How to Send and Receive E-mail on Unix

In this exercise you will learn how to send and receive e-mail in Unix, using both the simplest e-mail program, `mail`, and using `pine`.

You no doubt already know how to send e-mail, but you may not know how to send and receive e-mail using Unix. In this lession you will first customize your account a bit more and then send a message to your instructor.

The default e-mail program on most Unix computers is called simply "`mail`". It comes from the Berkely Standard Distribution of Unix (BSD), so it is sometimes also called Berkely mail. It's simple and easy to use, but not very powerful. You cannot, for example, send or receive e-mail with attachments using Berkeley mail.

You also have the option of using a more powerful e-mail program called Pine. Some of the advantages of Pine are that it also works on Windows PC's and on Mac OS X, it handles file attachments just fine, and it works with centralized e-mail servers that use the IMAP protocol (like Vassar's central mail server).

So Pine is better than Berkely mail, but since it isn't available on all Unix computers by default we will first start by learning to use the more universal Berkeley `mail` program.

1. Customization

Before you use the `mail` program you should copy some more files from your instructor to set up your account to make e-mail easier.

At the Unix prompt (written here as "`%` ") give the following commands:

```
% cp ~myers/fortran/sample.mailrc ~/.mailrc
% cp ~myers/fortran/sample.pinerc ~/.pinerc
```

(If you can't copy these files from that directory you can download them from the "Exercises" page on the web.)

The `.mailrc` file contains commands which are read by the `mail` program when it starts up. The commands in this version of this file will make your life a lot easier. The `.pinerc` file contains settings which are read and used by Pine when it is started. Many Unix programs use startup files like these which begin with a "dot" (so that they are

hidden) and end with the letters "rc", which stand for "run commands." Remember, you only have to copy these files to your home directory once.

It is a good idea to make a subdirectory where your e-mail messages can be saved, and in fact the `.mailrc` file you have just copied will try to save copies of your outgoing mail to a file called `Archive` in a subdirectory called `Mail`. If you do not already have such a folder (you can check with `‘ls -F‘`) then you can create it with the Unix `mkdir` command, like so:

```
%  mkdir Mail
```

2. Sending E-mail in Unix

Now send your instructor an e-mail message. At the Unix prompt simply type the following:

```
%  mail myers
Subject: I'm learning Fortran
I am in the Fortran reading class,
and I have completed Exercise 02.
⟨^D⟩
%
```

The command ‘`mail myers`‘ sends a mail message to the userid `myers`. The mail program prints the word "Subject:" and waits for you to type in the subject of the mail message. Then the mail program lets you type in your message, on as many lines as you like, until you press control-D (*i.e.*, hold down the "control" key and then press the "D" key). Don't forget to press the Enter key at the end of each line of your message. When you press control-D the mail program sends your message, and you are back to the Unix prompt.

If, after you press control-D, the computer prints "Cc:", then it is waiting for you to type the names of users to whom to send "carbon copies" of your message. Just press return again and your message will be sent (or you can add your own userid to receive a copy of your own message).

Since you will want to learn how to read e-mail too, you can send yourself some mail, or get someone else you know to send you some mail (and you could send some to them). Just follow the same procedure as above, to send yourself something like:

```
% mail mavassar
Subject: e-mail
I'm not talking to myself, this is just
so I can practice reading e-mail.  Really!
:-)
⟨^D⟩
```

```
EOT
%
```

From any other computer the address would be "`mavassar@noether.vassar.edu`". Of course you want to use your own userid instead of "mavassar".

That last bit of punctuation in the e-mail message above, the "`:-)`", is called a "smiley", and if you can't see why this is a good name for it just turn your head 90° to the left. The smiley is used in e-mail to show that you are joking or being facetious, the way a chuckle or your tone of voice would if you were talking to someone. Get it? `;-)`

3. Reading Email in Unix

At some point, when you log in or when you are working, you may see those four wonderful words, "`You have new mail.`" When you have mail you can read it simply by giving the '`mail`' command by itself, with no arguments:

```
%  mail
Mail version 5.3 2/18/88.  Type ? for help.
"/usr/spool/mail/mavassar": 1 message 1 new
>N  1 mavassar              Wed Oct 13 20:40  14/397  "e-mail"
&
```

The mail program lists the messages you have, with numbers next to each one, the userid of the person who sent you the message, the date it was sent, and the subject of the message. Finally, the mail program shows a `&` prompt, which is different from the `%` prompt of Unix, to remind you that you are in the `mail` program.

To read a message you can simply type the number of the message you want to read and hit Enter:

```
&  1
Message 1:
From mavassar Wed Oct 13 20:40:16 1993
Date: Wed, 13 Oct 93 20:40:15 -0400
From: Fortran Student <mavassar>
To: mavassar
Subject: e-mail
I'm not talking to myself, this is just
so I can practice reading e-mail.  Really!
:-)
&
```

If you have more than one message you can go to the next message by simply pressing Enter, or you can read any message by typing its number. You can also get a good (though

short) summary of other commands known to the mail program by typing the command "`help`".

To exit the mail program and return to the Unix command shell simply give the command "`quit`", like so:

```
&  quit
Saved 1 message in mbox
%
```

Messages which have been read are removed from your system mailbox and put in a file in your home directory called `mbox`. You can see this new file if you give the `ls` command:

```
%  ls
bin         Mail         mbox
```

You can go back and read mail which is in your `mbox` file by giving the mail command with the `-f` flag to tell it which "folder file" to use (in place of your system mailbox). The command is:

```
%  mail -f mbox
Mail version 5.3 2/18/88.  Type ? for help.
``mbox'': 1 message
>   1 mavassar              Wed Oct 13 20:40  15/408  ``e-mail''
&
```

You can read this message, `‘delete‘` it, send a `‘reply‘` to it, or do whatever you want with it. When you `‘quit‘`, any mail in the `mbox` folder file remains there until you explicitly delete it.

If you want to find out more than you'd every really want to know about the mail command, just type `‘man mail‘`.

4. Forwarding Mail

It is easy to have your e-mail forwarded automatically from a Unix computer to any e-mail address. You may want to do this if you would prefer to get all your e-mail sent to your campus e-mail account. The idea is simple: you create a file called `.forward` in your home directory, and you put the forwarding address in that file. At the time an e-mail message arrives on this computer, if the `.forward` file exists, then the mail is automatically forwarded to the address(es) listed in the file.

Thus to forward your mail to your campus e-mail account (webmail) you could simply give the command:

```
%  cat > .forward
mavassar@vassar.edu
⟨^D⟩
```

Press control-D (hold down the control key and press "D") to terminate input into the `.forward` file. Of course you would want to use your own e-mail address, not "mavassar". If you ever want to stop your mail from being forwarded you can simply delete the file with the Unix '`rm`' command:

```
%  rm .forward
```

5. Sending and Receiving E-mail with Pine

To send a message to someone using Pine you simply give the command '`pine`' with the destination e-mail address as a command line argument, such as:

```
%  pine  myers@vassar.edu
```

This puts you in a message composition mode where you can fill in the subject line and additional recipients and then type in your message. You can easily navigate this input form using the tab and arrow keys on your keyboard. Try it by sending your instructor another message.

When you are ready to send your message simply press "control-X" (hold down the control key and press "X"). You will be asked to confirm that you really want to send your message. When you press "Y" for yes your message is sent. You can also cancel your message at any time by pressing control-C. Pine always shows you a simple menu of options at the bottom of the screen.

To read e-mail using Pine simply give the command with no command line arguments:

```
%  pine
```

You will start at Pine's main menu, from which you should select the "Folder List" item, by pressing either "L" or using the arrows to highlight the item you want and pressing Enter. From the list of folders select the local mail folders collection, and from that select your INBOX to read new mail, or any other folder to read old mail.

One reason Pine is easy to use is that it always shows you a command menu at the bottom of the screen to remind you of your options. Another reason it is easy to use is that you can almost always get help from Pine by pressing the "?" key.

When you are done reading your e-mail you can quit Pine by pressing the "Q" key.

5.1. Configuring Pine to use IMAP

IMAP (the Intenet Mail Access Protocol) is a method of storing and accessing e-mail whereby e-mail messages are kep on a central mail server and then given out to client access programs when requested. The main e-mail system at Vassar uses IMAP. One of the many benefits of IMAP is that a variety of client programs can be used to access the e-mail. Pine is one of these programs.

It is fairly easy to configure Pine to access your Vassar e-mail account using IMAP. You only have to use Pine's setup menus to tell it where to find your "inbox" and your folders. Just follow these steps:

1. Start Pine and press "S" for "Setup" and then "C" for "Configuration" This will present you with the configuration menu.

2. Scroll down to the item `user-domain` and press "C" for "Change". Enter the value "`vassar.edu`" and press Enter.

3. Scroll down to the item `smtp-server` and press "C" for "Change". Enter the value "`smtp.vassar.edu`" and press Enter.

4. Scroll down to the item `inbox-path`, press "C" for "Change" and enter the value "`{imap.vassar.edu}INBOX`" (those are curly brackets, not parentheses or square brackets). Press Enter.

5. Press "E" to "Exit Setup". You will be asked to commit to the changes. Press "Y" for "Yes" to accept the changes.

6. You should now be back at Pine's main menu. Again press "S" for "Setup" but now press "L" to change your collection List (the list of your e-mail folders).

7. Press "A" for "Add Collection", then fill in the form. The "nickname" can be something like "Vassar E-mail Server". The `Server:` field should be set to "`imap.vassar.edu`". The `Path:` field should be set to "`INBOX.`" (don't forget that trailing dot, it's important).

8. Press Control-X to save this new collection list definition. You will be asked to confirm that you want to "Exit and save changes?". Press "Y" for "Yes". Then press "E" to "Exit Setup"

9. Since you have changed the location for Pine's inbox and folders you need to exit pine (press "Q" for "Quit") and restart it for the changes to take effect.

You only need to perform these customization steps once, but you can always select "Setup" from the main menu to make changes. In addition to providing your server settings, the configuration menu also contains a large number of options that can make Pine do things the way you want them to be done. You can scroll down to any item in the menu and press "?" for a detailed description of that option.

Pine's configuration options are stored in the file `.pinerc` in your home directory. If you have an account on another Unix machine you can bypass the process of having to repeat the steps above simply by copying your now customized `.pinerc` file to the other account.

If you find that you like Pine enough to use it on your own computer you can get the latest copy by following the link on the list of exercises.