

Windows Me FTP/Telnet

OBJECTIVES

1. Install the HyperTerminal telnet client.
2. Use HyperTerminal to access a remote server.
3. Use the Windows FTP client to access a FTP site.
4. Log on to a public FTP site.
5. Download an ASCII text file and a binary file.
6. Use the Internet Explorer FTP client to download a file.
7. Install the WinZip compression utility.
8. Install the LeechFTP client.
9. Download and upload files using a graphical FTP client.



Networking

RESOURCES

1. Marcraft 8000 Trainer with 64 MB RAM
2. Windows Me operating system (installed)
3. Internet access through a network connection or modem

DISCUSSION

Telnet is a service you can use to "TELEphone - NETwork" with a remote computer. For example, if you were a sports reporter for the New York Times newspaper, and you were watching the Yankees play the Braves at Turner Field in Atlanta, Georgia, you could "telnet" to the computer at the Times office in New York City, and enter your story immediately from this remote location. The information would be presented on the screen of your portable computer, just as if you were back at your desk in New York. This type of remote system access usually uses terminal-emulation software to create a compatible interface for a completely different kind of computer. Typically, a Windows computer is used to access and use a Unix/Linux system. You should note that Telnet will only be able to access those host servers that have been pre-configured to support the telnet protocol.

NOTE: The layout and procedures at web, Telnet, and FTP sites can change fairly often. The instructions below may have to be modified to comply with those changes. Even so, the basic structure of these sites and the applications you download will be similar to the steps used in this lab procedure.



Networking

PROCEDURE

For the following procedure you are going to install the Windows HyperTerminal telnet client, configure it, and use it to log on to a public telnet site.

NOTE: If you already have HyperTerminal installed on your computer, you may skip to Step 2.

1. Install the Windows HyperTerminal telnet client

- ___ a. Boot to the Windows Me desktop.
- ___ b. Use the path Start/Settings/Control Panel and open the Add/Remove Programs Wizard.
- ___ c. Click the Windows Setup tab.
- ___ d. In the *Components* window, double-click on Communications.
- ___ e. Click to select the check box next to HyperTerminal.
- ___ f. Click the OK button.
- ___ g. Click the OK button to begin installation.

2. Set up a telnet session using HyperTerminal

- ___ a. Use the path Start/Programs/Accessories/Communications and select HyperTerminal to run it.

NOTE: If you are using a LAN connection and do not have a modem installed, you may be asked to install one. Just cancel this and continue.

- ___ b. In the *New Connection* window type **Aztec-ASU** into the Name box, then click the OK button.
- ___ c. In the *Connect to* window, click the triangle to open the drop-down menu next to the Connect Using box. Select your modem if you are using one to connect to the Internet. If you are using a LAN connection to the Internet, select TCP/IP (Winsock).
- ___ d. In the Host address box, type **aztec2.asu.edu**, and then click the OK button.
- ___ e. Maximize the *HyperTerminal* window.

3. Use telnet to log in to the AzTeC server

- ___ a. Read the welcome section, then record the full name for the abbreviation AzTeC in Table 39-1.
- ___ b. Record the provided login name in Table 39-2.
- ___ c. Record the provided password in Table 39-3.
- ___ d. At the login prompt type **guest**, and press the ENTER key. Your screen should be similar to Figure 39-1.
- ___ e. At the password prompt, type **visitor** and press the ENTER key.
- ___ f. Follow the prompts until you see the main menu.
- ___ g. Explore AzTeC.
- ___ h. Close HyperTerminal.
- ___ i. When asked if you are sure, click the Yes button.

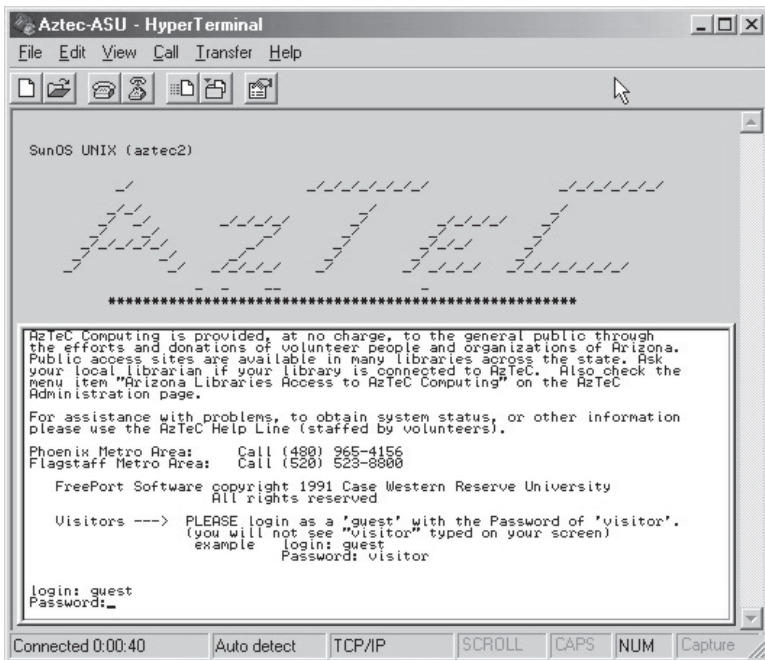


Figure 39-1: The AzTeC-ASU Welcome Screen

Transferring Files Using an FTP Client

FTP (File Transfer Protocol) is an older communication protocol used to transfer files over a remote network connection. Before the creation of the World Wide Web, almost all files were moved in this manner. The widest use of FTP today is for downloading software. For example, almost all manufacturers have a download page on their Web site. At this page you can download a demo, a shareware or freeware version of their product, or the latest driver, revision, or patch for a product.

FTP is also a good tool for troubleshooting a TCP/IP connection. First, if a file can be sent or received, the connection is good. Second, the information collected during the transfer of a large file is the best way to evaluate the speed of a particular connection. It should be noted that FTP will only work on host servers that are configured to support the FTP protocol. Standard HTTP web servers will not normally allow you to use FTP to access the files on the system.

The procedure used to log on to a public FTP site is very simple. Typically, you will be asked to enter a login name and password. Traditionally, users could log on to a public FTP site by using "anonymous" FTP. This means that a user would enter "anonymous" for the requested login name, and "anonymous" for the password. This would allow the user limited guest privileges to use the site. Currently, most sites that allow anonymous FTP use "ftp" for the login name, and the most common requested password is your e-mail address.

Windows has a very simple FTP client that can be accessed through the Start menu by choosing Run and typing **ftp**, or by entering **ftp** at the MS-DOS command prompt. If you wish to use this client to transfer ASCII text files, all you have to do is navigate to the file's location and type **get filename** at the ftp prompt. This won't work with non-text files that have extensions such as .exe, .jpg, .pdf, etc. In order to download these types of files you will have to switch to binary mode. To do this you will need to type **binary** at the FTP prompt. After you are finished you can switch back to ASCII mode by typing **ascii** at the FTP prompt. After finishing, the downloaded files can be found in the directory from which you accessed FTP.

Fortunately, in most cases you should not need to use this awkward Windows utility. Most web browsers, such as IE and Navigator, have a built-in FTP capability. This allows the web site visitor to use pre-created FTP tasks without having to do anything other than point and click on a hyperlink. While these predefined tasks can be very helpful to the user, if you wish to do anything more than the simplest of FTP tasks, it might be best to upgrade to a graphical FTP client. Fortunately, there are several excellent freeware and shareware FTP clients available, such as LeechFTP, WS_FTP LE, CuteFTP, and FTP Voyager. These FTP clients automatically identify the type of file you are transferring (text or binary) and use the appropriate download method. These graphical FTP clients have intuitive interfaces that use drag-and-drop and standard Windows-like navigation to make it very easy to transfer files.

Many files at FTP sites are made available for download as compressed archive files, most commonly in the .zip, .tar, .sit, .bin, or .hqx formats. In order to decompress these files after download, you will need to have a utility such as WinZip, PKZip, or Expander installed on your computer. These compression utilities can be downloaded from a shareware download web site, such as download.com or tucows.com.

In the next part of this lab you will install the WinZip archive utility and the LeechFTP client. You will use the Windows FTP client to access the Marcraft public FTP site and download an ASCII text file and a binary file and then use the Internet Explorer FTP client to download a file. Finally, you will download and upload files using the Leech FTP client.

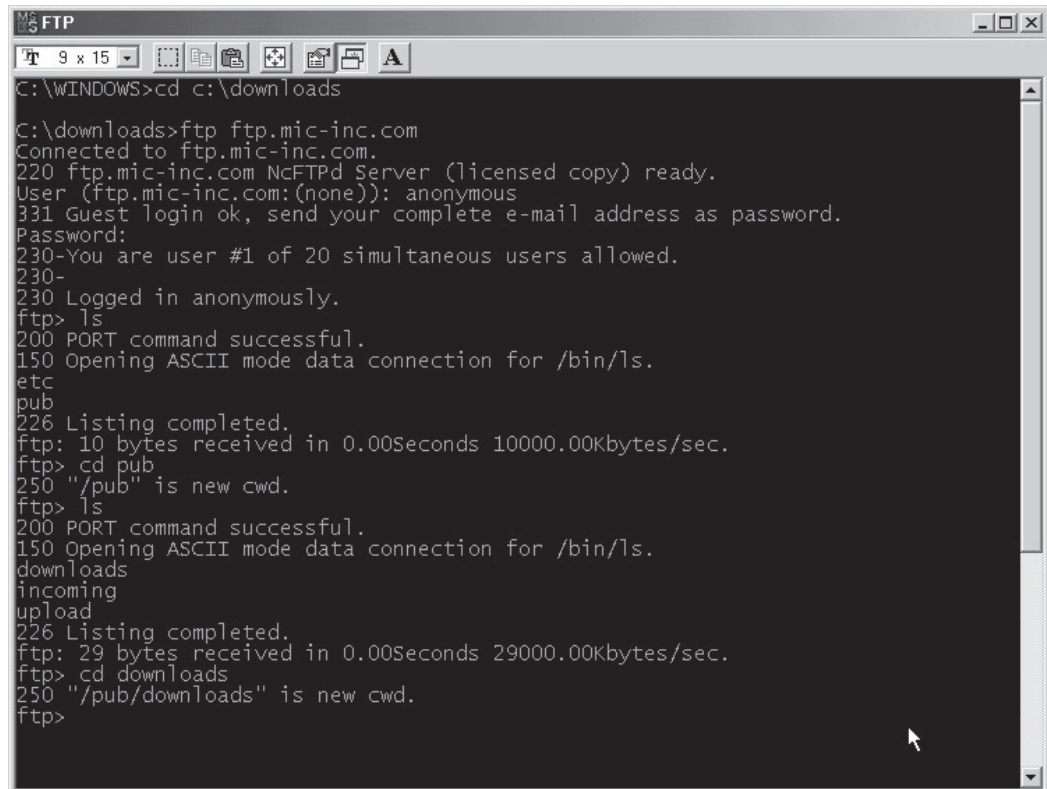
1. Access the Marcraft public FTP site

- ___ a. Use the path Start/Programs/Accessories to open the *MS-DOS command prompt* window.
- ___ b. At the MS-DOS command prompt type **cd c:\downloads**, and press the ENTER key to change to your downloads directory. If your DOWNLOADS folder is not at this location, just navigate to an appropriate directory.
- ___ c. At the MS-DOS command prompt type **ftp ftp.mic-inc.com**, and press the ENTER key.



PROCEDURE - 39

- ___ d. At the User prompt type **anonymous**, and press the ENTER key.
- ___ e. At the password prompt type your e-mail address and press the ENTER key.
- ___ f. At the FTP prompt type **ls** and press the ENTER key to list the files in the directory.
- ___ g. At the FTP prompt type **cd pub** and press the ENTER key to change to the pub directory.
- ___ h. At the FTP prompt type **ls** and press the ENTER key to list the files in the directory.
- ___ i. At the FTP prompt type **cd downloads** and press the ENTER key to change to the downloads directory. Your screen should be similar to Figure 39-2.



```
MS FTP
C:\WINDOWS>cd c:\downloads
C:\downloads>ftp ftp.mic-inc.com
Connected to ftp.mic-inc.com.
220 ftp.mic-inc.com NcFTPd Server (licensed copy) ready.
User (ftp.mic-inc.com:(none)): anonymous
331 Guest login ok, send your complete e-mail address as password.
Password:
230-You are user #1 of 20 simultaneous users allowed.
230-
230 Logged in anonymously.
ftp> ls
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
etc
pub
226 Listing completed.
ftp: 10 bytes received in 0.00Seconds 10000.00kbytes/sec.
ftp> cd pub
250 "/pub" is new cwd.
ftp> ls
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
downloads
incoming
upload
226 Listing completed.
ftp: 29 bytes received in 0.00Seconds 29000.00kbytes/sec.
ftp> cd downloads
250 "/pub/downloads" is new cwd.
ftp>
```

Figure 39-2: The Windows FTP Client

2. Download a text and binary file with FTP

- ___ a. At the FTP prompt type **get test1.txt** and press the ENTER key to download an ASCII text file.
- ___ b. In Table 39-4 record the bytes received, time, and speed of the download.

3. Download a binary file with FTP

- ___ a. At the FTP prompt type **binary** and press the ENTER key to switch to binary format.
- ___ b. At the FTP prompt type **get marcraft.gif** and press the ENTER key to download a binary file (in this case a GIF image).
- ___ c. At the FTP prompt type **get lftp13.zip** and press the ENTER key to download a binary file (in this case a an FTP client program).
- ___ d. When the download is done record in Table 39-5 the bytes received, time, and speed of the download.
- ___ e. At the FTP prompt type **ascii** and press the ENTER key to switch back to ASCII text format.
- ___ f. At the FTP prompt type **quit** and press the ENTER key to switch back to ASCII text format.
- ___ g. At the MS-DOS command prompt type **dir**, and press the ENTER key to view the contents of your downloads directory.
- ___ h. At the MS-DOS command prompt type **exit**, and press the ENTER key to return to Windows.

4. Use the Internet Explorer FTP client to download the WinZip installation file

- a. Use the path Start/Run to open the *Run* window.
- b. In the Open box type **www.winzip.com** and press the ENTER key.
- c. Click the hyperlink labeled Download.
- d. Click the link labeled Download WinZip.
- e. Select the "Save this program to disk" radio button, and then click the OK button.
- f. Navigate to your DOWNLOADS folder and then click the Save button.
- g. When the file is done downloading, click the Close button.

NOTE: If you already have WinZip installed on your computer, you may skip to Step 6.

5. Install the WinZip compression utility

- a. Open Windows Explorer and navigate to your C:\DOWNLOADS folder.

NOTE: If your DOWNLOADS folder is not at this location, just navigate to an appropriate directory.

- b. Double-click the file *winzip80.exe* to begin.
- c. Click the Setup button to begin the installation of WinZip, and then click OK to use the default location for installing the program.
- d. Click the Next button to continue, and then click the Yes button to accept the license agreement.
- e. Click the Next button if you are familiar with the programs such as WinZip. Otherwise, view the Help information before clicking the Next button.
- f. Click the radio button next to the "Start with WinZip Classic" option, and then click the Next button.
- g. Select Express Setup and click the Next button.
- h. Click the Next button to associate WinZip with all supported archive file types.
- i. When the installation completes, click the Finish button, and then close the *Tip of the Day* window.

6. Install the LeechFTP client

- a. In the Taskbar, click the Downloads button to bring it to the front.
- b. Double-click the installation file *lftp13.zip*.
- c. If the *WinZip license* window appears, click the I Agree button to continue.
- d. Double-click the file *Setup.exe* in the *WinZip* window, and then click the OK button to begin.
- e. Click the Next button in the *LeechFTP1.3 Installation* window, and then click the Next button to accept the DEFAULT folder.
- f. Click the Finished button when the installation process is done.

7. Run the LeechFTP client and log on to ftp.mic-inc.com

- a. Use the path Start/Programs/LeechFTP to run LeechFTP.
- b. At the left side panel, click the Threads tab.
- c. In the center panel, double-click the folder with a blue arrow and labeled ".." to go up one level in the directory tree.
- d. Again, in the center panel, double-click the folder with a blue arrow and labeled ".." to go up to the C:\ root directory.
- e. In the central panel, double-click on your personal DOWNLOADS folder to open it. If your DOWNLOADS folder is not at this location, just navigate to an appropriate directory.
- f. Click the lightning bolt button in the toolbar to start a new FTP connection.
- g. Type **ftp.mic-inc.com** in the Host or URL box, and then click the OK button.
- h. In the right panel, double-click the folder labeled PUB to open it.

PROCEDURE - 39

- i. Click the Remote menu, then click Add Bookmark and type **Marcra** into the bookmark description box, and then click the OK button. Your screen should now appear similar to Figure 39-3.

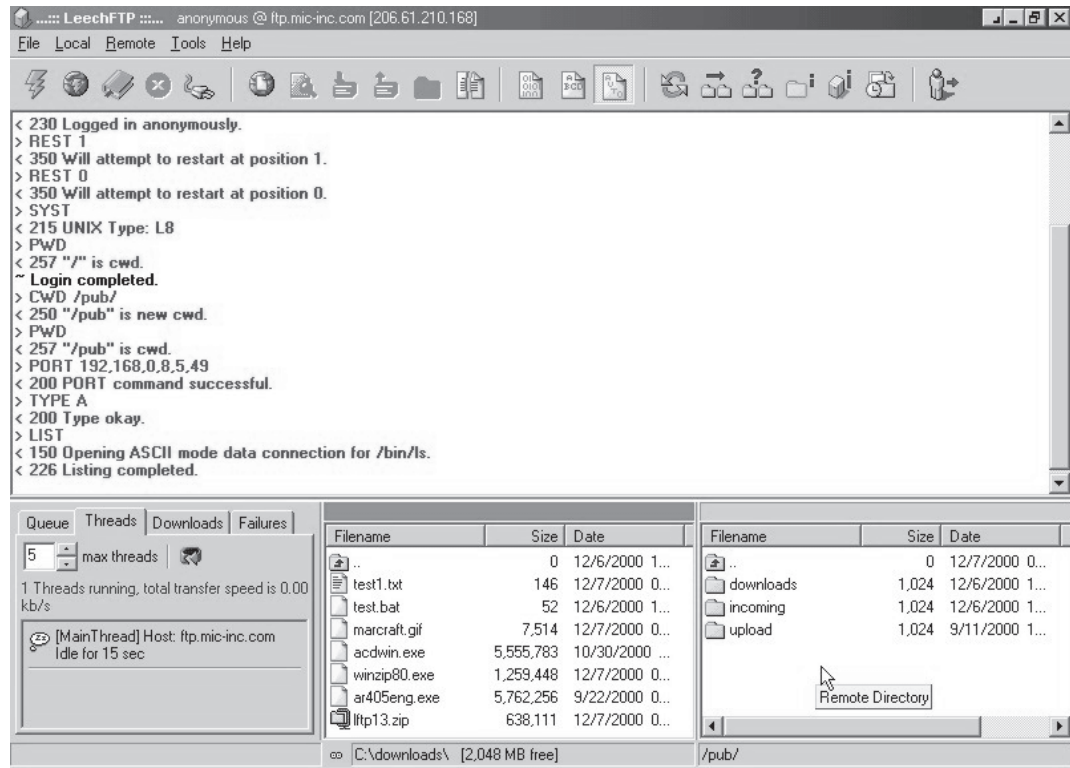


Figure 39-3: The LeechFTP Window

NOTE: You should make a bookmark every time you visit a new FTP site. If at any time the FTP server disconnects you, just log on again by clicking the Show Bookmarks button (on the toolbar, third from the left), then double-clicking the bookmark you created for that particular FTP site.

8. Download and examine a text file using LeechFTP

- a. In the right panel, double-click the folder labeled **DOWNLOADS** to open this directory.
- b. Click and hold the file *dirmap.txt*, and then drag-and-drop it over the center panel, which represents your personal downloads directory.
- c. Double-click the file *dirmap.txt* in your center panel, and then read the contents of this file.
- d. Click the Disconnect from remote host button in the toolbar (looks like a power plug) if you are still connected.
- e. Click the Normal Connect button (lightning bolt).
- f. In the Host or URL box type **ftp.microsoft.com**, then click the OK button.

NOTE: If a confirmation window appears, click OK to continue.

- g. Click the Remote menu in the toolbar and select Add Bookmark.
- h. Type **Microsoft** into the box, and then click OK.
- i. Using the directory map from *dirmap.txt*, navigate to the /deskapps/games directory.
- j. Right-click the file *readme.txt* and select View File from the pop-up menu.
- k. Read the description under Public, then close the *readme.txt* window.
- l. Double-click the folder labeled PUBLIC to open it.
- m. Double-click the folder labeled BASEBALL2001 to open it.
- n. Click the Change Remote Directory button in the toolbar (looks like two folders with an arrow over it).

- ___ o. In Table 39-6, record the FTP site address and the path you must navigate in order to reach the baseball 2001 game demo.
- ___ p. Click the Cancel button to close the *Change Remote Directory* window.

9. Download a video file from the Marcraft FTP site

- ___ a. From the File menu select Disconnect.
- ___ b. Click the Show Bookmarks button on the toolbar.
- ___ c. Double-click on Marcraft in the *Bookmarks* window.
- ___ d. In the right panel, double-click the folder labeled DOWNLOADS to open this directory.
- ___ e. In the right panel, click the file *dwlnld.avi*, and then drag-and-drop it into your personal DOWNLOADS folder (center panel). Downloading this file should take a maximum of 8 minutes (check the progress display in the Threads tab).
- ___ f. After downloading is finished, double-click the file *dwlnld.avi* in the center panel. The *Windows Media Player* window will appear displaying a video similar to Figure 39-4.

NOTE: If you do not have a sound card installed on your system, you may be presented with an error message explaining that the sound cannot be played. Click the Close button to begin playing the video portion of the file.



Figure 39-4:
Windows Media Player Window with DWNLD.AVI Displayed

NOTE: If the proper multimedia codec (coding and decoding file) is not installed on your system, you will be prompted with a dialog box asking permission to install the codec. If so, click Yes to continue.

- ___ g. After viewing the video, close the window.

10. Create a test file for uploading

- ___ a. On the Taskbar, click the dirmap.txt - Notepad button.
- ___ b. Click File and then select New.
- ___ c. Type **This is an FTP upload test by yourname.**
- ___ d. Click File and select Save As from the File menu.
- ___ e. Type **upldxxx** in the File name box (where xxx are your initials), and then click the Save button.

NOTE: Make sure that this file is saved in the correct directory, so that you do not have to search for it later.

PROCEDURE - 39

11. Upload a file using LeechFTP

- ___ a. On the Taskbar, click the LeechFTP button.

NOTE: If you have become disconnected, click the Show Bookmarks button. In the Bookmarks window, double-click on Marcraft to reconnect.

- ___ b. In the right panel, scroll to the right and read the permission flags for the UPLOAD and INCOMING directories. Record these permission flags in Table 39-7.

NOTE: There are two upload folders in the right panel. The INCOMING folder is for the general public and the UPLOAD folder is for the site administrator.

- ___ c. In the right panel, double-click the DOWNLOADS folder.
___ d. In the center panel, click the *upldxxx.txt* text file, and then drag-and-drop it into the right panel (into the DOWNLOADS directory).
___ e. Record the resulting error messages in Table 15-8.
___ f. Click the Change remote directory button in the toolbar.
___ g. Click the UPLOAD folder to highlight it, and then click the Change Directory button.
___ h. In the center panel, click the *upldxxx.txt* text file, and then drag-and-drop it into the right panel (into the UPLOAD directory).
___ i. Record the resulting error messages in Table 15-9.
___ j. Click the Change remote directory button in the toolbar.
___ k. Click the INCOMING folder to highlight it, and then click the Change directory button.
___ l. In the center panel, click the *upldxxx.txt* text file, and then drag-and-drop it into the right panel (into the INCOMING directory).
___ m. Record the resulting messages in Table 15-10.
___ n. Click the words "refresh needed" at the top of the right panel to highlight them.
___ o. In the toolbar, click the Refresh button (appears as two green arrows going in a circle) to refresh your directory list.
___ p. Disconnect and exit LeechFTP, and then shut down your computer.

TABLES

Table 39-1

Full Name:	
-------------------	--

Table 39-2

Provided Login Name:	
-----------------------------	--

Table 39-3

Provided Password:	
---------------------------	--

Table 39-4

ASCII Text File	
Bytes Received:	
Time to Download:	
Speed of Download:	

Table 39-5

Binary File	
Bytes Received:	
Time to Download:	
Speed of Download:	

Table 39-6

FTP Site Address:	
Path:	

Table 39-7

Permission Flags	
Upload Directory:	
Incoming Directory:	

Table 39-8

Downloads Error Message:	

PROCEDURE - 39

Table 39-9

Uploads Error Message:	

Table 39-10

Incoming Directory Message:	



Feedback

LAB QUESTIONS

1. What kind of software is used to simulate a computer interface on a remote telnet connection?
2. Who owns the telnet server you used in this lab procedure?
3. What is the most accurate means of testing the speed of a network connection?
4. What is anonymous FTP?
5. Name one freeware graphical FTP client?