Administrivia

- More homework on Web: Homework 8 (regular expressions) due next Monday. Homework 9 (text editors revisited) due first day of finals. Homework 10 (TBA) probably also due first day of finals.
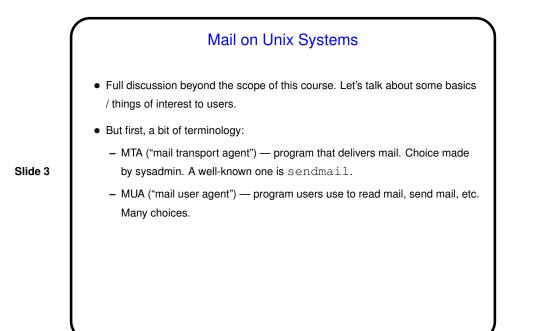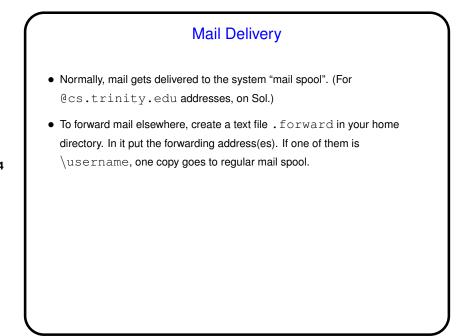
Slide 1

Minute Essay From Last Lecture

- Question: Try writing a regular expression that would match a "license plate" string of the form "one uppercase letter, then two digits, then three uppercase letters".

- Answer?

Slide 2

Mail on Unix Systems

- Full discussion beyond the scope of this course. Let's talk about some basics / things of interest to users.

- But first, a bit of terminology:

  - MTA ("mail transport agent") — program that delivers mail. Choice made by sysadmin. A well-known one is `sendmail`.

  - MUA ("mail user agent") — program users use to read mail, send mail, etc. Many choices.

Slide 3

Mail Delivery

- Normally, mail gets delivered to the system "mail spool". (For `@cs.trinity.edu` addresses, on Sol.)

- To forward mail elsewhere, create a text file `.forward` in your home directory. In it put the forwarding address(es). If one of them is `\username`, one copy goes to regular mail spool.

Slide 4

Reading Mail

Slide 5

- There are lots of programs you can use to read mail (MUAs). By default, many read from local mail spool. For us, this means you would have to run them on Sol — no longer allowed for performance reasons.

- Many MUAs, though, also allow reading from server (for us, Sol) using POP3 or IMAP. Also, `fetchmail` can be used to fetch mail using one of these protocols. Probably works best if run from your own machine.

- Or you can use `.forward` file or `procmail` (more later) to put mail in a file in your home directory and use any MUA to read it from there.

- Worth looking at text-mode MUAs — often very configurable/scriptable. `mutt` and `pine` both seem good.

Sending Mail from the Command Line

Slide 6

- Simplest / most primitive program for sending (and reading) mail is `mail`. Pretty reasonable for sending pre-composed text-only messages.
  Example: `echo "this is a test" | mail -s "test" bmassing@cs.trinity.edu`

- What about attachments? `mail` doesn't really "do" MIME. Workarounds:
  - Encode files to attach with `shar`. Recipient pipes message body through `unshar`.
  - Encode files to attach with `uuencode`. Recipient pipes message body through `uudecode`.

- Other text-mode MUAs (e.g., `mutt` and `pine`) are also "scriptable" and understand MIME.
  Example: `echo "here is my file" | mutt -a somefile -s "my file" bmassing@cs.trinity.edu`.

Filtering Mail with `procmail`

Slide 7

- `procmail` can be used for many kinds of "filtering" operations on mail. Selected messages can be saved (to files), forwarded, automatically replied to, or passed to other programs.

- On many Unix systems, you make this happen via a `.forward` file. On Red Hat Linux systems, it happens automatically if you have a file `.procmailrc` in your home directory.

- Syntax for `.procmailrc` can be intimidating, but `man` pages for `procmail`, `procmailrc`, and `procmailex` have examples that can help.

- One use of `procmail` is to run all incoming mail through a spam-filtering program, such as `spamassassin` (installed on Sol).

- (Examples.)

Minute Essay

Slide 8

- Are you thinking of doing an extra-credit project? Likely due date is May 11.