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**QUESTION**

Briefly explain the following types of protocols:

* File transfer protocols
* Simple mail transfer protocol (SMTP)
* Internet protocol and
* User datagram protocol UDP

**ANSWER**

1. **File Transfer Protocol:** File transfer protocol also known as FTP, is an open protocol standard that is widely used to transport and receive large files. It can also be used to send configuration files and software updates for network switches and routers. FTP uses ports for communication and uses encryption to protect the information being received and sent.
2. **Simple Mail Transfer Protocol:** SMTP is an application layer protocol. This protocol is a communication protocol used for electronic mail transmission. The client who wants to send the mail opens a TCP connection to the SMTP server and then sends the mail across the connection. The SMTP server is always on listening mode. As soon as it listens for a TCP connection from any client, the SMTP process initiates a connection on that port (25). After successfully establishing the TCP connection the client process sends the mail instantly.
3. **Internet Protocol:** The Internet Protocol (IP) is the method by which data is sent from one computer to another on the Internet. Each computer (known as a host) on the Internet has at least one IP address that uniquely identifies it from all other computers on the Internet. The Internet Protocol delivers the packets from one computer to another on the Internet.

1. **User Datagram Protocol:** UDP (User Datagram Protocol) is an alternative communications protocol to Transmission Control Protocol (TCP) used primarily for establishing low-latency and loss-tolerating connections between applications on the Internet. UDP runs on top of the Internet Protocol (IP). UDP provides two services. It provides port numbers to help distinguish different user requests and , optionally, a checksum capability to verify that the data arrived intact.