

Network tools: `rdesktop`

You can, if necessary, access Windows machines running terminal services (or remote desktop) via `rdesktop`.



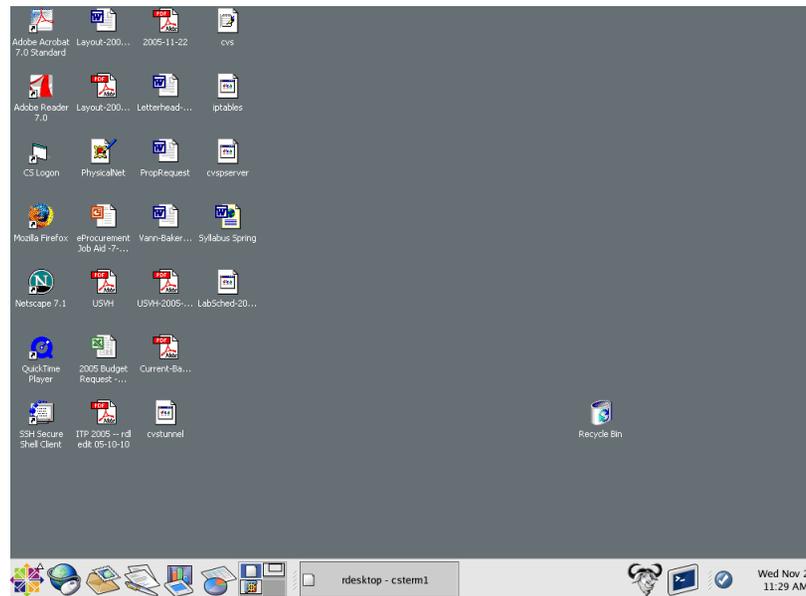
Network tools: `rdesktop`





Running `rdesktop`

```
rdesktop [-f] HOSTNAME
```



The `-f` option puts you in fullscreen mode (`CTRL-ALT-ENTER` to shift back).



Network tools: `ftp`

`ftp` is an older interactive method of transferring files. It is still useful occasionally, though since it is insecure it should only be run within a safely sheltered environment.

Invocation:

```
ftp [-p] HOSTNAME
```

The option `-p` is not found on every version of `ftp`



(modern versions of `ftp` default to this mode), but when it is, it allows you to specify passive mode for data transfers, which can help you use `ftp` going through firewalls.



ftp commands

```
cd RDIR          # chdir on the remote machine to RDIR
lcd LDIR         # chdir on the local machine to LDIR
dir [RDIR]      # get a directory of the remote directory RDIR (defaults to .)
get RNAME [LNAME] # get a single file RNAME from the remote machine, using
                 # LNAME as the local name if specified
put LNAME [RNAME] # put a single file LNAME from the local machine to the remote
                 # machine, using RNAME as the remote name if specified
mget RNAMEPATTERN # get multiple files fitting RNAMEPATTERN (expansion is done
                 # remotely)
mput LNAMEPATTERN # put multiple files fitting LNAMEPATTERN (expansion is done
                 # locally)
hash            # show a hash mark every time 1k is sent or received
del            # delete a remote file
mdel RNAMEPATTERN # delete remote files fitting pattern (expansion is done remotely)
quit          # exit ftp
![CMD]       # if no CMD is given, start a shell; otherwise, execute the CMD
             # locally
```



Sending file trees

The easiest way to send a file tree with `ftp` is to use `tar` first, and then `ftp` the tarfile. For example:

```
[2006-Fall]$ tar cfz /tmp/somedir.tgz somedir
[2006-Fall]$ ftp ftp.redhat.com
Connected to ftp.redhat.com.
220 Red Hat FTP server ready. All transfers are logged. (FTP) [no EPSV]
Name (ftp.redhat.com:ftp): ftp
331 Please specify the password.
Password:langley@ftp
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> lcd /tmp
Local directory now /tmp
ftp> put somedir.tgz
```



telnet

Like `ftp`, `telnet` is an older, insecure program which should be avoided outside of secure environments unless you are using it in a situation for where security is not relevant, such as testing a mail server.

Invoking:

```
telnet HOSTNAME [PORT]
```



Using `telnet`

One of the most useful ways to still use `telnet` is for testing mail servers:





```
[2006-Fall]$ telnet mail.cs.fsu.edu 25
Trying 128.186.120.4...
Connected to mail.cs.fsu.edu (128.186.120.4).
Escape character is '^]'.
220 mail.cs.fsu.edu ESMTP Postfix
helo machine.cs.fsu.edu
250 mail.cs.fsu.edu
mail from: <langley@cs.fsu.edu>
250 Ok
rcpt to: <langley@cs.fsu.edu>
250 Ok
data
354 End data with <CR><LF>.<CR><LF>
Subject: This is a test

This message is a test message.

.
250 Ok: queued as B01E3F2F50
quit
221 Bye
Connection closed by foreign host.
```



The `r` family

The “r” programs `rlogin`, `rsh`, and `rcp` should all be avoided these days since the “s” programs `ssh` and `scp` are more than adequate replacements.



Web browsers, email clients

There are a large number of web browsers and email clients available on Unix machines.

The traditional line-oriented email client is `mail`; two more recent ones are `pine` and `elm`.



mail

```
[2006-Fall]$ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/langley": 2 messages 2 new
>N  1 root@machine.cs.fsu.e  Thu Oct 20 15:54  16/630  "test456"
  N  2 root@machine.cs.fsu.e  Thu Oct 20 15:54  16/627  "test"
& x
```



mail

The `mail` program is very lightweight, and you can quickly read mail messages using it.

If you use “q” to quit, the state of your message box will be updated to indicate things such as whether or not you have read a message. If you use “x”, the message box is not updated.



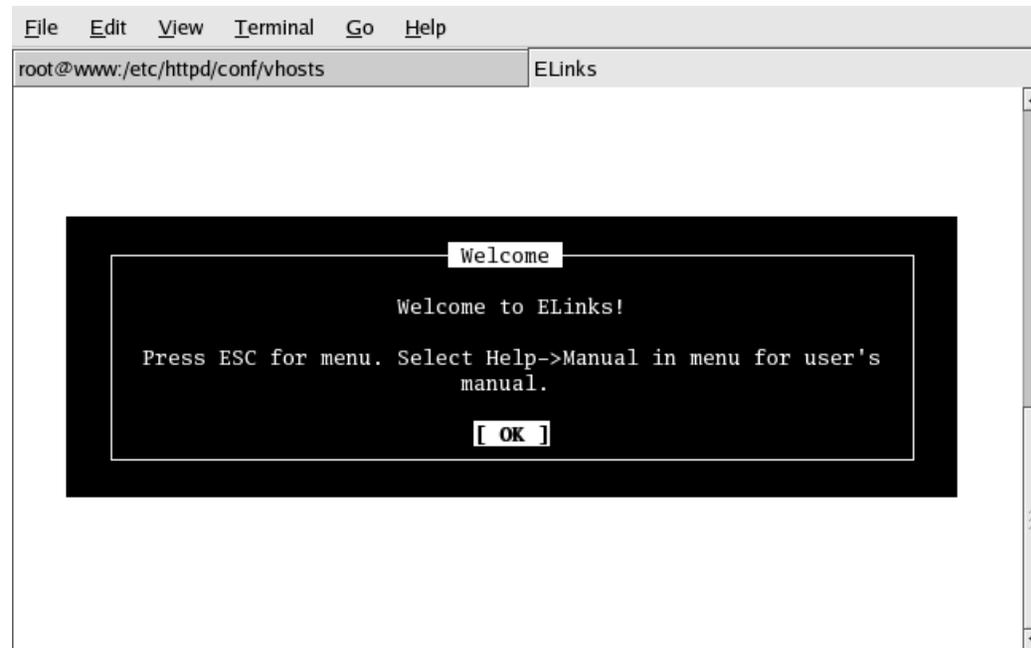
`elm` **and** `pine`: deprecated

Both `elm` and `pine` are designed as “screen” mailers rather than just a line mailer.

While some people prefer them, they lack many features that other mailers have: `mail` is fast and lightweight, and graphic mailers generally are able to handle `imap` and `pop`, which makes handling multiple mailboxes uniformly very simple.



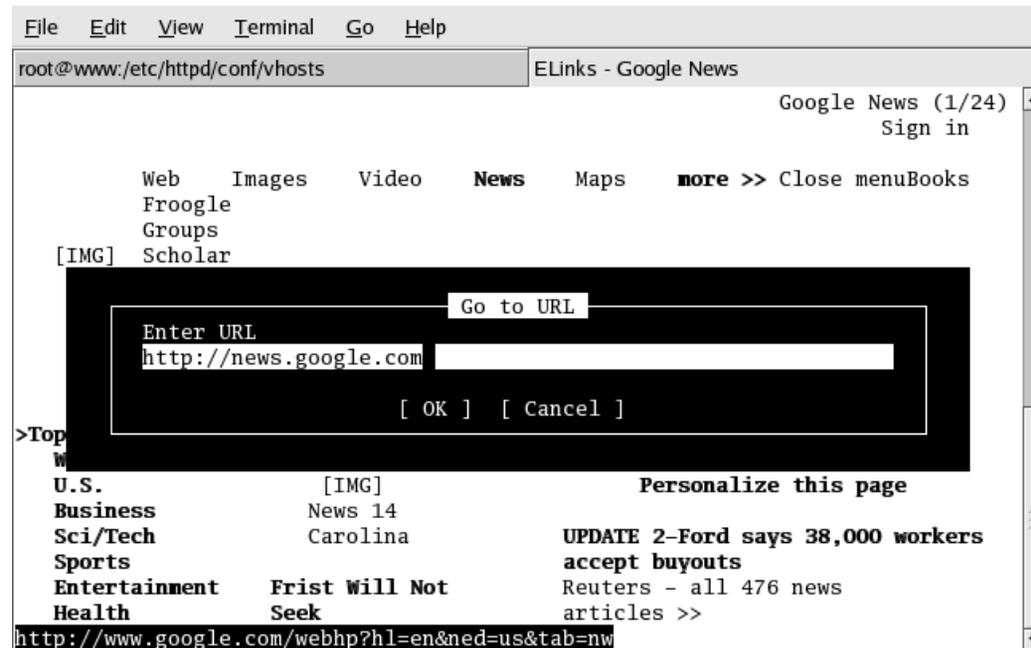
links (a.k.a. lynx or elinks)



The program links is a nice screen-based webbrowser. While it doesn't handle such as things as flash very well, it is a very responsive webbrowser.



links (a.k.a. lynx or elinks)



Using the “g” command



links (a.k.a. lynx or elinks)

```

File  Edit  View  Terminal  Go  Help
root@www:/etc/httpd/conf/vhosts  ELinks - Google News
Google News (1/24)
Sign in

Web  Images  Video  News  Maps  more >> Close menuBooks
Froogle
Groups
[IMG] Scholar
even more >>
[ Search News ] [ Search the Web ]
Search and browse 4,500 news sources updated continuously.

News archive search ^New! | Advanced news search | Blog search

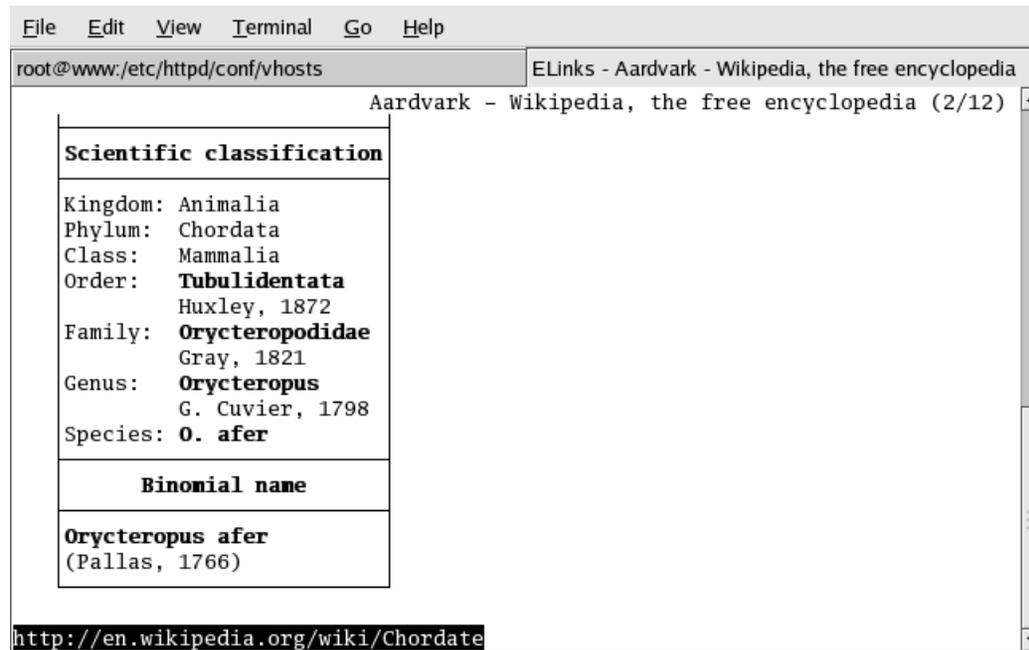
>Top Stories      Top Stories [U.S._____] [ Go ]
World
U.S.              [IMG]
Business          News 14
Sci/Tech          Carolina
Sports
Entertainment     Frist Will Not
Health            Seek
UPDATE 2-Ford says 38,000 workers
accept buyouts
Reuters - all 476 news
articles >>
Text field, name g

```

A typical web page rendered in links.



links (a.k.a. lynx or elinks)



The screenshot shows a terminal window with the following content:

```
File Edit View Terminal Go Help
root@www:/etc/httpd/conf/vhosts ELinks - Aardvark - Wikipedia, the free encyclopedia
Aardvark - Wikipedia, the free encyclopedia (2/12)
Scientific classification
Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Tubulidentata
      Huxley, 1872
Family: Orycteropodidae
      Gray, 1821
Genus: Orycteropus
      G. Cuvier, 1798
Species: O. afer
Binomial name
Orycteropus afer
(Pallas, 1766)
http://en.wikipedia.org/wiki/Chordate
```

A typical web page rendered in links.



Default keybindings in `links`

PageDown	page down
" "	page down
PageUp	page up
b	page up
Down	down
Up	up
Ctrl-C	copy clipboard
Ctrl-P	scroll up
Ctrl-N	scroll down
[scroll left
]	scroll right
Home	home
Ctrl-A	home
Ctrl-E	end
Enter	enter
Left	back
d	download



```
/      search
?      search back
n      find-next
Ctrl-R reload
g      goto url
a      add bookmark
s      bookmark manager
q      quit
```



Graphic web browsing and email

You can now run a variety of graphic web browsers and email clients in many Unix/Linux environments.

Browsers:

epiphany
firefox
galeon
konqueror
mozilla



Graphic web browsing and email

Email clients:

evolution
mozilla mail
thunderbird
xmail

(Another popular option with email is to use a webbrowser reader, such as `squirrelmail` or `openwebmail`.)



Graphic web browsing and email

Most graphic email clients can gracefully handle multiple mailboxes on multiple servers. One of the easiest ways to do this is via `imap`, which allows you to leave the mail on the server rather than the `pop` paradigm of pulling it to the local machine.

