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ASSIGNMENT

Briefly explain the following types of protocols:

1. File transfer protocols

2. Simple mail transfer protocol (SMTP)

3. Internet protocol and

4. User datagram protocol UDP

ANSWERS

FILE TRANSFER PROTOCOLS: The File Transfer Protocol is a standard network protocol used for the transfer of computer files between a client and server on a computer network. FTP is built on a client-server model architecture using separate control and data connections between the client and the server.

SIMPLE MAIL TRANSFER PROTOCOL (SMTP): SMTP is part of the application layer of the TCP/IP protocol. Using a process called "store and forward," SMTP moves your email on and across networks. It works closely with something called the Mail Transfer Agent (MTA) to send your communication to the right computer and email inbox. SMTP spells out and directs how your email moves from your computer's MTA to an MTA on another computer, and even several computers. Using that "store and forward" feature mentioned before, the message can move in steps from your computer to its destination. At each step, Simple Mail Transfer Protocol is doing its job. Lucky for us, this all takes place behind the scenes, and we don't need to understand or operate SMTP.

INTERNET PROTOCOL: The Internet Protocol (IP) is the method or protocol 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. IP is a connectionless protocol, which means that there is no continuing connection between the end points that are communicating. Each packet that travels through the Internet is treated as an independent unit of data without any relation to any other unit of data. (The reason the packets do get put in the right order is because of TCP, the connection-oriented protocol that keeps track of the packet sequence in a message.) In the Open Systems Interconnection (OSI) communication model, IP is in layer 3, the Networking Layer.

USER DATAGRAM PROTOCOL (UDP): UDP is a communication protocol used across the Internet for especially time-sensitive transmissions such as video playback or DNS lookups. It speeds up communications by not requiring what’s known as a “handshake”, allowing data to be transferred before the receiving party agrees to the communication. This allows the protocol to operate very quickly, and also creates an opening for exploitation. UDP is commonly used in time-sensitive communications where occasionally dropping packets is better than waiting. Voice and video traffic are sent using this protocol because they are both time-sensitive and designed to handle some level of loss.