Internet Mail System
Simple Mail Transfer Protocol
(SMTP)

Laboratory Exercise

CS 485 Systems Programming
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Mail Servers

- Clients and servers communicate using the Simple Mail Transfer Protocol (SMTP)
  - Client and server establish TCP connection
  - Client sends information to identify who the mail is from and to. It then sends the body of the email message.
  - Server responds with a status code to each part of the communication
  - Client and server close connection

Connecting to the SMTP Server

- The default mail port is 25
- SMTP runs over a TCP connection
- The *mail client* program opens a TCP connection to port 25 on the server. The client’s local port number does not matter and is selected (by the OS) from the set of unused local port numbers.
- For experimentation purposes, you can use the telnet program to connect to a mail server that we set up for this lab assignment. From your VM type:

  `telnet cs485mail.netlab.uky.edu 25`
Example SMTP Exchange

S = Server, C = client  (you will type the blue text)

(Please replace myloginID with your login id, and replace Your Name with your name).

S: 220 server.example.org ESMTP Postfix
C: HELO myloginID.netlab.uky.edu
S: 250 server.example.org
C: MAIL FROM: <myloginID@uky.edu>
S: 250 2.1.0 Ok
C: RCPT TO: <cs485@netlab.uky.edu>
S: 250 2.1.5 Ok
Example SMTP Exchange (continued)

C: DATA
S: 354 End data with <CR><LF>.<CR><LF>
C: From: “Your Name” <myloginID@uky.edu>
C: To: “CS 485” <cs485@netlab.uky.edu>
C: Date: Fri, 5 Dec 2014 13:05:00 EST
C: Subject: CS 485 SMTP Lab
C:
C: If you receive this, I succeeded in sending email via SMTP!
C:
C: Sincerely,
C: Your Name
C:
C: .
S: 250 2.0.0 Ok: queued as 00CF142E8F
C: QUIT
S: 221 2.0.0 Bye
Connection closed by foreign host

This is a period
Your assignment

Send an email from your real email address that the reader could respond to.

- Use telnet on your VM to send email to cs485@netlab.uky.edu on the mail server cs485mail.netlab.uky.edu on port 25
- Using SMTP, give your real email address as the sender’s address.
- Include a subject line that says “This is a test message from your real email address”.
- Include a body that tells whether you found this easy or hard to do.

Send an email from a spoofed email address.

- Use telnet on your VM to send email to cs485@netlab.uky.edu on the mail server cs485mail.netlab.uky.edu on port 25
- Use SMTP to spoof the sender’s email address so that it looks like it came from CS485.TA@netlab.uky.edu
- Include a subject line that says “This is a your grade for the SMTP lab (From TA ABC)” where ABC are your initials.
- Include a body that says

  Score = 100%
  Contact me if you have any questions.

The CS 485 TA
CS485.TA@netlab.uky.edu

(Just kidding – this is really from fill in your name here)