



- (Reasonably good ASCII-art picture here.)
- MTA ("mail transport agent") communicates with the outside world to send/receive mail, using SMTP (Simple Mail Transfer Protocol). Choice made by sysadmin. A traditional one is sendmail. Very powerful, but not easy to configure. Losing ground on desktop-oriented Linux distributions to alternatives such as postfix.

Slide 3

- MDA ("mail delivery agent") delivers mail locally, often to "mail spool". One choice is procmail, which allows various forms of filtering.
- MUA ("mail user agent") is what users interact with directly. Many choices (more later).
- Mechanisms for running "batch" jobs (e.g., cron, to run programs daily/weekly/etc.) often mail output to owning user.

Mail on UNIX (and Other) Systems — More-Current Approach

 MUA communicates directly with mail server (probably not local), using IMAP, POP3, etc. Mail stays on server. Examples include Thunderbird and Evolution. Requires that mail server be running something that provides IMAP/POP3/etc. access.

- Another alternative is Web-based mail client.
- Can co-exist with traditional approach.

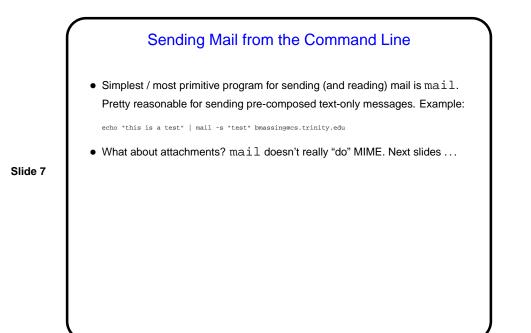
Mail Delivery
Normally, mail gets delivered to the system "mail spool". (For @cs.trinity.edu addresses, on Sol.)
To forward mail elsewhere, create a text file .forward in your home directory. In it put the forwarding address(es). If one of them is \username, one copy goes to regular mail spool. Can also use this to put mail in a file.
Can also use procmail to redirect/filter incoming mail.

Reading and Sending Mail
Lots of programs you can use to read mail (MUAs). Most allow reading from different sources:

System mail spool. (For us, that's on Sol, which might not accept regular logins.)
Another file (e.g., file in home directory).
Server that provides POP3 or IMAP access.

MUAs also, of course, allow sending mail. Some have built-in support for outgoing mail, usually (?) via SMTP ("Simple Mail Transport Protocol"). Others turn over outbound mail to system MTA, e.g., sendmail. Not a concern on lab machines, but may be if using mail on your own machine.

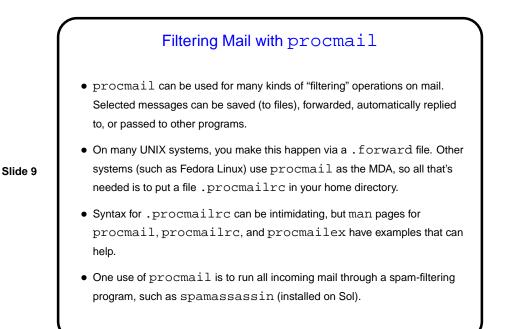
Slide 5



Sending Mail from the Command Line with Attachments

- Use mail with an old-style mechanism for encoding files as plain text:
 - Encode files to attach with shar. Recipient pipes message body through unshar.
 - Encode files to attach with uuencode. Recipient pipes message body through uudecode.
- Use another text-mode MUA (e.g., mutt or pine) that's "scriptable" and understands MIME. Example:

echo "here is my file" | mutt -a somefile -s "my file" -- bmassing@cs.trinity.edu.



Retrieving Mail with fetchmail

- fetchmail is designed to fetch mail, and turn it over to local MTA for delivery. Can retrieve mail from different sources using different protocols (POP3, IMAP, etc.). Very flexible/configurable.
- Could use this on your own machine to retrieve mail from Sol (and/or other servers), or on lab machines to retrieve mail from other servers.
- (Historical/cultural aside: A widely-read essay related to open-source software, "The Cathedral and the Bazaar" by Eric Raymond, was based in part on his experiences with fetchmail.)

