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CTEC 415

Networking Summary

Networks are any connection between two or more devices that allows them to communicate with each other. The Open Systems Interconnect (OSI) model is used to visualize and guide the process that data goes through when being transmitted on a network. There are seven layers within the OSI model, Application, Presentation, Session, Transport, Network, Data Link, and Physical. Each layer describes how data is handled to allow for communication over a network. On a network, the bandwidth is the maximum amount of data that can be sent over a single cable. Throughput is how much data is being transferred between two computers. The speed of a network is determined by how fast the throughput can move through the bandwidth. Latency is the amount of time data takes to go from the source to destination. Delay is a specified amount of latency on a network. Causes for delay include processing, queuing, transmission, and propagation. Packet loss occurs when a buffer is full and the packets are dropped. Depending on the protocol being used, packet loss may result in a resent packet or new packets may continue to be sent. TCP is a reliable protocol that will resend packets if they are loss or corrupted. UDP is an unreliable protocol that continues to send packets regardless of loss or corruption.

References

ArvigHQ (Director). (2016, September 16). Speed vs Bandwidth Explained - Arvig [Video file]. Retrieved from <https://www.youtube.com/watch?v=A_-L-kn9biw>

Brinkerhoff, S., III (Director). (2007, January 19). Bandwidth vs. Throughput [Video file]. Retrieved from <https://www.youtube.com/watch?v=VWxGtl5J7WM>

Casey, K. (Director). (2018, January 18). 1.4 - Delay, Loss, and Throughput | FHU - Computer Networks [Video file]. Retrieved from <https://www.youtube.com/watch?v=qL7ZGeSoQRM>

Messer, J. (Director). (2010, July 18). The OSI Model - CompTIA Network+ N10-004: 4.1 [Video file]. Retrieved from <https://www.youtube.com/watch?v=W438koUR04o>