

(CSAD735)

# Computer Networks

## Assignment - 5

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SCENARIO: A company uploads nightly updates to its Server via FTP over a 100 Mbps link.

PARAMETER: Upload Size = 250 MB, Bandwidth = 100 Mbps.

Questions:

1. Differentiate active and passive FTP.

Answer

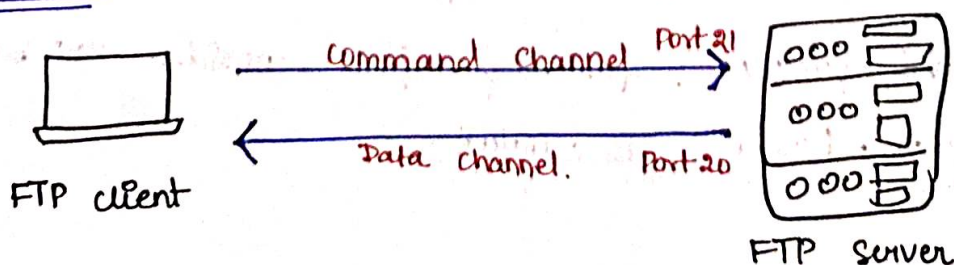
• Active FTP:-

- The client initiates a control connection from a random port to the server's port 21.
- The server then initiates a data connection from port 20 back to the client's specified port.
- Issues may arise if the client is behind a firewall.

• Passive FTP:-

- The client initiates both control and data connections to Server.
- The server opens a random high-numbered port for data transfer and informs the client.
- Works better with firewalls since the client manages all connections.

Active FTP:



4.) Suggest a secure alternative for FTP.

Ans

- SFTP (SSH file transfer protocol) : encrypts both data and commands over SSH (port 22).
- FTPS (FTP over SSL / TLS) : Adds TLS encryption to FTP.
- SCP (Secure copy protocol) : uses SSH for encrypted file transfers.
- HTTPS / WebDAV : Secure web-based file transfers.