

Overview

FTP is one of several methods available for sending images and commands to the printer. FTP utilizes the TCP/IP networking protocol and is available for most computer platforms including UNIX, MS-DOS/Windows and Apple Macintosh. FTP has the advantage of allowing files to be transferred to the printer with minimal changes to system files on the host computer system.

Description

FTP requires three pieces of information to successfully connect with the printer:

1. Hostname or IP address.
2. Username for login.
3. Logical Printer Device for password.

To illustrate how each of these is used, the following example shows a typical connection made using a common UNIX command line version of FTP. Other FTP implementations may use graphical interfaces instead of simple command prompts. Even though the user interface appearance may vary between implementations of FTP, the information required to connect to the printer is the same. In the following example, the required information is defined as:

1. Hostname: **myprinter**
2. Username: **john**
3. Password: **2**

```
ftp myprinter
Connected to myprinter
220 np1600 FTP server (Version 5.60) ready.
Name (myprinter:username): john
331 Use printer # [0-2, 9, 10, 11-99, 100-104] for
password.
Password: 2 ← Note: password will not display
230 User john logged in on Scaled device.
ftp> bin
200 Type set to I.
ftp>
```

The above example demonstrates the FTP login procedure. After the user has successfully logged in, a **bin** command is issued. This will instruct FTP to transfer all files in binary mode. This prevents FTP from modifying the data being transferred. On some systems, binary mode is called image mode.

The system is now ready to transfer files to the printer. Files are sent to the printer by issuing a **put** command. The syntax of the **put** command is:

```
ftp> put filename
```

(Note: **filename** is the image file to be transferred.)

Multiple **put** commands can be issued in succession to transfer multiple files as shown in this example:

```
ftp> put file1
ftp> put file2
ftp> put file3
```

A variant of the **put** command can be used to produce multiple prints of a single image. This is accomplished by specifying a remote name that is a number from 0-99. An example of the **put** command specifying the number of would be:

```
ftp> put filename number_of_copies
```

The following example will send the file **picture.gif** and request **15** copies.

```
ftp> put picture.gif 15
```

To close the connection, issue a **quit** command:

```
ftp> quit
```

If there is no activity on the FTP connection for 15 minutes, the printer will close the connection automatically. When this happens, the user must login again.

Logical Printer Devices

The printer side of the FTP connection expects the Logical Printer Device to be specified for the password. The Logical Printer Device is usually specified as a number. Logical Printer Devices control how the printer processes images. Processing options include: scaling an image to fit the printable area of the paper, placing multiple images on a single page and controlling various printer color adjustment parameters.

While Logical Printer Devices offer a large number of image processing options, there is a rule for getting the desired output in most cases. If you wish to print a single image per

page, you should send all raster (or bitmap) image files (TIFF, TGA, BMP, PCX, RGB, Sun Raster, PPM, etc.) to the scaled device (use "2" for the password). For PostScript files, you should send them to the unscaled device (use "1" for the password).

See the [Logical Printer Devices Technical Brief](#) for a complete description of the devices.

MS-DOS/Windows Versions of FTP

Many versions of FTP exist for the PC environment. Some common commercial packages include: [PC/TCP](#) by FTP Software, [Chameleon](#) by Netmanage and [SuperTCP](#) by Frontier Technology. These packages offer Windows based FTP clients with graphical interfaces.

Most Windows based FTP clients provide two lists of files. One list shows the directory of files on the local system. The other list is a directory of files on the remote system (the

printer). Users will connect to the printer using the login procedure described earlier in this document and select files from the local system to send (or copy) to the remote printer. Make sure to select binary (or image) mode for transfers.

Apple Macintosh Versions of FTP

FTP clients for the Macintosh have graphical interfaces and several options unique to Macintosh environments. The FTP clients usually provide two lists of files. One list shows the directory of files on the local Mac system. The other list is a directory of files on the remote system (the printer). There are also controls for binary (or image) mode transfers and a special control for MacBinary. Turn "ON" binary (or image) mode and turn "OFF" MacBinary.

Some Macintosh FTP implementations has a special "RAW DATA" mode. If the FTP client has this option, it should be used when transferring files to the printer.

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