

Software Design and Architectures
SE-2 / SE426 / CS446 / ECE426
Fall 2003

Assignment 4 : Client Server Exercise

Due in class (1pm RCH 205) on Wednesday October 15.

Find a Telnet client with a command-line interface. Connect it to your usual SMTP server. (You find out the port number.) Interact with it to send a message from yourself to someone else (someone who won't mind getting the message!)

Hand in a log of your interaction, including all TCP traffic in both directions, annotated (by you) to explain what's going on.

Solution.

I did this from my Mac desktop (running OS/X 10.2.8 on Darwin 6.8) whose Internet IP address is 129.97.75.132. I used the desktop application Terminal (which runs a shell doing I/O in a text window) and within that I ran the BSD telnet(1) command. I connected to an SMTP server on plg (running SunOS 5.8 on a Sparc Sunfire 880 dual processor) whose Internet IP address is 129.97.140.200.

It's all a bit of a coincidence, because the server actually speaks a different protocol (SMTP) from the client (telnet). However they're similar enough for our purposes: both are based on ASCII. SMTP requires each transmission to be terminated by two bytes CR and NL (decimal values 13 and 10). The telnet(1) command appends these by default.

(connexion initiated by Client)

```
Server: 220 plg2.math.uwaterloo.ca ESMTP Sendmail 8.11.7/8.11.7 ready at Fri,
      17 Oct 2003 11:26:55 -0400 (EDT) - problems to postmaster@uwaterloo.ca
Client: HELO mathmac175.math.uwaterloo.ca
Server: 250 plg2.math.uwaterloo.ca Hello mathmac175.math.uwaterloo.ca
      [129.97.75.132], pleased to meet you
Client: MAIL FROM:ajmalton@mathmac175.math.uwaterloo.ca
Server: 250 2.1.0 ajmalton@mathmac175.math.uwaterloo.ca... Sender ok
Client: RCPT TO:malton@swag.uwaterloo.ca
Server: 250 2.1.5 malton@swag.uwaterloo.ca... Recipient ok
Client: DATA
Server: 354 Enter mail, end with "." on a line by itself
Client: This is a test
Client: .
Server: 250 2.0.0 h9HFSOW29969 Message accepted for delivery
Client: QUIT
Server: 221 2.0.0 plg2.math.uwaterloo.ca closing connection
(connection terminated by Server)
```