

## **Transferring Files With FTP: Smart, Cute, and Flashy**

**“What to look for in FTP software.”**

*by Pete Choppin*

"Smart, cute and flashy" — that's how [Top 10 Reviews](#) describes its take on 2010's FTP (file transfer protocol) software.

Actually, it is a fairly decent review. My favorite client—CuteFTP is their number two pick. But rather than simply regurgitating one of dozens of software reviews on FTP clients, I thought it might be useful to explore the ways people use this handy utility, how to set it up, and what to look for in FTP software.

### **Why FTP?**

A common use for FTP by Web developers is transferring files from their local computer to a Web server and back again. Most Web developers keep a copy of the entire Web site on their own PC. That way, they can make changes and test the new pages before going "live" on the server. When they are happy with the page they are working on, they will save their changes locally, and then transfer the new file to the Web server. FTP is ideal for this process because it allows the developer to have a direct, secure connection to the Web server for updating files from a remote location.

FTP is also a good way to back up critical files. By transferring files between computers, you can keep files in more than one location, which is a nice way to keep things safe.

Often, you will need to keep two systems synchronized. If you change either system, the other one is modified to match.

The way this works is that files present only in the local folder are transferred to the FTP server. Similarly, unique files present on the FTP server are transferred to the local folder. This results in both folders being identical.

### **How It All Works**

FTP uses one connection for commands and the other for sending and receiving data. FTP has a standard port number (logical connection point) on which the FTP server "listens" for connections. This port number is 21 and is used only for sending commands. Since port 21 is used exclusively for sending commands, this port is referred to as a command port. For example, to get a list of folders and files present on the FTP server, the FTP client issues a LIST command. The FTP server then sends a list of all folders and files back to the FTP client. So what about the Internet connection used to send and receive data? The port that is used for transferring data is referred to as a data port. The number of the data ports will vary depending on the "mode" of the connection (see below).

### **Active and Passive Modes**

The FTP server may support Active or Passive connections, or both. In an Active FTP connection, the client opens a port and listens, and the server actively connects to it. In a Passive FTP connection, the server opens a port and listens (passively), and the client

connects to it.

Most FTP client programs select passive connection mode by default because server administrators prefer it as a safety measure. Firewalls generally block connections that are "initiated" from the outside. Using passive mode, the FTP client is "reaching out" to the server to make the connection. The firewall will allow these outgoing connections, meaning that no special adjustments to firewall settings are required.

If you are connecting to the FTP server using the Active mode of connection, you must set your firewall to accept connections to the port that your FTP client will open. However, many Internet service providers block incoming connections to all ports above 1024. Active FTP servers generally use port 20 as their data port. It's a good idea to use Passive mode to connect to an FTP server. Most FTP servers support the Passive mode. For Passive FTP connection to succeed, the FTP server administrator must set his/her firewall to accept all connections to any ports that the FTP server may open. This is standard practice for FTP administrators.

Once the FTP client manages to open the Internet connections, one for command and one for data, it starts communicating with the FTP server. You are now ready to transfer your files and folders between the two connected computers.

## **What To Look For**

Even though the basic function of FTP software is to transfer files, there are a few considerations when choosing an FTP client. First, some Web development software such as Dreamweaver has built-in FTP functionality already. But for people (like me) who do not like the functionality of built-in FTP mechanisms, there are other choices.

There are a multitude of freeware FTP programs available for download. Keep in mind that freeware and shareware are not the same. Freeware is free, while shareware is usually free to try with a price tag attached for those who wish to continue using the product beyond a certain timeframe. There are also packages that can be purchased outright. The key is investigating to ensure the product is the one that will work best for your needs.

Also, some FTP programs are restricted to certain operating systems. Some may be for Windows only, others for Mac, and still others for Linux operating systems. Some programs can be used across all three operating systems, which can be a benefit when you see a product you like on someone else's machine (with a different operating system).

Beyond that, my preference has been ease of use and a friendly interface. I usually use something I am comfortable with and like. So as long as the software has the features I need and I am generally comfortable with it, that will usually win me over.

## **Setting Up the FTP Client**

Most FTP clients have very similar settings and they all accomplish the same thing—transferring files between computers. I will demonstrate how to set up an FTP connection by using my preferred client: CuteFTP. These instructions will apply to most any FTP client.

When you launch the FTP client, you may find that there are already some connections established. Typically, these are connections to the company from which you purchased or downloaded the client, or from other publicly accessible FTP servers. I normally delete these connections, but if you want to explore these sites you just need to connect to them.

Many clients have some method of organizing your connections. CuteFTP uses a Site Manager, where you can see all the sites you have established a connection with, or you can create new connections or delete existing ones. To create a new connection, right-click the top of the tree labeled General FTP Sites and click New/FTP Site.

Figure 1. Create a new connection.

When you start a new FTP site, the Site Properties dialog box appears where you enter all the information for the site to which you need a connection.

Figure 2. Site Properties dialog box.

The areas that are essential to fill out, and which are included in most FTP software, are the host address, username, password, and remote and local folders. Other areas are either optional or should already have the correct settings by default.

The username, password, address and remote folders will be provided by the administrator of the FTP server, and the local folder is the location where you want the FTP client to copy files from the server to your computer.

Once the new site is created, simply connect to it. In most cases this is done using a Connect button or menu item. The FTP software will then send the connection commands to the host you specified. If everything passes, it will then connect. You should also see a list of files on the remote server. Listing the files is normally a default command sent at the time of connection.

This is a typical status log with commands and successful connection messages:

Figure 3. Typical status log.

Similar types of log messages are displayed when files are transferred to and from the server. Any error messages are also displayed, so you can easily monitor the status of your connection and the transfer of any files at a glance by using the status screen.

Another helpful tool in most FTP clients is the Queue window. This window will show any files that have been or are in line to be transferred. It shows the percent of the file transferred during the transfer, as well, so you can watch your progress.

Figure 4. Queue window.

The file listing, status log and queue window are all very helpful tools which provide valuable information when you are using an FTP client.

Anytime you need to move files from one computer to another, it is always a good idea to use FTP when it is available. It is secure, allows you to connect computers no matter what OS is installed, and allows larger files to be moved than most e-mail servers will allow.

### **Free FTP Client Software**

- [FileZilla](#)
- [CoffeeCup Free FTP](#)
- [FireFTP Firefox Addon](#)