CS 580 Client-Server Programming
Spring Semester, 2004
Doc 19 POP

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Reference


CS 580, Spring 1997 lecture notes,
http://www.eli.sdsu.edu/courses/spring97/cs596/notes/protocol/protocol.html

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POP3 Protocol

Purpose: Allow PC's, Macs, etc. to download mail from server

Port number 110

Protocol uses ASCII only
Command Format

Format of commands to server

keyword blank argument₁ [ blank argumentₖ ] CRLF

| keyword | = 3, 4 characters
| argument | <= 40 characters

keyword and arguments are separated by single space character

Server Response

Status keyword additionalInfo

Status is either "+OK" or "-ERR0.3."

A single line response ends in CRLF

If response requires more than one line:

• Each line ends in a CRLF
• The response ends in CRLF.CRLF
• If a line starts with a "." prepend a "." to it
Timeouts

A POP3 server may have an autologout timer

A server must wait at least 10 minutes before timing out a client

The POP3 server on cs.sdsu.edu times out in 2 minutes
States

AUTHORIZATION

Must log in with password before entering transaction state

TRANSACTION

Client can request actions of server, get mail for example

UPDATE

Updates mail box to reflect actions taken in transaction state
Commands

AUTHORIZATION

Server acknowledges connection from client with

+OK "message"

+OK UCB Pop server (version 2.1.2-R3) at sciences.sdsu.edu starting.

Commands: USER, PASS, APOP, QUIT
USER PASS

Combination is used to progress to transaction state

USER must come first
PASS or QUIT must come after USER

Example

Ti 38->telnet cs.sdsu.edu 110
Trying 130.191.226.116...
Connected to cs.sdsu.edu.
Escape character is '^]'.
+OK QPOP (version 3.1.2) at sciences.sdsu.edu starting.

USER whitney
+OK Password required for whitney.
PASS typeYourPasswordHere
+OK whitney has 116 visible messages (0 hidden) in 640516 octets.
TRANSACTION

Commands: STAT, LIST, RETR, RSET, QUIT

STAT

Arguments: none
Returns "+OK" numberOfMessages SizeOfMail

Example

STAT
+OK 22 45595

LIST

Arguments: a message-number (optional)
Returns: size of message in octets

Examples:

LIST 2
+OK 2 3064

LIST
+OK 116 visible messages (640516 octets)
1 2980
2 3064 (message 3 - 116 deleted to save space)
116 1290
.
RETR

Arguments: a message-number

Returns: the message

Example:

RETR 21
+OK 825 octets
Received: from [130.191.9.18] (ebb2p9.sdsu.edu [130.191.9.18]) by sciences.sdsu.edu
(4.1/8.6.10) with SMTP id UAA29486 for <whitney@saturn.sdsu.edu>; Mon, 11 Mar
1996 20:16:07 -0800 (PST)
X-Sender: whitney@cs.sdsu.edu (Unverified)
Message-Id: <v02110100ad6aaaf097b6@[130.191.9.70]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Mon, 11 Mar 1996 20:16:50 -0800
To: whitney@saturn.sdsu.edu
From: whitney@saturn.sdsu.edu (Roger Whitney)
Subject: Sample Mail
X-UIDL: 826604201.000

this is a test
..
the end
---
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DELE

Arguments: a message-number to delete
Returns: a confirmation of deletion
Marks a message to be deleted

NOOP

Arguments: none
Returns: a positive response
Does nothing

QUIT

Arguments: none
Returns: a positive response
Send POP3 server to UPDATE state

UPDATE State

Updates mailbox to reflect transactions taken during the transaction state, then logs user out

If session ends by any method except the QUIT command during the transaction state, the update state is not entered
Optional POP3 Commands

TOP

Arguments: a message-number and number of lines to return
Returns: Requested lines of indicated message
State allowed in: transaction

UIDL

Arguments: a message-number (optional)
Returns: a unique-id listing for message
State allowed in: transaction

Examples:
UIDL 1
+OK 1 826312760.001

UIDL
+OK uidl command accepted.
1 826312760.001
2 826312760.006
3 826493796.004
etc.
APOP

Arguments: a mailbox and a MD5 digest string

State allowed in: authorization

Action: If MD5 string is correct move to transaction state