



## **Linux Ubuntu 22.4.5 Manual Pages on command 'netkit-ftp.1'**

### **\$ man netkit-ftp.1**

FTP(1) BSD General Commands Manual FTP(1)

#### NAME

ftp ? Internet file transfer program

#### SYNOPSIS

ftp [-46pinegvd] [host [port]]

pftp [-46inegvd] [host [port]]

#### DESCRIPTION

Ftp is the user interface to the Internet standard File Transfer Protocol. The program allows a user to transfer files to and from a remote network site.

Options may be specified at the command line, or to the command interpreter.

-4 Use only IPv4 to contact any host.

-6 Use IPv6 only.

-p Use passive mode for data transfers. Allows use of ftp in environments where a firewall prevents connections from the outside world back to the client machine. Requires that the ftp server support the PASV command. This is the default if invoked as pftp.

-i Turns off interactive prompting during multiple file transfers.

-n Restrains ftp from attempting ?auto-login? upon initial connection. If auto-login is enabled, ftp will check the .netrc (see netrc(5)) file in the user's home directory for an entry describing an account on the remote machine. If no entry exists, ftp will prompt for the remote machine login name (default is the user identity on the local machine), and, if necessary, prompt for a password

and an account with which to login.

- e Disables command editing and history support, if it was compiled into the ftp executable. Otherwise, does nothing.
- g Disables file name globbing.
- v Verbose option forces ftp to show all responses from the remote server, as well as report on data transfer statistics.
- d Enables debugging.

The client host and an optional port number with which ftp is to communicate may be specified on the command line. If this is done, ftp will immediately attempt to establish a connection to an FTP server on that host; otherwise, ftp will enter its command interpreter and await instructions from the user. When ftp is awaiting commands from the user the prompt `?ftp>?` is provided to the user. The following commands are recognized by ftp:

`!` [command [args]]

Invoke an interactive shell on the local machine. If there are arguments, the first is taken to be a command to execute directly, with the rest of the arguments as its arguments.

`$` macro-name [args]

Execute the macro macro-name that was defined with the `macdef` command. Arguments are passed to the macro unglobbed.

`account` [passwd]

Supply a supplemental password required by a remote system for access to resources once a login has been successfully completed. If no argument is included, the user will be prompted for an account password in a non-echoing input mode.

`append` local-file [remote-file]

Append a local file to a file on the remote machine. If remote-file is left unspecified, the local file name is used in naming the remote file after being altered by any `ntrans` or `nmap` setting. File transfer uses the current settings for type, format, mode, and structure.

`ascii` Set the file transfer type to network ASCII. This is the default type.

`bell` Arrange that a bell be sounded after each file transfer command is completed.

**binary** Set the file transfer type to support binary image transfer.

**bye** Terminate the FTP session with the remote server and exit ftp. An end of file will also terminate the session and exit.

**case** Toggle remote computer file name case mapping during mget commands. When case is on (default is off), remote computer file names with all letters in upper case are written in the local directory with the letters mapped to lower case.

**cd remote-directory**

Change the working directory on the remote machine to remote-directory.

**cdup** Change the remote machine working directory to the parent of the current remote machine working directory.

**chmod mode file-name**

Change the permission modes of the file file-name on the remote system to mode.

**close** Terminate the FTP session with the remote server, and return to the command interpreter. Any defined macros are erased.

**cr** Toggle carriage return stripping during ascii type file retrieval.

Records are denoted by a carriage return/linefeed sequence during ascii type file transfer. When cr is on (the default), carriage returns are stripped from this sequence to conform with the UNIX single linefeed record delimiter. Records on non-UNIX remote systems may contain single linefeeds; when an ascii type transfer is made, these linefeeds may be distinguished from a record delimiter only when cr is off.

**qc** Toggle the printing of control characters in the output of ASCII type commands. When this is turned on, control characters are replaced with a question mark if the output file is the standard output. This is the default when the standard output is a tty.

**delete remote-file**

Delete the file remote-file on the remote machine.

**debug [debug-value]**

Toggle debugging mode. If an optional debug-value is specified it is used to set the debugging level. When debugging is on, ftp prints each command sent to the remote machine, preceded by the string ?-->?

dir [remote-directory] [local-file]

Print a listing of the directory contents in the directory, remote-directory, and, optionally, placing the output in local-file. If interactive prompting is on, ftp will prompt the user to verify that the last argument is indeed the target local file for receiving dir output. If no directory is specified, the current working directory on the remote machine is used. If no local file is specified, or local-file is -, output comes to the terminal.

disconnect A synonym for close.

form format

Set the file transfer form to format. The default format is ?file?.

get remote-file [local-file]

Retrieve the remote-file and store it on the local machine. If the local file name is not specified, it is given the same name it has on the remote machine, subject to alteration by the current case, ntrans, and nmap settings. The current settings for type, form, mode, and structure are used while transferring the file.

glob Toggle filename expansion for mdelete, mget and mput. If globbing is turned off with glob, the file name arguments are taken literally and not expanded. Globbing for mput is done as in csh(1). For mdelete and mget, each remote file name is expanded separately on the remote machine and the lists are not merged. Expansion of a directory name is likely to be different from expansion of the name of an ordinary file: the exact result depends on the foreign operating system and ftp server, and can be previewed by doing ?mls remote-files -? Note: mget and mput are not meant to transfer entire directory subtrees of files. That can be done by transferring a tar(1) archive of the subtree (in binary mode).

hash [increment]

Toggle hash-sign (`#') printing for each transferred data block, but only in the absence of an argument. The size of a data block is set to 1024 bytes by default, but can be changed by the argument increment, which also accepts the suffixed multipliers 'k' and 'K' for kilobytes, 'm' and 'M' for Megabytes, and finally 'g' and 'G' for Gigabytes. Set?

ting a size activates hash printing unconditionally.

help [command]

Print an informative message about the meaning of command. If no argument is given, ftp prints a list of the known commands.

idle [seconds]

Set the inactivity timer on the remote server to seconds seconds. If seconds is omitted, the current inactivity timer is printed.

ipany Allow the address resolver to return any address family.

ipv4 Restrict the address resolver to look only for IPv4 addresses.

ipv6 Restrict host addressing to IPv6 only.

lcd [directory]

Change the working directory on the local machine. If no directory is specified, the user's home directory is used.

ls [remote-directory] [local-file]

Print a listing of the contents of a directory on the remote machine. The listing includes any system-dependent information that the server chooses to include; for example, most UNIX systems will produce output from the command `?ls -l?`. (See also `nlist`.) If remote-directory is left unspecified, the current working directory is used. If interactive prompting is on, ftp will prompt the user to verify that the last argument is indeed the target local file for receiving ls output. If no local file is specified, or if local-file is `?-?`, the output is sent to the terminal.

macrodef macro-name

Define a macro. Subsequent lines are stored as the macro macro-name; a null line (consecutive newline characters in a file or carriage returns from the terminal) terminates macro input mode. There is a limit of 16 macros and 4096 total characters in all defined macros. Macros remain defined until a close command is executed. The macro processor interprets ``$'` and ``\'` as special characters. A ``$'` followed by a number (or numbers) is replaced by the corresponding argument on the macro invocation command line. A ``$'` followed by an ``i'` signals that macro processor that the executing macro is to be looped. On the first pass ``$i'` is re?

placed by the first argument on the macro invocation command line, on the second pass it is replaced by the second argument, and so on. A backslash followed by any character is replaced by that character. Use the backslash to prevent special treatment of the '\$'.

`mdelete [remote-files]`

Delete the remote-files on the remote machine.

`mkdir remote-files local-file`

Like `dir`, except multiple remote files may be specified. If interactive prompting is on, ftp will prompt the user to verify that the last argument is indeed the target local file for receiving `mkdir` output.

`mget remote-files`

Expand the remote-files on the remote machine and do a `get` for each file name thus produced. See `glob` for details on the filename expansion. Resulting file names will then be processed according to case, `ntrans`, and `nmap` settings. Files are transferred into the local working directory, which can be changed with `?lcd directory?`; new local directories can be created with `?! mkdir directory?`.

`mkdir directory-name`

Make a directory on the remote machine.

`mls remote-files local-file`

Like `nlist`, except multiple remote files may be specified, and the local-file must be specified. If interactive prompting is on, ftp will prompt the user to verify that the last argument is indeed the target local file for receiving `mls` output.

`mode [mode-name]`

Set the file transfer mode to mode-name. The default mode is `?stream?` mode.

`modtime file-name`

Show the last modification time of the file on the remote machine.

`mput local-files`

Expand wild cards in the list of local files given as arguments and do a `put` for each file in the resulting list. See `glob` for details of filename expansion. Resulting file names will then be processed according to

ntrans and nmap settings.

newer file-name [local-file]

Get the file only if the modification time of the remote file is more recent than the file on the current system. If the file does not exist on the current system, the remote file is considered newer. Otherwise, this command is identical to get.

nlist [remote-directory] [local-file]

Print a list of the files in a directory on the remote machine. If remote-directory is left unspecified, the current working directory is used. If interactive prompting is on, ftp will prompt the user to verify that the last argument is indeed the target local file for receiving nlist output. If no local file is specified, or if local-file is -, the output is sent to the terminal.

nmap [inpattern outpattern]

Set or unset the filename mapping mechanism. If no arguments are specified, the filename mapping mechanism is unset. If arguments are specified, remote filenames are mapped during mput commands and put commands issued without a specified remote target filename. If arguments are specified, local filenames are mapped during mget commands and get commands issued without a specified local target filename. This command is useful when connecting to a non-UNIX remote computer with different file naming conventions or practices. The mapping follows the pattern set by inpattern and outpattern. [Inpattern] is a template for incoming file names (which may have already been processed according to the ntrans and case settings). Variable templating is accomplished by including the sequences ``$1'`, ``$2'`, ..., ``$9'` in inpattern. Use ``\'` to prevent this special treatment of the ``$'` character. All other characters are treated literally, and are used to determine the nmap [inpattern] variable values. For example, given inpattern `$1.$2` and the remote file name "mydata.data", `$1` would have the value "mydata", and `$2` would have the value "data". The outpattern determines the resulting mapped filename. The sequences ``$1'`, ``$2'`, ..., ``$9'` are replaced by any value resulting from the inpattern template. The sequence ``$0'` is replaced by the original

filename. Additionally, the sequence `?[seq1, seq2]?` is replaced by `[seq1]` if `seq1` is not a null string; otherwise it is replaced by `seq2`.

For example, the command

```
nmap $1.$2.$3 [$1,$2].[$2,file]
```

would yield the output filename "myfile.data" for input filenames "my?

file.data" and "myfile.data.old", "myfile.file" for the input filename

"myfile", and "myfile.myfile" for the input filename ".myfile". Spaces

may be included in outpattern, as in the example: ``nmap $1 sed "s/ *$/"`

`> $1'``. Use the ``\`` character to prevent special treatment of the

``$`,``,`,` and ``,'`` characters.

`ntrans [inchars [outchars]]`

Set or unset the filename character translation mechanism. If no argu?

ments are specified, the filename character translation mechanism is un?

set. If arguments are specified, characters in remote filenames are

translated during mput commands and put commands issued without a speci?

fied remote target filename. If arguments are specified, characters in

local filenames are translated during mget commands and get commands is?

sued without a specified local target filename. This command is useful

when connecting to a non-UNIX remote computer with different file naming

conventions or practices. Characters in a filename matching a character

in inchars are replaced with the corresponding character in outchars. If

the character's position in inchars is longer than the length of

outchars, the character is deleted from the file name.

`open host [port]`

Establish a connection to the specified host FTP server. An optional

port number may be supplied, in which case, ftp will attempt to contact

an FTP server at that port. If the auto-login option is on (default),

ftp will also attempt to automatically log the user in to the FTP server

(see below).

`prompt` Toggle interactive prompting. Interactive prompting occurs during multi?

ple file transfers to allow the user to selectively retrieve or store

files. If prompting is turned off (default is on), any mget or mput will

transfer all files, and any mdelete will delete all files.



## proxy ftp-command

Execute an ftp command on a secondary control connection. This command allows simultaneous connection to two remote ftp servers for transferring files between the two servers. The first proxy command should be an open, to establish the secondary control connection. Enter the command "proxy ?" to see other ftp commands executable on the secondary connection. The following commands behave differently when prefaced by proxy: open will not define new macros during the auto-login process, close will not erase existing macro definitions, get and mget transfer files from the host on the primary control connection to the host on the secondary control connection, and put, mput, and append transfer files from the host on the secondary control connection to the host on the primary control connection. Third party file transfers depend upon support of the ftp protocol PASV command by the server on the secondary control connection.

## put local-file [remote-file]

Store a local file on the remote machine. If remote-file is left unspecified, the local file name is used after processing according to any ntrans or nmap settings in naming the remote file. File transfer uses the current settings for type, format, mode, and structure.

pwd Print the name of the current working directory on the remote machine.

quit A synonym for bye.

## quote arg1 arg2 ...

The arguments specified are sent, verbatim, to the remote FTP server.

## recv remote-file [local-file]

A synonym for get.

## reget remote-file [local-file]

Reget acts like get, except that if local-file exists and is smaller than remote-file, local-file is presumed to be a partially transferred copy of remote-file and the transfer is continued from the apparent point of failure. If local-file does not exist ftp won't fetch the file. This command is useful when transferring very large files over networks that are prone to dropping connections.

remotehelp [command-name]

Request help from the remote FTP server. If a command-name is specified it is supplied to the server as well.

remotestatus [file-name]

With no arguments, show status of remote machine. If file-name is specified, show status of file-name on remote machine.

rename [from] [to]

Rename the file from on the remote machine, to the file to.

reset Clear reply queue. This command re-synchronizes command/reply sequencing with the remote ftp server. Resynchronization may be necessary following a violation of the ftp protocol by the remote server.

restart marker

Restart the immediately following get or put at the indicated marker. On UNIX systems, marker is usually a byte offset into the file.

rmdir directory-name

Delete a directory on the remote machine.

runique Toggle storing of files on the local system with unique filenames. If a file already exists with a name equal to the target local filename for a get or mget command, a ".1" is appended to the name. If the resulting name matches another existing file, a ".2" is appended to the original name. If this process continues up to ".99", an error message is printed, and the transfer does not take place. The generated unique filename will be reported. Note that runique will not affect local files generated from a shell command (see below). The default value is off.

send local-file [remote-file]

A synonym for put.

sendport Toggle the use of PORT commands. By default, ftp will attempt to use a PORT command when establishing a connection for each data transfer. The use of PORT commands can prevent delays when performing multiple file transfers. If the PORT command fails, ftp will use the default data port. When the use of PORT commands is disabled, no attempt will be made to use PORT commands for each data transfer. This is useful for certain FTP implementations which do ignore PORT commands but, incorrectly, indi?

cate they've been accepted.

site arg1 arg2 ...

The arguments specified are sent, verbatim, to the remote FTP server as a SITE command.

size file-name

Return size of file-name on remote machine.

status Show the current status of ftp.

struct [struct-name]

Set the file transfer structure to struct-name. By default ?stream? structure is used.

sunique Toggle storing of files on remote machine under unique file names. Remote ftp server must support ftp protocol STOU command for successful completion. The remote server will report unique name. Default value is off.

system Show the type of operating system running on the remote machine.

tenex Set the file transfer type to that needed to talk to TENEX machines.

trace Toggle packet tracing.

type [type-name]

Set the file transfer type to type-name. If no type is specified, the current type is printed. The default type is network ASCII.

umask [newmask]

Set the default umask on the remote server to newmask. If newmask is omitted, the current umask is printed.

user user-name [password] [account]

Identify yourself to the remote FTP server. If the password is not specified and the server requires it, ftp will prompt the user for it (after disabling local echo). If an account field is not specified, and the FTP server requires it, the user will be prompted for it. If an account field is specified, an account command will be relayed to the remote server after the login sequence is completed if the remote server did not require it for logging in. Unless ftp is invoked with ?auto-login? disabled, this process is done automatically on initial connection to the FTP server.

verbose Toggle verbose mode. In verbose mode, all responses from the FTP server are displayed to the user. In addition, if verbose is on, when a file transfer completes, statistics regarding the efficiency of the transfer are reported. By default, verbose is on.

? [command]

A synonym for help.

Command arguments which have embedded spaces may be quoted with quote `"' marks.

## ABORTING A FILE TRANSFER

To abort a file transfer, use the terminal interrupt key (usually Ctrl-C). Sending transfers will be immediately halted. Receiving transfers will be halted by sending a ftp protocol ABOR command to the remote server, and discarding any further data received. The speed at which this is accomplished depends upon the remote server's support for ABOR processing. If the remote server does not support the ABOR command, an ?ftp>? prompt will not appear until the remote server has completed sending the requested file.

The terminal interrupt key sequence will be ignored when ftp has completed any local processing and is awaiting a reply from the remote server. A long delay in this mode may result from the ABOR processing described above, or from unexpected behavior by the remote server, including violations of the ftp protocol. If the delay results from unexpected remote server behavior, the local ftp program must be killed by hand.

## FILE NAMING CONVENTIONS

Files specified as arguments to ftp commands are processed according to the following rules.

1. If the file name ?-? is specified, the stdin (for reading) or stdout (for writing) is used.
2. If the first character of the file name is ?|?, the remainder of the argument is interpreted as a shell command. Ftp then forks a shell, using popen(3) with the argument supplied, and reads (writes) from the stdout (stdin). If the shell command includes spaces, the argument must be quoted; e.g. ?" ls -lt"?. A particularly useful example of this mechanism is: ?dir more?.
3. Failing the above checks, if ``globbing" is enabled, local file names are expanded according to the rules used in the csh(1); c.f. the glob command. If the ftp command expects a single local file (.e.g. put), only the first filename

generated by the "globbing" operation is used.

4. For mget commands and get commands with unspecified local file names, the local filename is the remote filename, which may be altered by a case, ntrans, or nmap setting. The resulting filename may then be altered if runique is on.
5. For mput commands and put commands with unspecified remote file names, the remote filename is the local filename, which may be altered by a ntrans or nmap setting. The resulting filename may then be altered by the remote server if sunique is on.

## FILE TRANSFER PARAMETERS

The FTP specification specifies many parameters which may affect a file transfer.

The type may be one of ?ascii?, ?image? (binary), ?ebcdic?, and ?local byte size? (for PDP-10's and PDP-20's mostly). Ftp supports the ascii and image types of file transfer, plus local byte size 8 for tenex mode transfers.

Ftp supports only the default values for the remaining file transfer parameters: mode, form, and struct.

## ENVIRONMENT

Ftp utilizes the following environment variables.

HOME For default location of a .netrc file, if one exists.

SHELL For default shell.

## SEE ALSO

ftpd(8), netrc(5), RFC 959

## HISTORY

The ftp command appeared in 4.2BSD.

## BUGS

Correct execution of many commands depends upon proper behavior by the remote server.

An error in the treatment of carriage returns in the 4.2BSD ascii-mode transfer code has been corrected. This correction may result in incorrect transfers of binary files to and from 4.2BSD servers using the ascii type. Avoid this problem by using the binary image type.