



### Basic FTP Commands

#### Connection and Authentication

<code>ftp [hostname]</code>	Connects to the specified FTP server.
<code>open [hostname]</code>	Opens a connection to the specified host.
<code>user [username]</code>	Specifies the username for login.
<code>password [password]</code>	Specifies the password for the user.
<code>account [account-name]</code>	Sends a supplemental account password required by some systems.
<code>close</code>	Closes the current FTP connection.
<code>bye</code> or <code>quit</code>	Terminates the FTP session and exits.

#### Navigation

<code>pwd</code>	Prints the current working directory on the remote server.
<code>ls</code> or <code>dir</code>	Lists the files and directories in the current remote directory.
<code>cd [directory]</code>	Changes the current directory on the remote server.
<code>cdup</code>	Changes to the parent directory on the remote server.
<code>m!s [remote-files] [local-file]</code>	Generates a listing of the specified remote files.

### File Transfer Commands

#### Downloading Files

<code>get [remote-file] [local-file]</code>	Downloads a single file from the remote server. If <code>local-file</code> is not specified, the file is downloaded to the current directory with the same name as the <code>remote-file</code> .
<code>mget [remote-files]</code>	Downloads multiple files from the remote server using wildcard characters.
<code>recv [remote-file] [local-file]</code>	Alias for <code>get</code> command.

#### Uploading Files

<code>put [local-file] [remote-file]</code>	Uploads a single file to the remote server. If <code>remote-file</code> is not specified, the file is uploaded to the current directory with the same name as the <code>local-file</code> .
<code>mput [local-files] [remote-file]</code>	Uploads multiple files to the remote server using wildcard characters.
<code>send [local-file] [remote-file]</code>	Alias for <code>put</code> command.
<code>append [local-file] [remote-file]</code>	Appends a local file to a remote file. If the remote file doesn't exist, it will be created.
<code>mput [local-files]</code>	Upload multiple files using wildcards.

#### File Management

<code>delete [remote-file]</code>	Deletes a file on the remote server.
<code>mdelete [remote-files]</code>	Deletes multiple files on the remote server using wildcard characters.
<code>rename [old-name] [new-name]</code>	Renames a file on the remote server.
<code>mkdir [directory-name]</code>	Creates a new directory on the remote server.
<code>rmdir [directory-name]</code>	Removes a directory on the remote server.

### Advanced FTP Commands

#### Transfer Modes

<code>ascii</code>	Sets the transfer mode to ASCII (text) mode.
<code>binary</code>	Sets the transfer mode to binary mode. Essential for non-text files like images or executables.
<code>image</code>	Alias for <code>binary</code> mode.
<code>type [type-name]</code>	Sets the file transfer type. Use <code>type ascii</code> or <code>type binary</code> .

#### Other Useful Commands

<code>status</code>	Displays the current status of the FTP connection.
<code>system</code>	Shows the type of operating system running on the remote server.
<code>help [command]</code>	Displays help information for the specified FTP command.
<code>!</code> or <code>shell</code>	Escapes to the local shell.
<code>prompt</code>	Toggles prompting during multiple file transfers. Useful to turn off for automated scripts.
<code>verbose</code>	Toggles verbose mode. When on, displays more detailed output.

### Passive and Active Modes

#### Understanding Transfer Modes

FTP can operate in two modes: Active and Passive. These modes define how the data connection (used for transferring files) is established. The choice of mode is often determined by firewall configurations.

## Active Mode

How it Works:	The client initiates the control connection (port 21). The server initiates the data connection back to the client (port > 1023).
Problems:	Firewalls often block incoming connections to the client, making active mode problematic.

## Passive Mode

How it Works:	The client initiates both the control connection (port 21) and the data connection (port > 1023) to the server.
Advantages:	More firewall-friendly as the client initiates all connections.
Command:	<code>passive</code> - Toggles passive mode on or off. Most clients default to passive mode.