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ASSIGNMENT

1. File Transfer Protocol: File Transfer Protocol (FTP) is a standard Internet [protocol](https://searchnetworking.techtarget.com/definition/protocol) for transmitting files between computers on the Internet over [TCP/IP](https://searchnetworking.techtarget.com/definition/TCP-IP) connections. FTP is a client-server protocol where a client will ask for a file, and a local or remote server will provide it. The end-users machine is typically called the local host machine, which is connected via the internet to the remote host—which is the second machine running the FTP software.
2. Simple Mail Transfer Protocol: 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.
3. Internet protocol: The Internet Protocol (IP) is a protocol, or set of rules, for routing and addressing packets of data so that they can travel across networks and arrive at the correct destination. Data traversing the Internet is divided into smaller pieces, called packets. IP information is attached to each packet, and this information helps routers to send packets to the right place. Every device or [domain](https://www.cloudflare.com/learning/dns/glossary/what-is-a-domain-name/) that connects to the Internet is assigned an [IP address](https://www.cloudflare.com/learning/dns/glossary/what-is-my-ip-address/), and as packets are directed to the IP address attached to them, data arrives where it is needed.

Once the packets arrive at their destination, they are handled differently depending on which transport protocol is used in combination with IP. The most common transport protocols are TCP and UDP.

1. User Datagram Protocol: UDP is a communication protocol used across the Internet for especially time-sensitive transmissions such as video playback or Domain Name System (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.