Beginner's Guide for FTP

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About this Guide

This guide teaches all about the basic knowledge of how the files can be transferred between local and remote system. By the time you finish this guide you'll know enough about FTP and also how FTP can be done from different OS. This guide assumes that you are an absolute beginner to the concept of FTP.

Who should read this Guide

The guide is intended for people who have the urge to know

- What are FTP, FTP Site and FTP Client?
- How files can be uploaded into a web server.
- How the "transfer method" has influence while transferring files in to a server.
- How transfer of files can be done from different Operating systems.

- Author

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1. Introduction:

So, you need to use ftp to transfer your files? Sounds like trouble, doesn't it? Well, no need to worry; it's not as bad as it sounds.

To begin using FTP, you need to get an ftp program that makes it easy to transfer and rename your files. My suggestion is WS_FTP from Ipswitch. You can download a free trial version at the Ipswitch Homepage. Now install the program on your computer using the installation instructions provided at the site. Once you have the program installed, start it up.

In this tutorial I discussed with Reflection FTP Client. What is this? Do not worry it is also FTP Client software like WS_FTP. The graphical user interface doesn't differ much. The core idea behind this tutorial is to make you clear with how these file transfers are handling between a remote servers and your local computer.

2. File Transfer Protocol:

FTP is an acronym for File Transfer Protocol. FTP is a client/server application that allows the transfer of files between computers. This transfer can take place between a mainframe and a local terminal or as a transfer of information over the Internet between your computer and a distant server. FTP is a powerful application which allows users to access archives that are available on a large number of computer hosts. The key elements of FTP are:

- . Finding FTP sites from your client based system
- . Establishing a connection with the server
- . Developing an ability to search through "archives" to retrieve information
- . Using FTP commands to facilitate the transfer of information and
- . allowing for the differences in file types and compressions techniques.

The idea of client/server is important here - that you, the „local" client, are initiating a communication pathway with a "remote" server that may contain public information of interest to you. We will be discussing the more user-friendly GUI applications which makes the ftp easy in the chapters below.

2.1 Where FTP?

The most common use for FTP is to download files from the Internet. Because of this, FTP is the backbone of MP3 music craze (MPEG-1, Layer 3: An audio format that compresses standard audio tracks into much smaller as 12:1 ratio sizes without significantly compromising the sound quality) and vital to most online auction and game enthusiasts. In addition, the ability to transfer files back-and-forth makes FTP essential for anyone creating a Web page, amateurs and professionals alike.

When downloading a file from the Internet you're actually transferring the file to your computer from another computer over the Internet. This is why the transfer is in FTP. You may not know where the file is coming from but you most likely know its URL or Internet address. URL is nothing but *'Universal Resource Locator',*- A postal address for the location of a file or page on the Web.

Example: *http://www.domain.com/directory/page.html*

An FTP address looks a lot like HTTP (*Hyper Text Transfer Protocol* , An application protocol which transfers displayable web pages and related files over the internet). It looks with the prefix ftp:// instead of http://. For example web address http://jamalmd.netfirms.com and FTP address ftp://ftp.domain.com look like this.

Most often, a computer with an FTP address is dedicated to receive an FTP connection, just as a computer that is setup to host web pages is referred to as a web server or website, a computer dedicated to receive an FTP connection is referred to as an FTP server or FTP site.

3. FTP Site.

An FTP site is like a large filing cabinet. With a traditional filing cabinet, the person who does the filing has the option to label and organize the files however they see fit. They also decide which files to keep locked and which remain public. It is the same with an FTP site. The owner of the FTP site can arrest anonymous user to access his/her ftp site. The virtual 'key' to get into an FTP site is the *UserID* and *Password*.

If the creator of the FTP site is willing to give everyone access to the files, the *UserID* is 'anonymous' and the *Password* is your e-mail address (e.g. name@domain.com). If the FTP site is not public, there will be a unique *UserID* and *Password* for each person who is granted access.

When connecting to an FTP site that allows *anonymous* logins, you're frequently not prompted for a name and password. Hence, when *downloading* from the Internet, you most likely are using an anonymous FTP login and you don't even know it. To make an FTP connection you can use a standard Web browser (Internet Explorer, Netscape, etc.) or a dedicated FTP software program, referred to as an ***"FTP Client"***.

When using a Web browser for an FTP connection, FTP uploads are difficult, or sometimes impossible, and downloads are not protected (not recommended for uploading or downloading large files). When connecting with an FTP Client, uploads and downloads could be easier, and you have added security and additional features. For one, you're able to *resume* a download that did not successfully finish, which is a very nice feature for people using dial-up connections who frequently loose their Internet connection. Now a day's software like download manager also available to facilitate the downloading from internet.

4. FTP Client

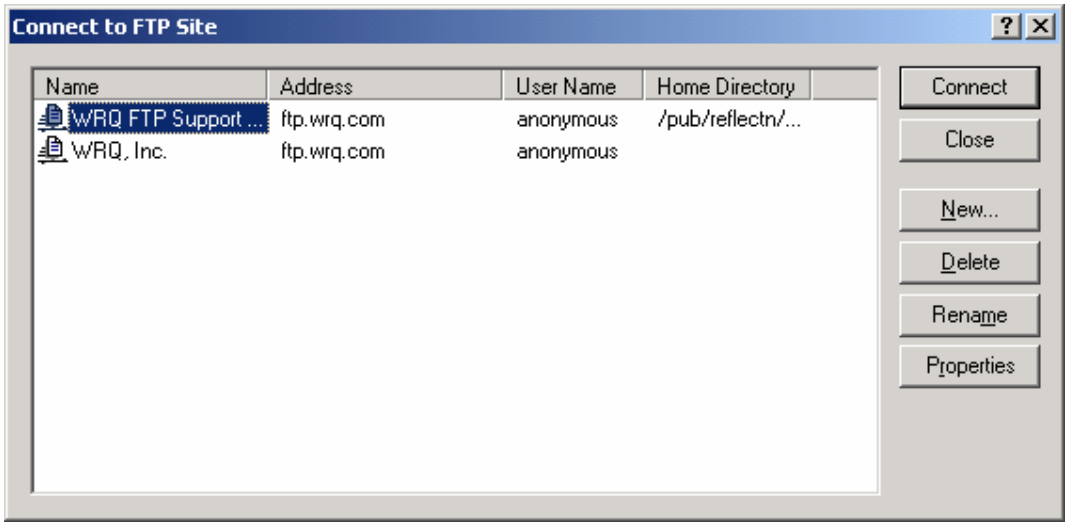
An FTP Client is software that is designed to transfer files back-and-forth between two computers over the Internet. It needs to be installed on your computer and can only be used with a live connection to the Internet. The classic FTP Client look is a two-pane design. The pane on the left displays the files on your computer and the pane on the right displays the files on the *remote* computer. File transfers are as easy as dragging-and-dropping files from one pane to the other or by highlighting a file and clicking one of the direction arrows located between the panes depend upon the feature of the FTP Client which you are using.

Additional features of the FTP Client include:

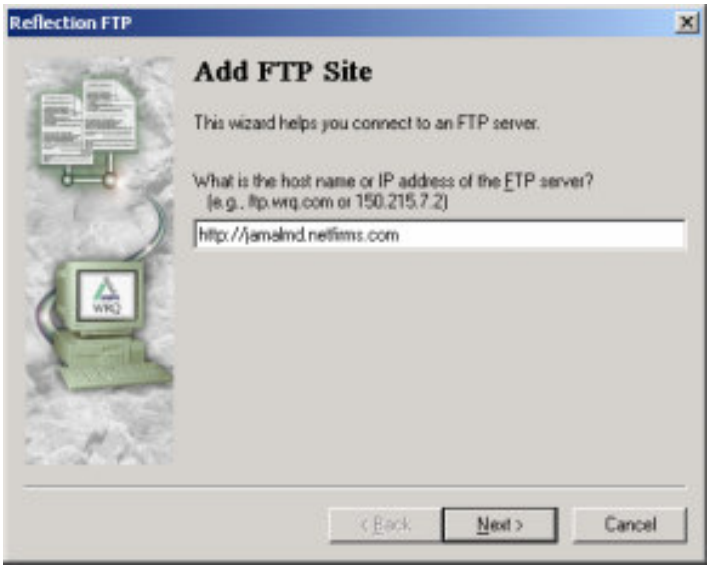
- Multiple file transfer;
- Auto re-get or resuming feature;

- Queuing utility;
- Scheduling feature;
- FTP find utility;
- Ssynchronize utility and
- Script recording for the advanced user.

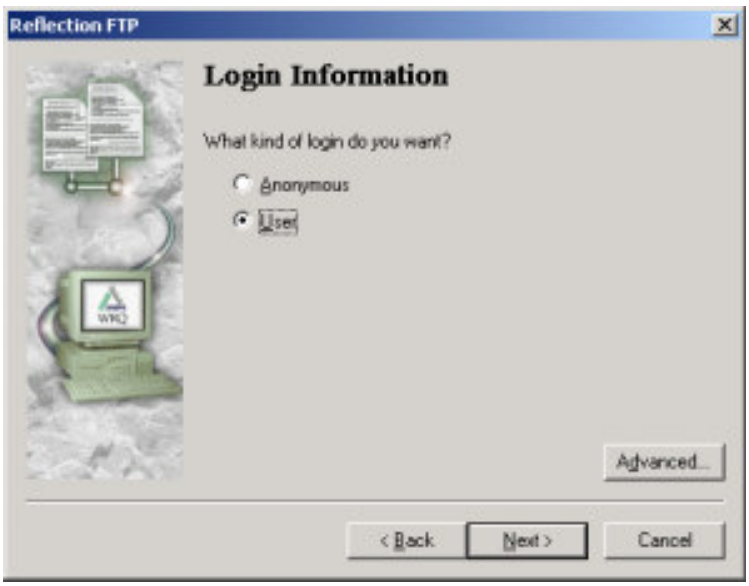
The first thing you should do is set up the program so that it can connect to your web host. So, click on the Reflection FTP Client the window looks like below.



Now, click on the „New" button to begin. You will then be able to fill in the information needed into the proper fields to establish a connection to your FTP Site.

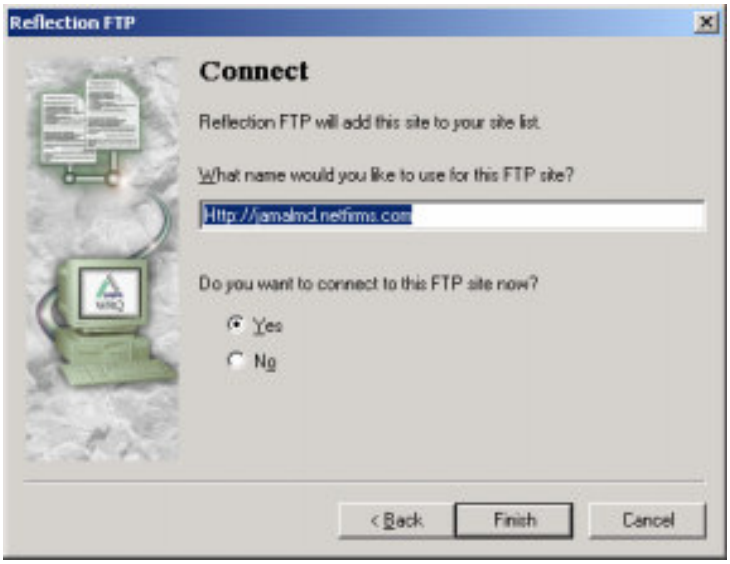


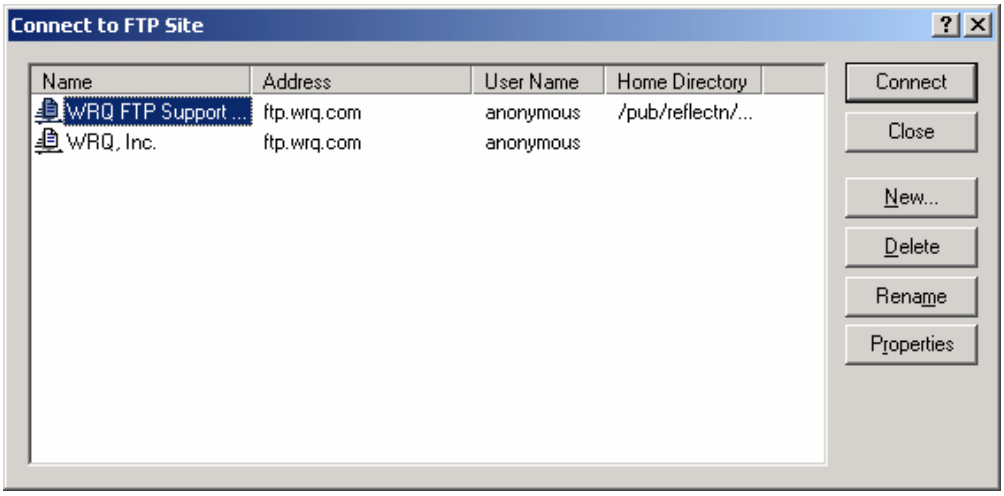
Give your FTP site name or IP address as shown in the window above. Then it will ask the user name information, anonymous user name needs just your email address as your password but you cannot login to secured FTP site without a user name and password. The window is shown below.



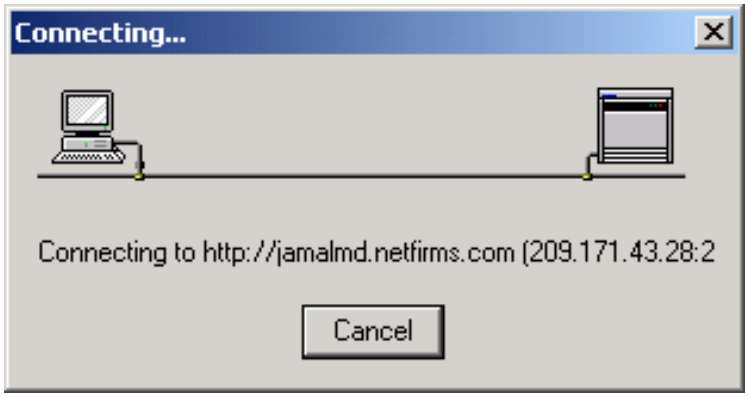
If you click on the radio button user and click next it will ask the username and password for your FTP site.

After giving the required information it will ask whether to store the information filled already for later use. Click on finish will store the data's for future use.



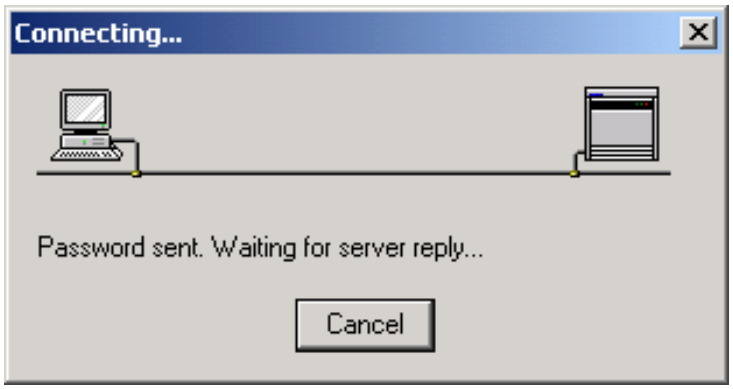


Now you will see your FTP site in the above window as shown. Click on connect will establish a connection to your FTP site.

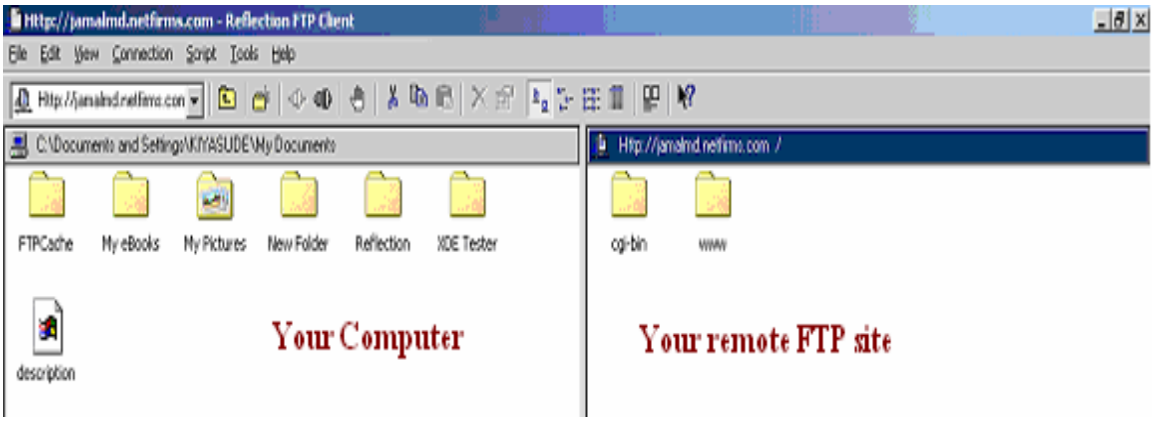


It will ask the password now to send for the connection you selected.

After giving the password and click ‘OK’ will establish the connection to your FTP site.



Then your connection window between your computer and your remote FTP site will be shown like as in the figure below.



The Left Panel shows the files and directory structure in your computer and the right panel shows the files and directory structure in your remote FTP site.

5. Upload files to a web server:

OK, you were able to set up the FTP program and connect to your web server. Now you need to know how to send the files to the server so they can be seen on the web. Well, here we go! Once you are connected, you should see a screen similar to the one above, which is a screen capture of Reflection FTP Client.

Now, look in the right frame, this is where you will see files for the "Remote Host"(which will be your web server).. If you see a directory called "**public_html**" or "**www**" or something similar, you will need to double click on the directory name. You will now be in the directory that holds your files that people can see on the web.

You may already have an "index.html" file here, or you may have nothing at all. Either way, you can start sending your files to your server. To begin, go over to the left frame. This is a listing of the files on your computer. Now, you must navigate to the directory where you have the files you want to send. If you need to go to some specific location where your files are sitting, use the up arrow at the top in the tools bar for navigation similar to windows explorer.

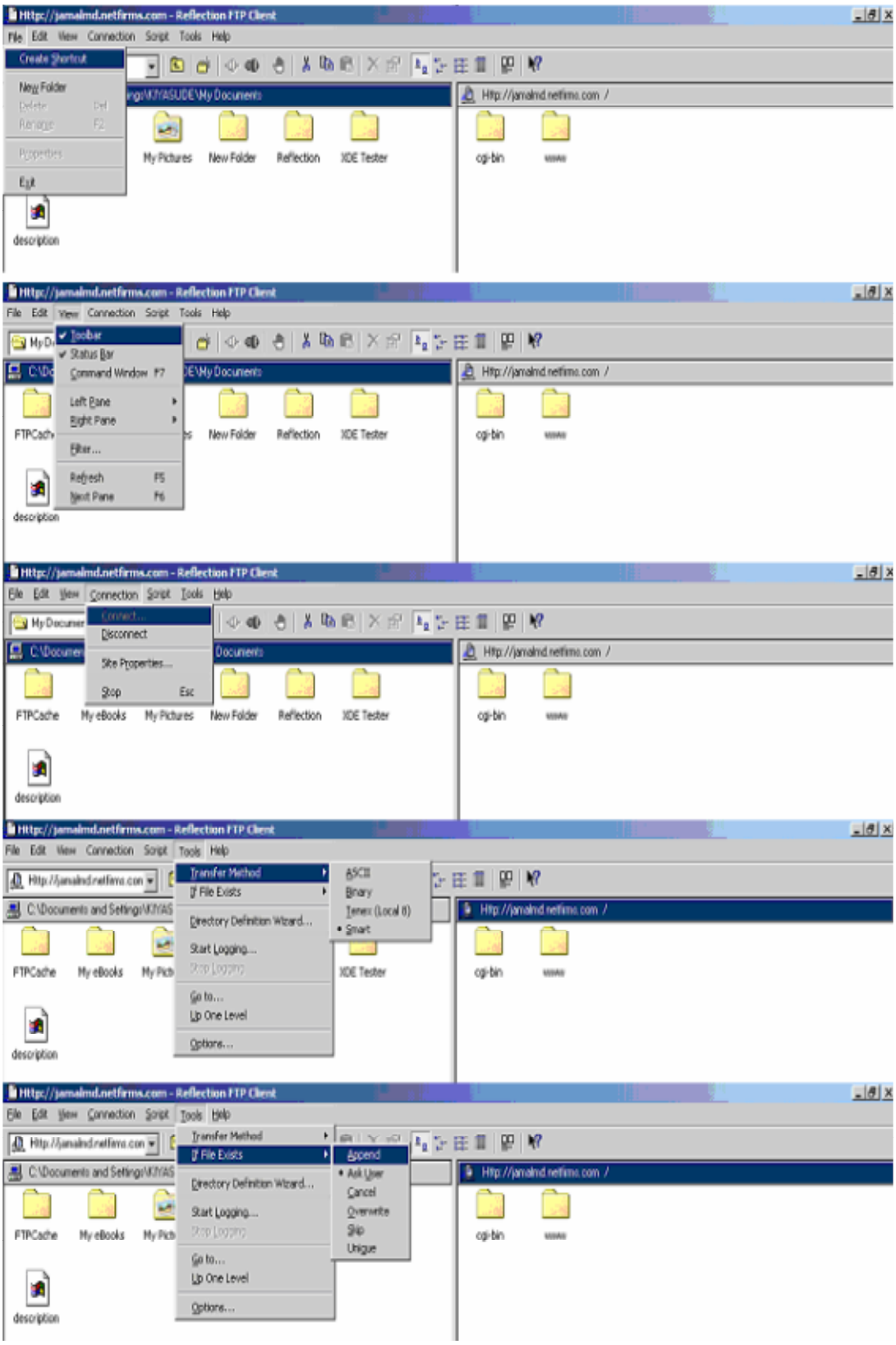
Now just select the file you wish to send, drag and drop in the appropriate folder in the remote computer. This will send your file to the web server, and you will be able to go view it in your web browser!

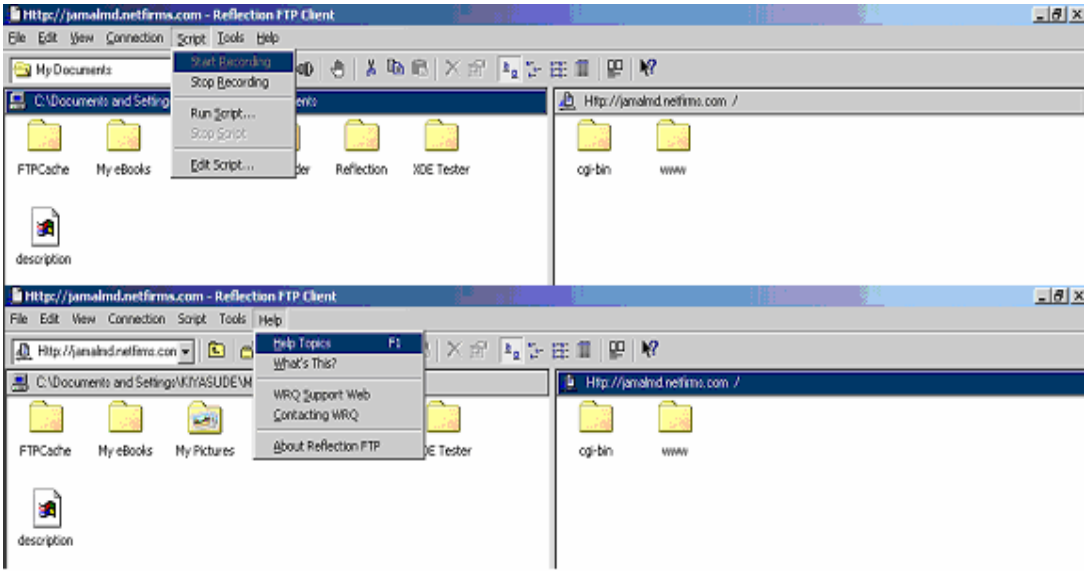
6. FTP Options:

Before uploading a file, if you would like to do few other things like creating a folder, rename, selecting transfer mode etc., can be done with the help of your FTP client software. First, let's take one more look at the screenshot in the next page.

Regarding the Reflection X FTP client most of the options are similar to windows explorer. Clicking on the left pane you can use the tools for your local computer and clicking on the right pane you can use the tools to manipulate your files and directory structure in your remote computer. I don't want to discuss in detail regarding the GUI since it differs according to the client software. The idea behind this section is to clear you about how to transfer files through FTP client effectively.

The screen shots show the options included in this Reflection FTP Client.





7. Transfer Methods:

Irrespective of Client software you are using, the transfer method is a very important concept while transferring files to your remote system.

Check the option for the method you wish to use to transfer your files to the server as shown in the GUI above. The method **"binary"** has to be used for **html files, images, and sound files.** The options should be changed to **"ASCII"** method to upload a CGI program file, which needs to be sent as ASCII text in order to execute properly. Check the ask user option when you want to send files along with CGI program so that it make easier to select the appropriate transfer method. Basically, if one does not work, try using the other...or try smart. If nothing seems to work right, contact your web host and see which method they want you to use for your file transfer.

8. FTP for Unix

Basic Commands:

Since UNIX is a command line environment, we should introduce some of the basic commands that are used to establish an FTP session and to instruct the server on what the client is requesting. Some of the most commonly used commands are discussed below:

- **open** initiates the session between the client and the server.
- **nlist, dir, ls** list the hierarchical organization of files on the remote server.
- **cd** allows you to change directories on the remote computer either up or down.
- **pwd** gives the client a chance to view the current directory and pathway on the remote host.
- **lls, lcd, lpwd** are the ways in which you can do the above for managing your local files.
- **get** allows you to retrieve a file from the server down to your local client computer.
- **put** allows you to place a file from your client up to the remote server computer.
- **mput/mget** are the same as above but allow for multiple files to be manipulated with a single command.
- **prompt** sets interactive prompting; "on" is a safety feature prompting you for verification of each step of the multiple commands, "off" allows the commands to act unimpeded.
- **ascii/binary** allows to specify the type of file to be transferred.
- **quit** ends the connection and ends the session.

To find the full array of commands, type **help** or **?** at the FTP> prompt. This will instruct to show all the available commands for effective FTP use; the above list is by no means exhaustive but does give the most commonly used commands.

Initiating a Session:

For the sake of example we will assume that you are attempting to establish an FTP session from your UNIX account to another remote server computer (jamal.netfirms.com, for example). Once you have logged into your account, you could then start an ftp session by simply typing **ftp** at the prompt. The prompt then changes to look like: **ftp>.** At this you can then type: **open jamal.netfirms.com**. If you have an account on jamal.netfirms.com you can login with your username and password. Some servers allow anonymous ftp sessions which simply mean that you use 'anonymous' as your user id and your email address as your password.

A typical login, with client commands is shown:

~ % **ftp**

Ftp>**open jamal.netfirms.com**

Connected to jamal.netfirms.com

220 FTP server ready.

Name (jamal.netfirms.com): **anonymous**

331 Guest login ok, send your complete e-mail address as password.

Password:

230 Guest login ok, access restrictions apply.

Ftp>

Getting What You Want:

Once in any FTP server, you can navigate through the lists of directories and files to find out what is available. This is done by using the **(l)cd, (l)ls** and others like them to direct the navigation and the downloading of the files. Since the organization of directories and files is structured hierarchically, it may be easy to lose the way when looking for a document. In order to allow clients to keep up with their paths of searching, the command pwd **(print working directory)** becomes useful. Before a file is requested by the client to be downloaded from the server (**get command**) or that the client wishes to upload onto the server (**put command**), two conditions must be considered.

- Issues concerning file permissions
- Whether the file being transported is in Binary or ASCII mode

Briefly, one should view the permissions in UNIX to know for whom it is readable, writeable, and executable. These can be viewed by using either the **nlist** or **dirinfo** commands.

The client must also be aware if the file being transported is a text file or any other kind of file. In general, the transfer mode should be set to ASCII for text- only files and to binary for all others (including .gif, .doc, and any executable files).

9. FTP for Windows

The FTP application for Windows is called WS-FTP, Reflection FTP Client and many. It is GUI-based file-transfer client that allows for a much easier client/server interaction.

The client software can be initiated by double clicking on the icon for it in Windows. The session starts with a logon procedure, and then graphically represents the client and the server by two opposing tables of directories and files. By logging in you specify yourself as the local system, and allow jamal.netfirms.com (or any other ftp server) to be the remote system. The directories can be changed easily enough, both on the remote computer and on the local client hard drive by simply clicking on the change directory button.

In order to FTP a file, one can simply look through the directories of the server to identify the file(s) of interest. You then make sure that the directory where you want to put that file in is open in your local system. You can click on either binary or ASCII transfer mode; depending on what kind of file it is (you can also let the program decide by setting it to auto or smart depend on FTP Client Software). Then, clicking the arrow or drag-drop in the direction you want the file to be transferred client to server or vice-versa) moves the file into the other computer.

In terms of permissions, the windows based FTP Client program makes it very simple to set or re-set permissions. One needs only to double-right click on the file of interest and choose the CHMOD command to set the permissions with the mouse.

9. FTP for Macintosh

FTP applications for Macintosh are unique in their feel interface, but the underlying features of file transfers between clients and servers are very similar to the windows based FTP Client as mentioned above.

One Macintosh application is called Fetch and is associated with a little dog running across the screen to fetch information. It has the same basic setup as Windows does. The only setback it has to the Windows system is that it is not clear in showing exactly where the file is coming from and where it is going from the server, it only shows the directories for the client. One has to simple on this application and the helpful GUI interface leads you through the steps for file transfer.

Another useful FTP program is called Anarchie. The basic metaphor for Anarchie is based on Finder windows. Each window corresponds to a directory on a remote ftp server. You can have multiple windows open at once, so you can interact with different ftp servers, or different directories on those servers, at the same time. You can drag and drop files between the windows and the Finder, or just double click to transfer the file. You can even upload or download entire directories by dragging and dropping a directory from or to a window!

Anarchie also has two searching facilities to find files on the internet. "Archie" searching will let you search the one of the various Archie servers around the internet, which attempt to catalog a lot of files available via ftp. Anarchie also includes the ability to search the entire Info-Mac archive database, which will tell you the location of any file in the comprehensive Info-Mac library. Info-Mac is the main repository of Macintosh shareware and freeware.

Well, that does it for now. Have fun with your FTP program!!