the above commands.

7.RSET

Sets all the messages marked for deletion as unmarked.

8.NOOP

Simply returns a positive response, +OK.

9.QUIT

Upon entering this command, the client moves to the UPDATE state. If any messages were marked as deleted, they would be deleted here. The server then frees all the resources allocated to the client and sends an appropriate response.