FTP

FTp-File Transfer protocol
FTP is a collection of stadndrad protocols that are used to share data among devices that are connected to a netwok(same)
- -If there are several computers connected to a router ,if we want to share data among computers then one computer will work as a server .

FTP (File Transfer Protocol) is important for several reasons:
- **File Transfer:** FTP provides a standardized way to transfer files between computers over a network.
- **Reliability:**It transfers files without corruption, which is essential for critical data transfers.
- **Efficiency:** FTP allows for efficient transfer of files, particularly large files or batches of files,, making it faster and more efficient than methods like emailing files or using physical storage devices(usb cable)
- **Cross-Platform Compatibility:**FTP is supported on a wide range of operating systems (Windows, macOS, Linux, and various Unix systems)
- **Security:** While basic FTP lacks encryption and can pose security risks, secure variations like FTPS (FTP over SSL/TLS) and SFTP (SSH File Transfer Protocol) provide encryption
- **Accessibility:** FTP servers can be configured to provide access to files for authorized users from anywhere with an internet connection.
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Three major components-
- 1.FTP client
- 2.FTP server
- 3.Connection(Cilent and sever)

Requirements for using FTP
- -FTP cilent installed on computer (Filezilla,Auto FTp Manager,File Zilla pro)
- -FTp server address is where it is hosted(ftp.testdocs.net)
- -Username and password are specific to the server

Two type of connections-

- **Control connection-**cilent sends connection to the specific port of the server this connection is used to send commands where the client says what server should do and recieve response according to it.((**like telling the server what to do**)

- **Data connection-** In this connection server recives the controller commands from a client now it should provide what is asked for now this model keeps a separeate conenction for this purpose which is called the data connection (**transferring the actual files. This way, when you want to download or upload a file, a special connection is made just for that job,)**

How to establish the conenction-two modes
Active Mode: In active mode, the server reaches out to the client to transfer data after the client sends a command. Think of it like the server calling the client's phone.
Passive Mode: In passive mode, the client connects to the server to transfer data. It's like the client calling the server's phone.

Ftp types-

- **Anoynmous ftp-**basic form of ftp no security features,login credentials and encryption feature

- **Password protected FTP-**Password and username need for the service encryption

- **FTPS**(FTP SSL which stands for FTP secure socket layer which enables the implict transport layer(without asking the client first; it automatically applies encryption when the client connects to a specific port.) security which is known as TLS

- **FTP over explicit SSL/TLS(SSL/TLS stands for Secure Sockets Layer/Transport Layer Security)-** FTPS, adds encryption and authentication to FTP connections. It secures data transfer by establishing a secure SSL/TLS connection after the client explicitly requests it.

- **Secure FTP-**More secure protocol for transferring files

https://youtu.be/KSsECmxuPL4

How to use FTP for File Transfer?

To send files through FTP, you first need to connect using either a web browser or an FTP Client. Using a browser like Chrome or Firefox might be slow for uploading, and downloads aren't secure, so it's not great for big files. Make sure you have an FTP account for the place you're sending files to.

FTP Client Software is like a tool on your computer that helps you move files between your computer and a server on the internet. It's like a bridge that lets you upload or download files easily. With FTP clients like FileZilla or Cyberduck, you can do things like pause and resume transfers, which is handy if your internet is slow. The software usually shows your computer's files on one side and the server's files on the other, making it easy to manage them.

FTP File Transfer: File transfers are made by simply dragging and dropping files from one pane to the other. Additional features of the FTP Client include multiple file transfers at a time, auto-resuming of the transfer, file queuing and more.

-How to Use FileZilla

Learnt from this tutorial -
https://youtu.be/adxmlHDim6c?feature=shared

- install file zilla

- Site manager-Select a file(give hostname,port,protocol,encryption,user,password for connection)

- Local site(Desktop files) and Remote site(Web host service)

- Drag and drop files-drag a file from local site,then drop it to the remote site

FTP quota restricts the total size of files and directories the user can store within their designated space on the server.For example, if a user has a quota of 1 GB, they can upload files and create directories on the server until they reach the 1 GB limit.

What is multisite SFTP access-Manage 2 or more sites as an owner or collaborator, you may generate a single SSH key for multisite SFTP access through your Client Area.

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How to create and manage an FTP account

https://youtu.be/KSsECmxuPL4 (followed this tutorial)

- First signup into sitground website (https://world.siteground.com/)
- Username,password,root directory(need for signup)
- **Site Tools** > **Site > FTP Accounts**.
1. **Access Server Settings**: Log in to your web hosting control panel.
2. **Create New Account**: Find the option to create a new FTP account.
3. **Set Username and Password**: Choose a username and password for the new account.
4. **Choose Permissions**: Decide what the account can do, like read-only or full access.
5. **Save Changes**: Save your settings to make the new account.
6. **Manage Accounts**: Later, you can change settings or delete accounts if needed.
7. **Use FTP Software**: Users can connect to the server using FTP software.
8. **Transfer Files**: Once connected, they can move files between their computer and the server.
9. **Keep an Eye on Things**: Check regularly to ensure everything's working smoothly and make changes if needed.

When to change the home folder of an FTP account-When you need to provide FTP access to a developer or another third party but you want them to edit only a

specific folder. You can change the home folder of their FTP account so they can't reach upper-level folders.

What Is FTP Port 21?

FTP is an internet protocol that allows computers within the network to exchange files in bulk. In order to work correctly, FTP must use two ports-**port 21** for command and control, and **port 20** for data transport. An FTP client cannot perform the protocol if it fails to connect to the FTP ports.

How to check port 21 working or not?
- Open the Command Prompt on Windows or Terminal on Mac/Linux.
- Type the command: `telnet [hostname or IP address] 21` and press Enter.
- If the port is open, you'll see a response indicating a successful connection. If the port is closed, you'll see an error message or the connection will timeout.