
SECTION 1

BASIC FTP

WHAT IS FTP?

The File Transfer Program (FTP) is a program used for transferring files to and from an Integrated File Server (IFS) or between Alto workstations. Before Alto workstations are able to communicate with file servers and other Alto workstations using FTP, they must be connected to a cable device called an ETHERNET network.

When using FTP to communicate with a file server, the file server can be thought of as a large electronic filing cabinet shared by several users. In addition to storing and retrieving files, the program allows some manipulation of files such as renaming and deletion of files previously stored. Before using the File Transfer Program, the user must be familiar with the EDITOR and the EXECUTIVE level of the XEROX DOCUMENT SYSTEM.

When working with files in FTP, file names must conform to naming conventions similar to those used in the EDITOR. That is, file names should be no longer than 35 characters. (However, if 35 characters are used in a file name, only 20 characters will be visible.) In addition to all the alphabetical letters (a-z) and numeric symbols (0-9), periods and dashes (. -) are the only symbols that should be used in file names. The use of all other symbols should be avoided. You may, however, use any combination of alpha or numeric symbols along with dashes and periods to construct your file names. It is good practice to end your file names with .ed (distinguishing files created using the EDITOR), .draw for draw files, and .press for press files.

The File Transfer Program has three main parts:

- 1 An FTP Server which "listens" for file transfer requests,
- 2 An FTP User which initiates file transfer requests,
- 3 A User Telnet. (Telnet is not supported or presented in this document.)

The FTP Server and the FTP User will be discussed in this manual.

This manual is a self-paced course that will allow you to work at your own speed. The course is divided into sections. Each section explains various features of FTP, provides instructional text, gives a summary of what is covered in each section, and provides an application exercise for the user. Checkmarks () indicate an action to be taken by the user to activate a

command. Various window illustrations are provided to give examples of what should be displayed on the workstation screen before and/or after each command is activated.

If you have a problem or think that you may have done something incorrectly: Read the passage again, make sure you've completed all the steps. If you still have a problem, contact your on-site administrator.

OBJECTIVES

At the end of this section you will have learned:

- 8 What FTP is
- 8 How to enter FTP
- 8 What the FTP display looks like
- 8 How to open a connection with a remote workstation
- 8 How to store a file at a remote workstation
- 8 How to retrieve a file from a remote workstation
- 8 How to close a connection with a remote workstation
- 8 How to leave FTP

How To Begin Your FTP Session

FTP is started from and ends in the Alto EXECUTIVE level of the XEROX DOCUMENT SYSTEM. To start FTP after the EXECUTIVE level has been reached:

-) TYPE: FTP
-) PRESS and RELEASE the RETURN key.

The Alto Executive

```
--XEROX Alto Executive/11 ---Monday Jun 30 - 9:46:48 am -- 4319 pages
--- OS Version 18/16 ----- Alto 00#00# --- ----Smith --- Work Disk ---
```

```
> FTP|
```

The FTP Display

The FTP display contains three windows: the Server window, the User window, and the Telnet window. Since the Server window and the User window are the only windows you will use, an illustration of the Telnet window has not been included.

THE SERVER WINDOW

The server window displays the request for file transfers from other workstations. The server window looks like this:

The Server Window

```
FTP of 21 Jun 80 ----30-Jun-80 16:11:40 20#153# ---2540 pages ---
FTP Server
```

The top of the server window contains some helpful information. The first line contains four items: (1) the version of FTP with which you are working (subject to change depending upon site requirements), (2) the date and the time, (3) the number of the ETHERNET network you are operating followed by your Alto workstation number (The ETHERNET number is the number preceding the first # symbol. The Alto workstation number is the number between the # symbols.) and (4) the amount of free disk pages remaining on your disk.

The Alto workstation number (in this case, 153) is very important to know. This is the number used when communicating with file servers or other Alto workstations.

THE USER WINDOW

The User window is where you will type the information necessary to initiate a file transfer. The user window looks like this:

The User Window

FTP User

* |

How To Open A Connection With A Remote Workstation

Before you can do anything in FTP, you must first open a connection with the workstation with which you wish to communicate. To do this, both workstations must have established an FTP connection. Therefore, you should be in FTP. If you are not, enter FTP. You will see an asterisk in the middle (User) window with a blinking bar next to it. The workstation with which you are going to communicate must also be in FTP. If it is not, either go to the other workstation and enter FTP or have the person at that workstation enter FTP. It is necessary for you to know the number or name of that workstation (displayed on the top as #). When you are ready:

-) TYPE the number or name of the workstation to which you want to open a connection, followed by a pound sign (#).
-) PRESS and RELEASE the RETURN key.

Opening a Connection

FTP User

*127#

Alto Pup Ftp Server, 17 June 80

STORING FILES

Storing a file from your workstation to another workstation enables the user of the other workstation to see and use your file. When you store a file at another workstation, you make a copy of your file on the other workstation disk. The original file remains on your disk.

To illustrate how this feature could be used, consider how easy it would be for a secretary to transmit a rough draft of a proposal to the author's workstation for comments. The author could make the necessary changes in the file and transmit it back to the secretary, complete with changes. You can see how this could eliminate not only many steps to the copier, but time-consuming hand editing and unnecessary retyping of an entire document.

With the connection is open, proceed as follows.

-) TYPE: Store
-) PRESS and RELEASE the SPACE bar. (Note the words "local file" appear on the screen.)
-) TYPE the name of the file you wish to store. This can be any document you wish to store. For now, type
 TEST-DOCUMENT
-) PRESS and RELEASE the RETURN key. After you press the RETURN key you will see the message:

TEST-DOCUMENT as remote file TEST-DOCUMENT[New file]

Note: If the message reads [Old File] instead, FTP is warning you that there is a file with that name already on the disk, which will be written over if you press RETURN.

-) PRESS and RELEASE the RETURN key again to confirm that the file name displayed on the screen is the same name you wish to store the file as on the other disk.

or

-) TYPE in a new file name for the file and PRESS and RELEASE RETURN. If you did this, the new file name would automatically replace the original file name on the screen (following the phrase "as remote file") without your having to delete the file name. This gives you the opportunity to

change the name of a file you wish to use to be consistent with your filing methods, to eliminate duplicate names and to correspond to your naming conventions.

Storing A File At A Remote Workstation

FTP User

*127#

Alto Pup Ftp Server, 17 June 80

*store local file TEST-DOCUMENT as remote file TEST-DOCUMENT

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

When this step is complete, FTP will display the message:

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

The word byte is a computer term for character. Characters include spaces, punctuation, and control characters. The message above states that there are 5307 characters in the file. When the word "Done" appears, the transfer is complete and FTP will begin a new line with another asterisk to show that it is ready for the next command.

Note that while the file is being stored, the two connected black squares shift back and forth. This is to let you know that a copy of the file is being transferred.

RETRIEVING FILES

Retrieving a file from a remote workstation to your workstation enables you to see and use a file that another user has created or a file that you have previously stored (perhaps in incomplete form). To retrieve a file, you must first open a connection. Your connection is still open. Proceed as follows.

-) TYPE: Retrieve
-) PRESS and RELEASE the SPACE bar.
-) TYPE the name of the file you wish to retrieve. For now, type

SAMPLE-DOCUMENT

-) PRESS and RELEASE the RETURN key. After you press the RETURN key you will see the message:

SAMPLE-DOCUMENT to local SAMPLE-DOCUMENT [New file]

Note: If the message reads [Old File] instead, FTP is warning you that there is a file with that name already on your disk, which will be copied over if you press RETURN.

-) Confirm the file name shown is the name you wish to retrieve it as by pressing and releasing the RETURN key

or

-) Type in the new name of the file and press and release the RETURN key.
(The new name automatically replaces the original name on the screen.)

Retrieving a Document From Another Workstation

FTP User

*127#

Alto Pup Ftp Server, 17 June 80

*retrieve remote file SAMPLE-DOCUMENT to local file SAMPLE-DOCUMENT

[New File]

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

When this step is complete, FTP will display the message:

Type Binary ... Byte 88 ... 5307 bytes ... 22478 bits/sec

When the word "Done" appears, the transfer is complete and FTP will begin a new line with another asterisk to show that it is ready for the next instruction.

How to Close a Connection or Quit from FTP

FTP allows two options for closing a connection. You may either close a connection and remain in FTP, or you may quit from FTP. If you close a connection with a remote host, you will still be in FTP. If you quit, you will return to the Alto EXECUTIVE. To close a connection:

) TYPE: cl

Note: It isn't necessary to type the complete word "close" or "quit". FTP is programmed to accept "cl" for close and "q" for quit. Similar abbreviations exist for other commands. Use st for store, ret for retrieve, etc.

) PRESS and RELEASE the RETURN key.

Closing a Connection

FTP User

*cl(ose)

*

You are still in FTP, but have closed your connection. To quit from FTP:

) TYPE: q

Note: Alternate form is q. See the back of the manual for a complete list of abbreviations.

) PRESS and RELEASE the RETURN key.

Closing a Connection

FTP User

*q

Summary Basic FTP

It is possible to send files to or receive files from other remote workstations. To begin your FTP session you must be at the EXECUTIVE level of the XEROX DOCUMENT SYSTEM. In order for workstations to communicate with one another they must be connected by a length of cable called an ETHERNET network. Each Alto workstation contains a number unique to that Alto workstation that is used when communicating with another Alto workstation.

Before you can begin working in FTP, you must open a connection with the workstation with which you intend to communicate. Both workstations must be in FTP. To open a connection, you must type the number of the workstation you are going to communicate with in the User Window.

Files may be stored at a remote workstation or retrieved from a remote workstation using FTP. Before you can store a file you must open a connection with the workstation at which you wish to store the file.

To close the connection, you type cl.

To quit from FTP, type q.

Exercise 1

To begin your FTP session:

1. Return to the EXECUTIVE.
2. TYPE: FTP
3. PRESS and RELEASE the RETURN key.

To open a connection:

1. TYPE the number of the workstation you want to open a connection with followed by a pound (#) sign.
2. PRESS and RELEASE the RETURN key.

To store a file on a remote workstation.

1. TYPE: Store
2. PRESS and RELEASE the SPACE bar.
3. TYPE the name of the file you wish to store

TEST-DOCUMENT
4. PRESS and RELEASE the RETURN key.
5. Confirm the file name is the name you wish to store the file as by pressing and releasing the RETURN key

or

6. TYPE in the new file name, and press and release the RETURN key.

To retrieve a file from a remote workstation:

1. TYPE: Retrieve
2. PRESS and RELEASE the SPACE bar.
3. TYPE the name of the file you wish to retrieve

SAMPLE-DOCUMENT

4. PRESS and RELEASE the RETURN key.
5. Confirm the name of the file is the name you wish to retrieve it as by pressing and releasing the RETURN key

or

6. Type in the new name of the file and press and release the RETURN key.

To close the connection:

1. TYPE: cl
2. PRESS and RELEASE the RETURN key.

To terminate your FTP session:

1. TYPE: q
 2. PRESS and RELEASE the RETURN key.
-

SECTION 2USING FTP AND IFS

In Section 1 you learned what FTP is, how to open and close a connection, and how to store and retrieve files between individual workstations. Now, you are going to learn how to do these same functions using an IFS. What's an IFS? An Integrated File Server (IFS) is a workstation with high capacity disk units for mass file storage. You could think of it as a giant file cabinet (electronic, of course). The IFS is shared by everyone at your installation.

Why an IFS? The Integrated File Server can be used to conserve storage on your disk and archive seldom used documents. Another feature of an IFS is to store files that other workstation users can then retrieve. For example, you may need to create a report that is to be distributed to 5 people. Instead of making 5 copies of the report and distributing it manually, the report is stored on the IFS and each user can then retrieve a copy of the file as needed. The IFS can also be used as a backup system for important files on your disk.

Each user will have an IFS account and an IFS directory, created by the on-site IFS Administrator. You can think of your IFS directory as your own personal file cabinet. You will be assigned a user name (usually your last name) and a password for use in identifying yourself to the IFS. This password will prevent others from using your name and accessing your files. Your files are protected by your password. They cannot be changed or deleted from your directory without the password. Files cannot be stored on your directory without your password; they are "read only" files. So, you have a large electronic file cabinet (IFS) with a key (your password) for your use.

PREREQUISITES

Completion of the Section 1 - Basic FTP.

OBJECTIVES

At the end of this section, you will have learned:

- 8 What an IFS is and how you might use it
- 8 How to open a connection to an IFS
- 8 How to store a file on your IFS directory
- 8 How to retrieve a file from an IFS directory
- 8 How to close the connection to an IFS

HOW TO OPEN AN IFS CONNECTION

Before you can begin, you must first open a connection with the IFS with which you are going to communicate. You should be in FTP now. If you are not, enter FTP. You should see an asterisk in the middle (User) window with a blinking bar next to it.

-) TYPE the number (followed by a pound sign) or name of the IFS with which you want to open a connection. The example below uses the name "JUMBOJET" rather than a number.
-) PRESS and RELEASE the RETURN key.

Opening An IFS Connection

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

LOGGING IN TO THE IFS

Before you can proceed any further, you must identify yourself to the IFS. This is where your user name and password are needed. This identification process is called logging in. (Note: logging in is necessary only if workstation disk has a different user name and password.) To log in to an IFS:

-) TYPE: Log
-) PRESS and RELEASE the SPACE bar
-) TYPE: Your user name (if it doesn't automatically show on the screen)
-) PRESS and RELEASE the SPACE bar
-) TYPE: Your password
-) PRESS and RELEASE the RETURN key. Your password will not show on the screen.

Logging in to an IFS

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*

STORING FILES AT AN IFS

Storing a file from your workstation to your IFS directory provides you with a back-up copy of your file. It also enables others to retrieve a copy of your file for their own use. When you store a file at an IFS, you make a copy of your file at the IFS. The original file remains on your disk.

Caution should be used in storing files. If you attempt to store a file with a file name identical to a file already stored on the IFS, the screen will display a message stating [old file]. If there is not a file stored with the name of the you are about to store, the screen will display a message stating [new file]. Be sure that when you store a file, you are aware of whether or not the file is a new file or a new version of an old file. If it is a new version of an old file be sure that you want to overwrite it.

To store a file you must first open a connection and log in. Proceed as follows.

-) TYPE: Store
 -) PRESS and RELEASE the SPACE bar.
 -) TYPE the name of the file you wish to store. This can be any document you wish to store. Type
IFS-DOCUMENT
 -) PRESS and RELEASE the RETURN key.
 -) PRESS and RELEASE the RETURN key again to confirm the file name is the name you wish to store the file as
- or
-) TYPE in the new name of the file and PRESS and RELEASE the RETURN key. (If you did this, the new name automatically replaces the original name on the screen.)

Storing A File At An IFS

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*store local file IFS-DOCUMENT as remote file IFS-DOCUMENT

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

When this step is complete, FTP will display the message:

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

The message above states that there are 5307 characters in the file. When the word "Done" appears, the transfer is complete and FTP will begin a new line with another asterisk to show that it is ready for the next command.

RETRIEVING FILES FROM AN IFS

Retrieving a file from an IFS to your workstation enables you to see and use a file that another user has created or retrieve a file that you have previously stored (perhaps in incomplete form)

Caution should be used in retrieving files. If you attempt to retrieve a file with a file name identical to a file already stored on the disk, the screen will display a message stating [old file]. If there is not a file stored on the disk with the name of the file you are about to retrieve, the screen will display a message stating [new file]. Be sure that when you retrieve a file, you are aware of whether or not the file is a new file or a new version of an old file. If it is a new version of an old file, be sure that you want to overwrite it.

To retrieve a file, you must first open a connection. Proceed as follows.

-) TYPE: Retrieve
 -) PRESS and RELEASE the SPACE bar.
 -) Type the file name of the file you wish to retrieve. This can be any document you wish to retrieve. Type
 NEW-DOCUMENT
 -) PRESS and RELEASE the RETURN key.
 -) Confirm the file name is the name you wish to retrieve the file as by pressing and releasing the RETURN key
- or
-) Type in the new file name and press and release RETURN. (If you did this, you would see that the new file name automatically replaces the original file name on the screen.)

Retrieving A File From An IFS

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*retrieve remote file NEW-DOCUMENT as local file NEW-DOCUMENT

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

When this step is complete, FTP will display the message:

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

When the word "Done" appears, the transfer is complete and FTP will begin a new line with another asterisk to show that it is ready for the next command.

How to Close (or Quit From) An IFS Connection

Closing (quitting) the IFS connection is the same as closing (quitting) the FTP connection.

-) TYPE: cl (or q)
-) PRESS and RELEASE the RETURN key.

Closing An IFS Connection

FTP User

*cl

*

or

*q

Summary Opening And Closing An IFS Connection

IFS is an Integrated File Server much like your own workstation, but with a special high-capacity disk used for storing and backing up files. You must log in to the IFS before you can communicate with it. The IFS may have a number or a name. Your IFS directory is protected by a password.

Files may be stored at or retrieved from an IFS using FTP. Before you can store or retrieve a file, you must open a connection and log in to the IFS..

The procedure to close (or quit from) an IFS connection is the same as for FTP.

Exercise 2

To open an IFS connection:

1. TYPE the number (followed by a pound sign) or of the name of the IFS.
2. PRESS and RELEASE the RETURN key.
3. TYPE: Log
4. PRESS and RELEASE the SPACE bar.
5. TYPE your user name (usually your last name only).
6. PRESS and RELEASE the SPACE bar.
7. Type your password.
8. PRESS and RELEASE the RETURN key.

To store a file on an IFS

1. TYPE: Store
2. PRESS and RELEASE the SPACE bar.
3. TYPE the name of the file you wish to store

IFS-DOCUMENT
4. PRESS and RELEASE the RETURN key.
5. Confirm the name of the file is the name you wish to store it as by pressing and releasing the RETURN key or
6. Type in the new name of the file and press and release the RETURN key.

To retrieve a file from an IFS. (NEW-DOCUMENT.)

1. TYPE: Retrieve
2. PRESS and RELEASE the SPACE bar.
3. TYPE the name of the file you wish to retrieve

NEW-DOCUMENT
4. PRESS and RELEASE the RETURN key.
5. Confirm the file name is the file name you wish to retrieve it as by pressing and releasing the RETURN key

or
6. Type in the new file name and press and release the RETURN key.

To close the connection:

8. TYPE: Close
9. PRESS and RELEASE the RETURN key.

SECTION 3IFS DIRECTORIES

You have learned what an Integrated File Server is and how to store and retrieve files from your own directory. In this section you will learn how to retrieve files from other directories. You will also learn about subdirectories. Remember, your files are private to you; they are "read only" files. This is true of each directory. Therefore, unless you know someone's password, you may only retrieve files from their directory.

PREREQUISITES

Completion of Sections 1 - Basic FTP and 2 - Using FTP & IFS.

OBJECTIVES

At the end of this section, you will have learned:

- 8 What subdirectories are and how to use them
- 8 How to retrieve a file from an IFS directory other than your own

DIRECTORIES AND SUBDIRECTORIES

IFS directories can be thought of as individual file cabinets owned and controlled by individual users. The directory file names within each directory can be thought of as individual files in that file cabinet.

Each directory file name is similar to a file folder in a file cabinet. And, like folders, directories can contain subdirectory names. For example: If a file name or a directory name were 1980FinancialReports, subfile names or subdirectory names might be Monthly, Quarterly, Yearly. And, again like files, each subdirectory name can contain another subdirectory. For example: The Monthly subdirectory might contain subdirectory files; January, February, March, etc.

When naming and managing files on an IFS, angle brackets < > are used for each level of the directory. For example, if your directory name were 1980FinancialReports, your subdirectory name for monthly reports would be 1980FinancialReports>Monthly. The subdirectory for the month of March would be 1980FinancialReports>Monthly>March, and for January, <1980FinancialReports>Monthly>January. The brackets delineate the directory levels and allow easy retrieval of either all the monthly reports or just the monthly report for a particular month. It is possible to use several levels of subdirectories. However, to avoid confusion, it is not advisable to use more than 2 or 3 levels of subdirectory.

RETRIEVING A FILE FROM ANOTHER DIRECTORY

When you first login to an IFS, you are automatically connected to your own directory. When you attempt to store or retrieve a file, IFS assumes that the file is located on your directory. You can, however, retrieve a file from another directory. There are three ways to do so.

ATTACHING TO ANOTHER DIRECTORY

One is by attaching to the other directory. To attach to another directory, you must first log in. If you haven't logged in, do so. Once you are logged in:

-) TYPE: dir
-) PRESS and RELEASE the SPACE bar.
-) TYPE the name of the directory to which you wish to attach.
-) PRESS and RELEASE the RETURN key.

Attaching to Another IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*Directory Jones

*

You are now attached to the directory Jones and you can retrieve files from the directory Jones. You cannot store files on the directory Jones, because you do NOT know the password of the directory. Here is an example of retrieving a file from another IFS directory by attaching to it:

Retrieving a File From Another IFS Directory by Attaching

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*Directory Jones

*retrieve NEW-BUDGET as local file NEW-BUDGET [New File]

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

POINTING TO ANOTHER DIRECTORY

The second method of accessing another directory is by pointing to the directory that you wish to access. When you point to another directory, you must enclose the directory name in brackets such as <Jones>. The name of the directory is preceded by the instruction you are giving, such as Retrieve. Here is an example of pointing to another directory.

Pointing to Another IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*retrieve remote file <Jones>

*

Now that you have pointed to the directory <Jones>, you can retrieve files from it. You cannot store files on the directory <Jones> because you DO NOT know the password of the directory. To retrieve a file from the directory <Jones>, open a connection and log in first. Now:

-) TYPE: ret
-) PRESS and RELEASE the SPACE bar.
-) TYPE the name of the directory in pointed brackets

<Jones>

-) TYPE the name of the file to be retrieved (No spaces between the directory name and the file name are allowed. You may use dashes or periods in the directory name.)
-) PRESS and RELEASE the RETURN key.

Retrieving a File From Another IFS Directory by Pointing

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*retrieve remote file <Jones>NEW-BUDGET as local file NEW-BUDGET [New File]

Type Binary ... Byte 8 ... 5307 bytes ... 22478 bits/sec

*

CONNECTING TO ANOTHER DIRECTORY

The third method of accessing another directory is by connecting to the directory that you wish to access. When you connect to another directory, you must know the password of that directory. To connect to another directory.

-) Open a connection and log in
-) TYPE: con
-) PRESS and RELEASE the SPACE bar.
-) TYPE the name of the directory

Jones

-) PRESS and RELEASE the SPACE bar.
-) TYPE the password of that directory
-) PRESS and RELEASE the RETURN key.

You are now connected to that directory. You can now store or retrieve a document on that directory. You may only be connected to one directory at a time (including your own). Here is an example of connecting to another directory.

Connecting to Another IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*log Smith password

*connect to directory Jones password

*

Summary IFS Directories

You can store files on individual directories on an IFS. Directories may contain several subdirectories. You can retrieve files from other IFS directories by either attaching, pointing, or connecting to the other directory. In order to connect to another directory, you must know the password of that directory. When you point at another directory, the directory name must be enclosed in brackets.

EXERCISE 3

To attach to another directory:

1. Open a connection and log in.
2. TYPE: dir
3. PRESS and RELEASE the SPACE bar.
4. TYPE the name of the directory to be attached to

JONES

5. PRESS and RELEASE the RETURN key.

To point to another directory:

1. Open a connection and log in.
2. TYPE: ret
3. PRESS and RELEASE the SPACE bar.

4. TYPE the name of the directory in brackets

<JONES>

5. TYPE the name of the file to be retrieved.
6. PRESS and RELEASE the RETURN key.

To connect to another directory:

1. Open a connection and log in.
2. TYPE: con
3. PRESS and RELEASE the SPACE bar.
4. TYPE the name of the directory to be connected to

JONES

5. PRESS and RELEASE the SPACE bar.
 6. TYPE the password of that directory.
 7. PRESS and RELEASE the RETURN key.
-

SECTION 4

MANAGING YOUR IFS DIRECTORY

Now you know just about everything there is to know about storing files on and retrieving files from an IFS. But what about periodically organizing or managing the files on your directory? A time consuming process if done manually, but not electronically! Managing files on your IFS directory is really quite simple.

PREREQUISITES

Completion of the Sections 1 - Basic FTP, 2 - Using FTP & IFS, and 3 - IFS Directories

OBJECTIVES

At the end of this section, you will have learned:

- 8 How to manage files on your IFS directory

WHAT'S ON YOUR IFS DIRECTORY?

LISTING FILES

First, you will learn how to look at the file names that are stored on your IFS directory. We call this listing files (you see a list of the file names). To list files:

-) Open a connection and log in
-) TYPE: li
-) PRESS and RELEASE the SPACE bar. FTP will complete the command List by inserting the phrase: "remote files matching".
-) TYPE: *
-) PRESS and RELEASE the RETURN key.

The asterisk indicates to FTP that you want to see everything listed in your IFS directory. The FTP user window will now show you a list of each file name in your directory. It will look something like this:

Listing Files On Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*List remote files matching *

<JONES>!1

<JONES>YearEnd.memo!1

<JONES>Budget.report!1

<JONES>Budget.report!2

<JONES>TEST.document!1

<JONES>NEW.document!1

*

You have listed every file that is stored on your IFS directory. But what if you want to see a specific portion of your files? For example, what if you wanted to see only those files beginning with the letter "B"? Or, those files that ended in ".Document"? When you give the "List" instruction, you can point to a specific set of files. Here is an exmple of listing only those files beginning with the letter "B" and only those files that end with "Document".

Listing Specific Files on Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

List remote files matching B

<JONES>Budget.report!1

<JONES>Budget.report!2

*List remote files matching *.document

<JONES>TEST.document!1

<JONES>NEW.document!1

*

You may also list files by subdirectories. When you give the "List" instruction, you can point to a specific subset of files. Here is an example of listing only those files contained in a subdirectory.

Listing Subdirectory Files on Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*Directory 1980FinancialReports

List remote files matching Monthly

<1980FinancialReports>Monthly>April!1

<1980FinancialReports>Monthly>April!2

<1980FinancialReports>Monthly>April!3

<1980FinancialReports>Monthly>August!1

<1980FinancialReports>Monthly>December!1

<1980FinancialReports>Monthly>February!1

<1980FinancialReports>Monthly>January!1

<1980FinancialReports>Monthly>July!1

<1980FinancialReports>Monthly>July!2

<1980FinancialReports>Monthly>June!4

<1980FinancialReports>Monthly>March!2

<1980FinancialReports>Monthly>May!2

<1980FinancialReports>Monthly>November!1

<1980FinancialReports>Monthly>October!1

<1980FinancialReports>Monthly>September!1

*

MASTERY HINT

The asterisk is a very helpful tool in manipulating files with FTP. The asterisk can be thought of as meaning "everything". For example, *.press, means everything that ends with .press, or Budget*, means everything that begins with the word Budget, or Budget*Report, means everything that begins with the word Budget AND ends with the word Report.

The asterisk responds only to the string of characters preceding, following, or surrounding it. If you accidentally type a space (Budget* Report) in the string of characters, you will either receive a message that no files were found, or it will list everything that begins with the word Budget whether it is a Report or

not. Or, if you have a file BusReport, and you type Bu*Report, you will list all the Budget reports as well as the Bus report. When using an asterisk to manipulate reports, be sure you put in characters that will precisely indicate what you want from the directory.

VERSION NUMBERS

You may wonder what the "!1" and "!2" are that follow the file names. These are version numbers. Each time you store a file on your IFS directory, it is automatically assigned a version number. The first time it is stored, it is numbered "!1" and the second time it is stored it is numbered "!2" and so on.

When you retrieve a file without specifying a specific version number, IFS will retrieve the most recent version (with the highest number). If you want to retrieve a previous version, you must specify the exact version number when you type the Retrieve instruction.

You can store the same file as often as you like and then retrieve any version of that file. The IFS will store a large number of versions of each file. To conserve storage space and avoid possible error, it is a good practice to delete old versions of each file, keeping only one or two versions on file at any time.

Note that files are stored alphabetically regardless of THE order you stored them, and insertion of new files will be alphabetic also.

RENAMING FILES

You can change the name of a file that is stored on your IFS directory. To do so:

-) Open a connection and log in
-) TYPE: ren
-) PRESS and RELEASE the SPACE bar.
-) TYPE: the name of the file to be changed.
-) PRESS and RELEASE the SPACE bar. FTP will insert the phrase "to be:"
-) TYPE: the new name of the file.
-) PRESS and RELEASE the RETURN key.

Renaming Files on Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*Rename remote file YearEnd.memo to be: NewYearEnd.memo

*

You can "group" files on your IFS directory in the same way you create separate file folders for a filing cabinet or create subdirectories. As an example, if you wanted to group all the files that had to do with "Memos", use the "Rename" feature as follows:

-) Open a connection and log in
-) TYPE: ren
-) PRESS and RELEASE the SPACE bar.
-) TYPE: the name of the file to be changed.
-) PRESS and RELEASE the SPACE bar. FTP will insert the phrase "to be:"
-) TYPE: the key word identifying the group followed by a single bracket and then the new name of the file.

Memos>YearEnd.memo!1

-) PRESS and RELEASE the RETURN key.

Grouping Files on Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*Rename remote file YearEnd.memo to be: Memos>YearEnd.memo!1

*

Now when you "List" files, you can "pull" a group of files by specifying the group as shown in the following example:

Listing A Group Of Files On Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

List remote files matching Memos>

Memos>YearEnd.memo!1

Memos>Budget.memo!1

Memos>TEST.memo!1

*

DELETING FILES

To remove a file from your IFS directory is very simple. Exercise caution when doing so -- once a file is deleted, it is removed permanently. To delete a file:

-) Open a connection and log in
-) TYPE: del
-) PRESS and RELEASE the SPACE bar.
-) TYPE: the name of the file to be deleted (including the version number, if necessary).
-) PRESS and RELEASE the RETURN key.
-) Confirm the deletion by pressing and releasing the RETURN key. Or,
-) Cancel the deletion by pressing and releasing the DEL key.

Deleting Files on Your IFS Directory

FTP User

*JUMBOJET

IFS 1.26L, File Server of June 30, 1980; 1 user out of 8

*Delete remote file YearEnd.memo

Delete YearEnd.memo!1 [Confirm]

*

The least current version (lowest number) of the file will now be deleted. You may specify any version number of a file.

PRINTING FILE LISTS FROM YOUR IFS DIRECTORY

It is possible to print a copy of your IFS directory. To do so, you start in the Alto Executive level of the XEROX DOCUMENT SYSTEM. To print a directory listing:

-) TYPE: FTP/L in the Alto Executive level of the Xerox Document System.
-) PRESS and RELEASE the RETURN key (Note, FTP is activated.)
-) OPEN a connection with the File Server
-) TYPE: List
-) PRESS and RELEASE the SPACE bar.
-) TYPE: *
-) PRESS and RELEASE the RETURN key.
-) QUIT from FTP
-) At the Executive Level, TYPE: EMPRESS FTP.Log
-) PRESS and RELEASE the SPACE bar.
-) TYPE: FTP.Log
-) PRESS AND RELEASE the RETURN key (A copy of your directory will be printed at your printer.)

Printing File Lists from Your IFS Directory

The Alto Executive

```
--XEROX Alto Executive/11 ---Monday Jun 30 - 9:46:48 am -- 4319 pages
--- OS Version 18/16 ----- Alto 00#00# --- -----Smith --- Work Disk ---
```

```
> FTP/L|
```

The File Transfer Program

```
FTP User
```

```
*JUMBOJET
```

```
IFS 1.26L, File Server of June 30, 1980; 1 user out of 8
```

```
*List remote files matching *
```

```
(All your file names will be listed.)
```

```
*Quit
```

The Alto Executive

```
--XEROX Alto Executive/11 ---Monday Jun 30 - 9:46:48 am -- 4319 pages
--- OS Version 18/16 ----- Alto 00#00# --- -----Smith --- Work Disk ---
```

```
> Empress FTP.Log|
```

READ PROTECTING FILES ON YOUR IFS DIRECTORY

This manual has focused on files that were "read and write" or "read only" files. Occasionally, you may want to store files of a confidential nature. Since the password properties of the EDITOR are not recognized when the file is stored on an IFS, please contact your Installation Manager or IFS Administrator to assist you in "read protecting" confidential files stored on the file server.

Summary Managing Your IFS Directory

You can manage your IFS directory in much the same way as you do a file cabinet. You can "List", "delete" and "rename" files. You can "group" files into special categories using the "rename" feature. Files are kept with a version number (the highest being the most current). It is possible to print file listings from your IFS directory. It is possible to "read protect" files on your IFS directory.

EXERCISE 4

To list files on your IFS directory:

1. Open a connection and log in.
2. TYPE: `li`
3. PRESS the SPACE bar. FTP will complete the command List by inserting the phrase: "remote files matching".
4. TYPE: `*`
5. PRESS the RETURN key.

To rename a file on your IFS directory:

1. TYPE: `ren`
2. PRESS the SPACE bar.
3. TYPE the name of the file to be changed
4. PRESS the SPACE bar. FTP will insert the phrase "to be:".

5. TYPE: the new name of the file.
6. PRESS the RETURN key.

To group files on your IFS directory:

1. TYPE: ren
2. PRESS the SPACE bar.
3. TYPE the name of the file to be changed
4. PRESS the SPACE bar. FTP will insert the phrase "to be:".
5. TYPE: the key word identifying the group followed by a single bracket and then the new name of the file
6. PRESS the RETURN key.

To delete files on your IFS directory:

1. TYPE: del
2. PRESS the SPACE bar.
3. TYPE the name of the file to be deleted (including the version number, if necessary)
4. PRESS the RETURN key.
5. Confirm the deletion by pressing the RETURN key.

Or

6. Cancel the deletion by pressing the CANCEL key.
-

Abbreviations

Following is a list of abbreviations that can be used in FTP. By typing the abbreviation and pressing and releasing the space bar, the abbreviation will complete the word intended.

COMMAND	ABBREVIATION	DESCRIPTION
open	o	open connection with remote host (name or number of host)
close	cl	close (connection)
retrieve	ret	retrieve remote file (name of file)
store	st	store local file (name of file)
directory	dir	directory (name of directory)
connect	con	connect to directory (name of directory)
delete	del	delete remote file (name of directory)
quit	q	(quit from FTP)
rename	ren	rename remote file (name of file)
list	li	list remote files matching (name, character string, or *)
?	(lists various options that can be used in FTP file managing)	