

The "put" subcommand works in a similar fashion and is used to send a file from the local computer to the remote computer. Enter the command "put" and FTP will prompt you for the local file name and then the remote file name. If the transfer cannot be done because the file doesn't exist or for some other reason, FTP will print an error message.

There are a number of other subcommands in FTP that allow you to do many more things. Not all of these are standard so consult your local documentation or type a question mark at the FTP prompt. Some functions often built into FTP include the ability to look at files before getting or putting them, the ability to change directories, the ability to delete files on the remote computer, and the ability to list the directory on the remote host.

An intriguing capability of many FTP implementations is "third party transfers." For example, if you are logged on computer A and you want to cause computer B to send a file to computer C, you can use FTP to connect to computer B and use the "rmtsend" command. Of course, you have to know usernames and passwords on all three computers, since FTP never allows you to peek into someone's directory and files unless you know their username and password.

The "cd" subcommand changes your working directory on the remote host. The "lcd" subcommand changes the directory on the local host. For UNIX systems, the meaning of these subcommands is obvious. Other systems, especially those that do not have directory-structured file system, may not implement these commands or may implement them in a different manner.

The "dir" and "ls" subcommands do the same thing, namely list the files in the working directory of the remote host.

The "list" subcommand shows the contents of a file without actually putting it into a file on the local computer. This would be helpful if you just wanted to inspect a file. You could interrupt it before it reached the end of the file by typing CONTROL-C or some other special character. This is dependent on your FTP implementation.

The "delete" command can delete files on the remote host. You can also make and remove directories on the remote host with "mkdir" and "rmdir". The "status" subcommand will tell you if you are connected and with whom and what the state of all your options are.

If you are transferring binary files or files with any non-printable characters, turn binary mode on by entering the "binary" subcommand:

```
binary
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To resume non-binary transfers, enter the "ascii" subcommand.

Transferring a number of files can be done easily by using "mput" (multiple put) and "mget" (multiple get). For example, to get every file in a particular directory, first issue a "cd" command to change to that directory and then a "mget" command with an asterisk to indicate every file:

```
cd somedirectory
mget *
```

When you are done, use the "close" subcommand to break the communications link. You will still be in FTP, so you must use the "bye" subcommand to exit FTP and return to the command level. The "quit" subcommand will close the connection and exit from FTP at the same time.

### *Mail*

Mail is the simplest network facility to use in many ways. All you have to do is to create your message, which can be done with a file editor or on the spur of the moment, and then send it. Unlike FTP and Telnet, you do not need to know the password of the username on the remote computer. This is so because you cannot change or access the files of the remote user nor can you use their account to run programs. All you can do is to send a message.

There is probably a program on your local computer which does mail between users on that computer. Such a program is called a mailer. This may or may not be the way to send or receive mail from other computers on the network, although integrated mailers are more and more common. UNIX mailers will be used as an example in this discussion.

Note that the protocol which is used to send and receive mail over a TCP/IP network is called SMTP, the "Simple Mail Transfer Protocol." Typically, you will not use any program called SMTP, but rather your local mail program.

UNIX mailers are usually used by invoking a program named "mail". To receive new mail, simply type "mail". There are several varieties of UNIX mailers in existence. Consult your local documentation for details. For example, the command "man mail" prints out the manual pages for the mail program on your computer.

To send mail, you usually specify the address of the recipient on the mail command. For example: "mail knight@umcvmb.missouri.edu" will send the following message to username "knight" on host "umcvmb".

You can usually type in your message one line at a time, pressing RETURN after each line and typing CONTROL-D to end the message. Other facilities to include already-existing files sometimes exist. For example, Berkeley UNIX's allow you to enter commands similar to the following to include a file in your current mail message: