Experiment 8

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Branch: BE CSE **Section/Group:** 22BCS-JT-802-B
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Subject Name: Computer Networks **Subject Code:** 22CSH-312

1. **Aim**: Sharing of resources with two connected nodes with understanding of FTP-Connecting Devices, Configuring Server IP address.

2. **Objectives:**
   To demonstrate how to set up and share resources between two connected nodes using File Transfer Protocol (FTP), highlighting practical applications of network connectivity. To teach the process of configuring the FTP server's IP address and settings, ensuring proper communication and access between client and server devices.

3. **Apparatus used:** Cisco Packet tracer

4. **Theory:**
   Introduction to File transfer Protocol :

   The File Transfer Protocol (FTP) is widely used in the application layer of networking. It works at the application layer, ensuring that files are sent and received securely. There are various other protocols like HTTP which are used to transfer files between computers, but they lack clarity and focus as compared to FTP.

   Types of FTP:

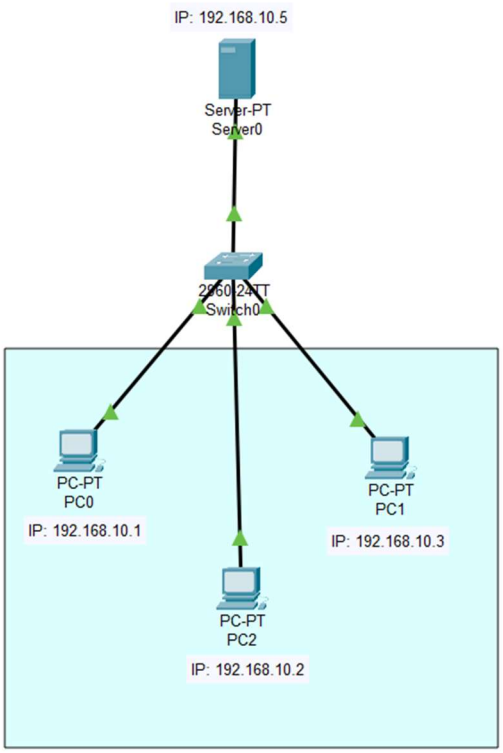
   1. Anonymous FTP: Anonymous FTP is enabled on some sites whose files are available for public access. Access w/o any username or password. User access is very limited.
   2. Password Protected FTP: Similar to the previous one, but uses credentials.
   3. FTP Secure (FTPS): It is also called as FTP Secure Sockets Layer (FTP SSL). More secure version of FTP data transfer. Whenever FTP connection is established, Transport Layer Security (TLS) is enabled.
   4. FTP over Explicit SSL/TLS (FTPES): FTPES helps by upgrading FTP Connection from port 21 to an encrypted connection.

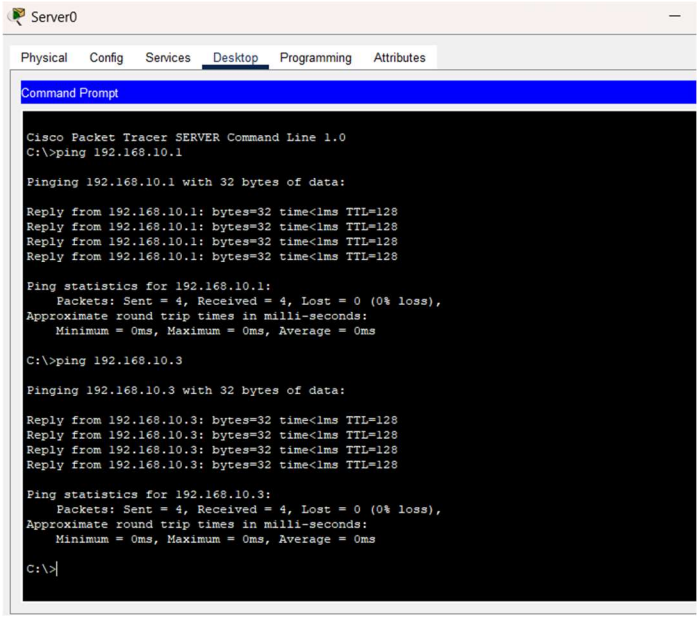
5. Secure FTP (SFTP): SFTP is not a FTP Protocol, but it is a subset of Secure Shell Protocol, as it works on port 22.

5. Implementation:

1. Launch cisco packet tracer on your system.
2. Place a server and 4 PCs onto the workspace.
3. Use straight-through Ethernet cables to connect each PC to server.
4. Assign static IPs to the server (e.g., 192.168.1.1) and PCs (e.g., 192.168.1.2, 192.168.1.3).
5. Enable FTP on the server and create a user account.
6. Use the command prompt on PCs to log into the FTP server using ftp 192.168.1.1.
7. Ensure connectivity by pinging the server from each PC.

6. Output:





7. Learning Outcome:

- Configuring Server-client architecture
- Configure user-password for the FTP Server.
- Use ping command to verify connectivity from server – pc and vice versa.
- Sharing of resources using a centralized server.