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Lab 3: TCP/IP Frames

For this lab, we use Ethernet cables as well for the primary connection. The destination IP address was 192.168.100.5. which was the access point. Wireshark was used to capture the frames. To look for TCP packets, we looked at ones with the protocol of TCP. The data in the TCP packets also showed us a sequence number to identify each byte of data. It’s important, because it identifies the ordering of the bytes sent from each computer, so that even if there are errors during transmission, the data can be reconstructed. Similarly, the acknowledgement number indicates the next sequence number that the receiver is expecting. Sequence and acknowledgement numbers are very good for troubleshooting.

There are two types of internet traffic: UDP and TCP. UDP is suitable fort applications that need fast and efficient transmission. It would be used on reliable media because we don’t want error correction. TCP is used on more unreliable media. It rearranges data packets in the order specified and the transmission time is less critical, so it can take its time. TCP/UDP ports indicate which application you’re using, since different ports are for different applications.

A device ARPs anytime a session is started and you need to establish a connection to a new device. An ARP is needed to get the destination MAC address that matches the IP address. It broadcasts to all machines on the LAN to see if one machine knows that it has an IP address associated with it.