

The transfer of information is what drives the Internet. Web pages use static text and graphical content to get a message across, e-mail facilitates correspondence between individuals, and newer technologies like video conferencing provide connectivity that is “almost like being there.”

There is also a need to transfer large files from point-to-point, which is what FTP was designed to do. **FTP** stands for **File Transfer Protocol**, an Internet protocol for transferring files between computers on the Internet. Many file servers world-wide have been set up to provide access to files, ranging from scientific documents to beta copies of new computer games. FTP is one of the few original Internet technologies that is still frequently-used today.

Originally designed for the scientific community, standard FTP is not a friendly beast--it uses a command line interface with somewhat cryptic commands. When the Internet migrated to the microcomputer desktop, graphical FTP clients were implemented to make FTP transfers easier. Today's FTP users enjoy a seamless transfer of files due to new clients and abundant resources.

## **What Is FTP?**

FTP is the File Transfer Protocol service for the Internet. At its most basic level, FTP simply routes data between two computers on the Internet in order to facilitate file transfer. On the higher end, FTP can create and remove directories, rename files, and perform most other file maintenance tasks.

FTP requires the client to log into an active FTP server to which commands are submitted. Most public FTP servers on the Internet accept a type of connection known as “anonymous”—you can log onto the server using the user name “anonymous” and use your e-mail address as the password. Because most anonymous-capable servers expect to see your e-mail address as the password, access isn't truly anonymous—if you follow the rules. The term and access method was devised to allow public access to certain servers. Note that anonymous access is typically read-only; that is, you can download files but you cannot upload, delete, or otherwise modify files on the remote server.

**NOTE:** Any server that begins with “ftp” can be assumed to be an FTP server. For example, `ftp.netscape.com` is the address of Netscape Communications's FTP server. However, not all FTP servers begin with “ftp.” For example, Wilfrid Laurier's FTP server is “`mach1.wlu.ca`”

**TIP:** Most anonymous FTP sites limit how many users can be logged in anonymously. Occasionally, when accessing an anonymous FTP site you will get a Too Many Users error. This means that the limit of anonymous users has been exceeded and you must wait for a user to log off before you can log on. Most FTP clients have a Retry setting that can automatically attempt another connection. You can specify the number of retries to have the client try until it successfully logs in. Use this setting with most of your anonymous sites to ease access during busy times.

Developed in the early days of the Internet, FTP was not meant to be easy to use. FTP was originally run from the Unix command line, and it has several arcane commands. Today, Windows 95 comes with a built-in FTP client that approximates the early Unix tools. Several third-party graphical clients are also available. These tools work more like a typical Windows File Manager or Explorer, taking the bite out of the command line interface. Additionally, most Web browsers understand the FTP protocol, allowing you to download files using the same tool you surf the Web with.

FTP is mostly used to retrieve files from remote servers. However, you can also use FTP to send files to your ISP account or Web server, to provide file access to friends and associates, and more.

## FTP Command Summary

Although you will probably be using a graphical client to access your favorite FTP servers, a basic understanding of FTP commands can come in handy.

FTP Command	Meaning and Use
!	Escape to the OS Shell
append <file>	Append to a file instead of creating a new file
ascii	Switch to ASCII mode
binary	Switch to binary mode
bye	Terminate current session and exit FTP
cd <directory>	Change active directory on server
close	Terminate the current FTP session
delete <file>	Delete remote file
dir	Lists the contents of the remote directory
disconnect	Terminate the current FTP session
get <file>	Receive file from remote server
lcd	Change active directory on local computer
ls <directory>	List the contents of the remote directory
mget <files>	Receive multiple files from the remote server
mkdir <directory>	Make a new directory on the remote server
mput <files>	Send multiple files to the remote server
open <server>	Open an FTP session with the server specified
put <file>	Send a file to the remote server
pwd	Display the current working directory on the remote server
send <file>	Send a file to the remote server
type	Set the file transfer type
user	Log into remote server as another user

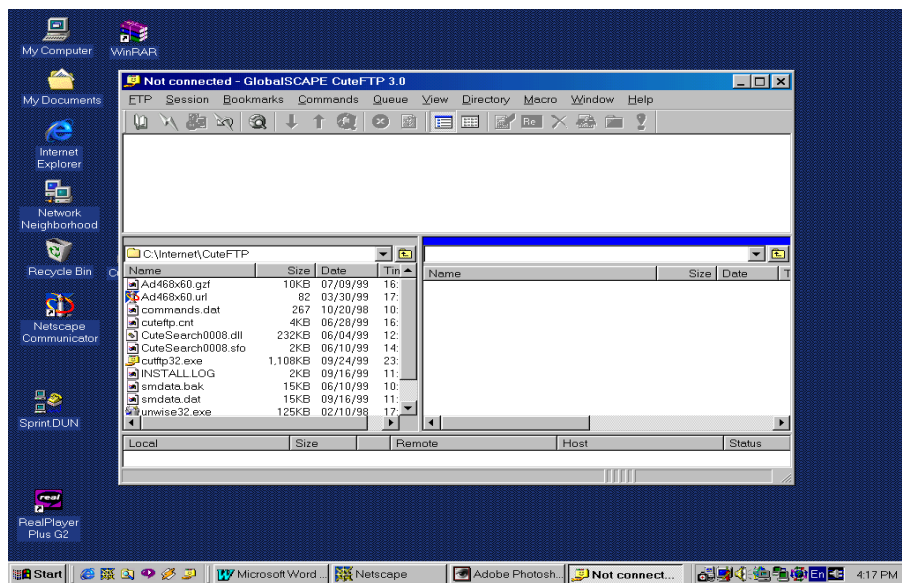
**NOTE:** There are two modes for transferring files with FTP: ASCII and Binary. You should use Binary mode for any file that is not strictly ASCII text. This includes (but is not limited to) programs, ZIP files, and graphics. You can transfer files encoded with UUCP with either protocol since they are ASCII files.

## Using GUI FTP Client Software

Although you can use the command line FTP interface, other, more attractive options exist. There are several good FTP client programs that utilize the GUI aspect of Windows to accomplish FTP transfers. These programs essentially perform the same commands you would use via the command line, but the programs enable you to use the graphical interface to control their actions.

## Using CuteFTP

CuteFTP is a very popular FTP program among Internet users, due to its Explorer-like interface and rich feature set. CuteFTP displays the remote site file list in one pane and your local file list in another pane. To transfer files, you can drag and drop files from one pane to another, use menu commands, or use the toolbar buttons.



In addition to the standard FTP transfer functions, CuteFTP offers these features:

- Sessions are stored in a Site Manager, using a hierarchical tree scheme so you can categorize your connections.
- You can view and execute remote files. (Files are downloaded temporarily to your local computer for viewing or execution.)
- You can set bookmarks so that you can easily return to a particular directory on the remote site.

- You can change the attributes of remote files using a menu command (Commands, Change File Attributes) or raw remote commands.
- You can define custom commands to send raw text to the remote site. For example, a Default Access command can be defined to send an appropriate CHMOD command to the remote site, setting a remote file's access rights.
- You have full firewall/proxy support for navigating through gateways or security firewalls.
- The Spawn Session command quickly launches another instance of CuteFTP, attached to the same site so you can work in several remote directories at once.
- CuteFTP can retry connecting to a site a specific number of times.
- You can rename file extensions automatically when transferred between sites.

To connect CuteFTP to a remote site, follow these steps:

1. Start CuteFTP.
2. If the Site Manager window is not open, click the Site Manger button or press F4.
3. Select the folder where you want to add the site and click the Add Site button. Alternately, add a new folder first by clicking the Add Folder button.
4. Fill in the site specifics within the FTP Site Edit dialog box and click OK. Note that any gray check-boxes will use the global settings, defined by choosing FTP, Settings, Options from the main CuteFTP window.
5. To connect to the site, double-click its entry from the site listings in the FTP Site Manager dialog box.

To transfer files between the local and remote site, follow these steps:

1. Navigate the local file list to find the directory where you want to send or receive a file.
2. Navigate the remote file list to find the directory where you want to send or receive a file.
3. Select the file(s) you wish to transfer.
4. Drag the file from one file list pane to the other.