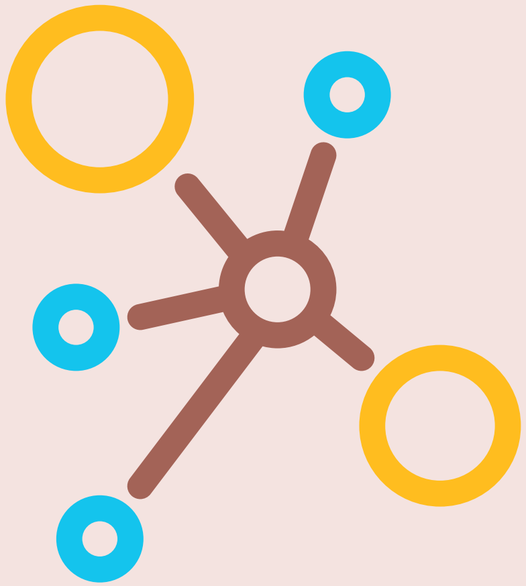
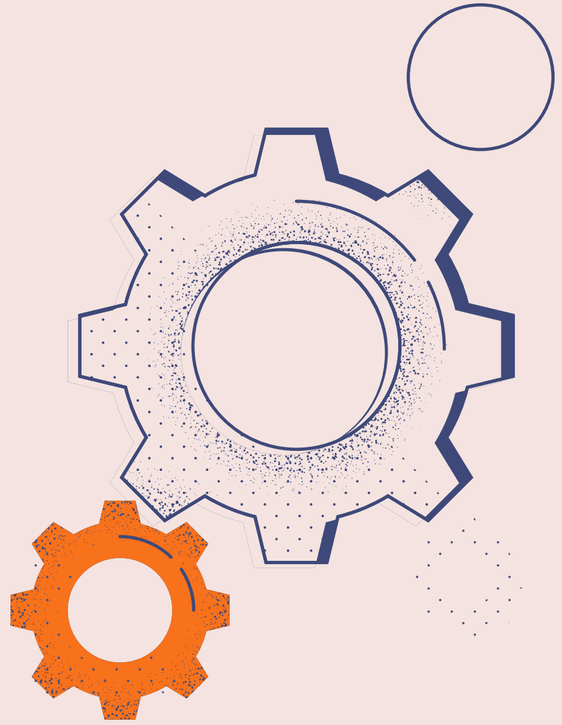
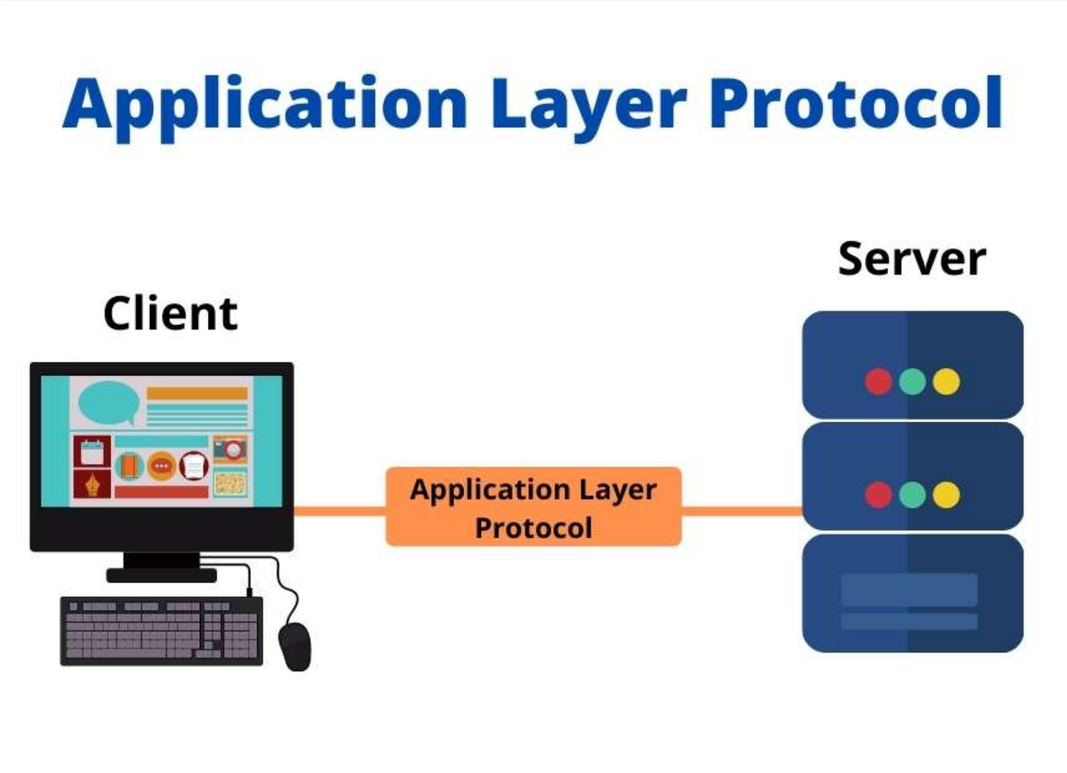
APPLICATION LAYER PROTOCOL





WHAT IS APPLICATION LAYER?



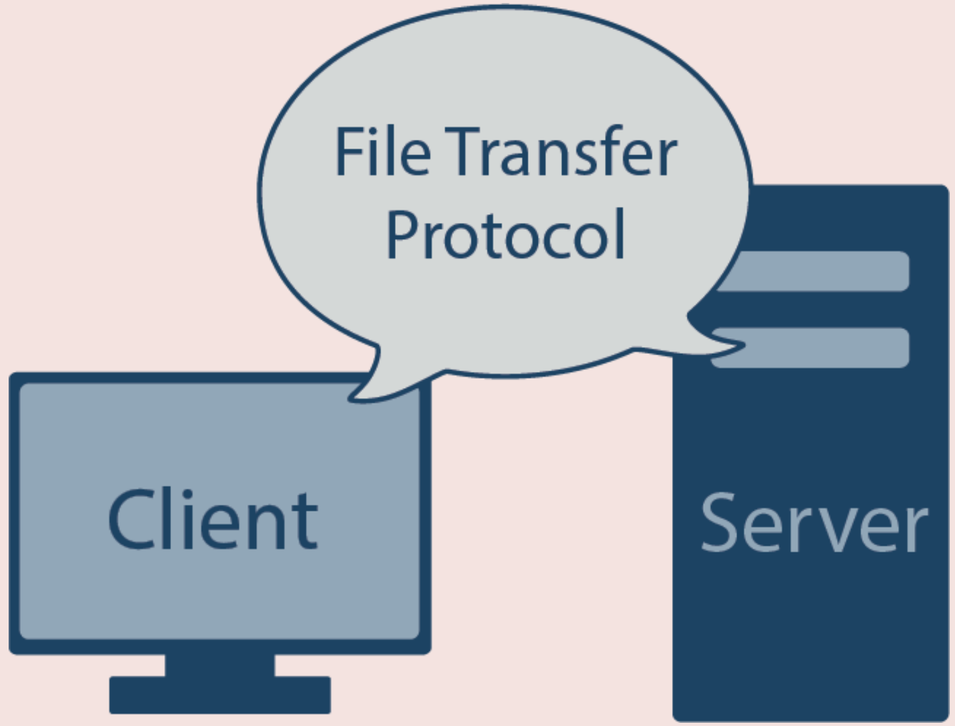
An application layer is an abstraction layer that specifies the shared communications protocols and interface methods used by hosts in a communications network.

An application layer abstraction is specified in both the Internet Protocol Suite (TCP/IP) and the OSI model.

Although both models use the same term for their respective highest-level layer, the detailed definitions and purposes are different.

FILE TRANSFER PROTOCOL

File Transfer Protocol(FTP) is an application layer protocol that moves files between local and remote file systems. It runs on the top of TCP, like HTTP. To transfer a file, 2 TCP connections are used by FTP in parallel: control connection and data connection.



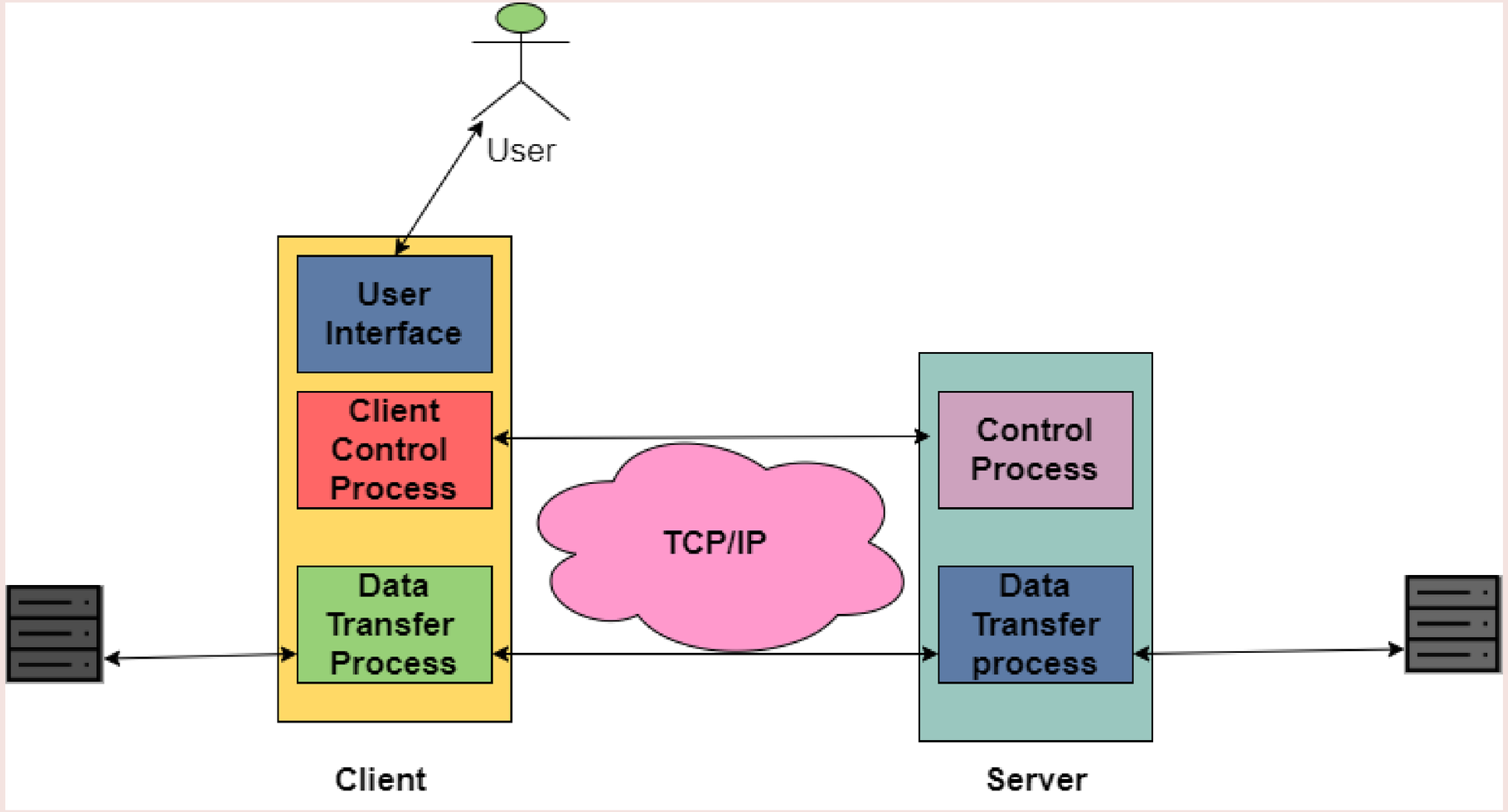
TYPES OF FILE TRANSFER PROTOCOL

01 Active FTP connection

02 Passive FTP connection

03 Anonymous FTP

WORKING OF FILE TRANSFER PROTOCOL



PORT DETAILS

- The File Transfer Protocol makes the use of two protocols; Port 21 for the Control connection and Port 20 is used for Data connection

ADVANTAGES

Speed: The FTP is one of the fastest way to transfer the files from one computer to another computer.

Efficient: It is more efficient as we do not need to complete all the operations to get the entire file.

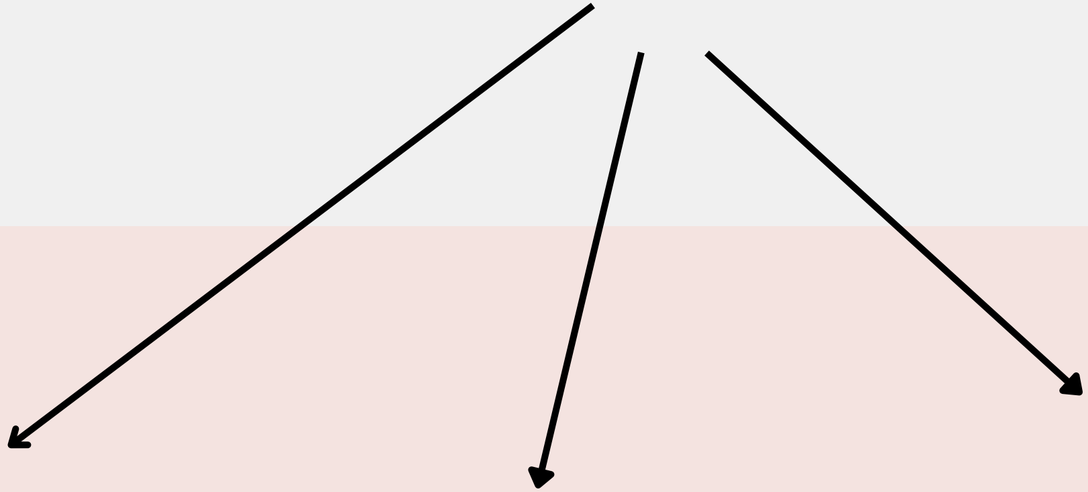
Security:To access the FTP server, we need to login with the username and password. Therefore, we can say that FTP is more secure

Back & forth movement: : FTP allows us to transfer the files back and forth. Suppose you are a manager of the company, you send some information to all the employees, and they all send information back on the same server.

DISADVANTAGES

- File Transfer Protocol is not a secure way to transfer the data.
- FTP does not allow the copy from server to server and also not allows removal operations for the recursive directory.
- Scripting the jobs is hard using the FTP protocol.
- The spoofing of the server can be done in order to send data to a random unknown port on any unauthorized computer

USES OF FILE TRANSFER PROTOCOL



TRANSFERRING A VIDEO THAT NEEDS TO BE SAVED FOR LATER VIEWING

INSTALLATION FILES FOR PROGRAMS OR OPERATING SYSTEM

TRANSFERRING A FOLDER(S) CONTAINING A LARGE NUMBER OF FILES OR IMAGES

CONCLUSION

ALTHOUGH TRANSFERRING FILES FROM ONE SYSTEM TO ANOTHER IS VERY SIMPLE AND STRAIGHTFORWARD, BUT SOMETIMES IT CAN CAUSE PROBLEMS. FOR EXAMPLE, TWO SYSTEMS MAY HAVE DIFFERENT FILE CONVENTIONS. TWO SYSTEMS MAY HAVE DIFFERENT WAYS TO REPRESENT TEXT AND DATA. TWO SYSTEMS MAY HAVE DIFFERENT DIRECTORY STRUCTURES. FTP PROTOCOL OVERCOMES THESE PROBLEMS BY ESTABLISHING TWO CONNECTIONS BETWEEN HOSTS. ONE CONNECTION IS USED FOR DATA TRANSFER, AND ANOTHER CONNECTION IS USED FOR THE CONTROL CONNECTION.

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