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Administrivia

- Reminder: Homework 7 due today.
- (Information about projects coming soon.)

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Minute Essay From Last Lecture

- Most people used Web-based interfaces such as TMail, and most seemed happy with them. One mentioned other Web-based interfaces as being not so good.
- But there were a few mentions of GUI programs, such as Thunderbird and Windows Mail (which according to its user here seems to be pretty bad at almost everything but has one nice feature, side-by-side displays of “both inboxes”(?).)
- And there was a `mutt` user, who likes that it's lightweight and can run even over a text-only connection.

Mail — Some Technical Stuff

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- Original standard for e-mail (RFC 561?) was text-only, “7-bit ASCII-clean”, though one could encode non-text files in some way compatible with that.
- (“RFC”? Literally, “Request For Comments”, but these are generally documents describing standards for Internet-related things.)
- E-mail message consists of “envelope” (real sender), “headers” (something: something), and “body”.
- Newer standard is MIME (“Multipurpose Internet Mail Extensions”), which extends previous standard to allow non-ASCII text and multipart messages. Includes notion of “MIME types” (types of files).

Mail on Linux Systems, Revisited

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- For incoming mail, mail servers on Linux first look for a `.forward` file, which may send mail somewhere else or to a local file.
- Mail not forwarded elsewhere is processed by a local MDA (Mail Delivery Agent). For some Linux distributions, that’s actually `procmail`. Default is to deliver to local “mail spool”, which is a file in text format(!) in “mbox” format (big sequential file, with messages separated by those real-sender lines (“From” at start of line, followed by a blank line.) (Alternative “maildir” format puts each message in a separate file.)
- Users run MUA (Mail User Agent), also called a “mail client”. Traditional UNIX MUAs read from local mailspool (or other file in similar format) and send mail using MTA (“mail transport agent” — (`sendmail`, `postfix`, etc.).
- Recall also that several ways of doing non-interactive work (`at`, `batch`, `cron`) also send output to users via mail.

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Filtering Mail with `procmail`

- As mentioned, `procmail` can be used to do some fairly sophisticated processing.
- But a simpler use is just to put mail in a file other than the system mailspool.
- (Look at sample configuration files.)

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Spam Filtering — `spamassassin`

- `spamassassin` looks at mail messages and assigns them a “score” meaning how likely it thinks they are to be junk. If higher than some threshold value (configurable), program flags as “spam” (usually rewriting the Subject line).
- Can configure system to route all incoming mail through this program, or individual users can do so via `procmail`.
- (Look at sample configuration file.)

Mail Clients

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- “Mail clients” include Web interfaces, graphical programs (Thunderbird, Windows Mail, Apple Mail, etc.), and text-mode programs (`mail`, `mutt`).
- Most that aren’t Web-based can read from local mail spool. Most these days also can read from nonlocal mail server using POP and/or IMAP. Outgoing mail can be turned over to system MTA (`mail`, older versions of `mutt`), or mail client may send directly using SMTP, often to a non-local server.
- Most allow/require that you provide information about where mail is coming from (local file(s) or mail server) and how to deal with outgoing mail (e.g., name of server to use for outgoing mail).

`mutt` Revisited

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- As mentioned, *highly* configurable, though sometimes it takes some tinkering to get things set up just so.
- By default, reads from and writes to local files and uses local MTA. But can also configure to read from POP or IMAP server and (newer versions) use remote SMTP server for outgoing mail.
- Uses an external editor to compose messages. Configurable.
- Has built-in support for showing text (“pager”) and maybe a few other MIME types. Uses external programs to display others, based on mime-types and “mailcap” configuration files.
- (Look at sample configuration file(s).)
- Online help via F1 (but that doesn’t work if intercepted by GNOME etc. — but F2 should work too).

A Sample Configuration for `mutt` on Our Machines

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- `.forward` to route mail to department mail server. (File should contain a single line, `\username@cs.trinity.edu`. That leading backslash avoids potential forwarding loops.)
- `.procmailrc` to put mail in file in your home directory.
- `.spamassassin/user_prefs` to set `spamassassin` preferences.
- `.muttrc` for `mutt` configuration.

Minute Essay

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- Anything noteworthy about Homework 7?