

Part 2.2

Similarities:

-The 3 packets have the same type of Data Link layer which is the Ethernet layer in the first 13 bytes, we can see that it contains a destination address and a source address. The Ethernet layer is concerned with node to node.

-They also have the same Network layer which starts from the byte 14-33.

The IP layer is concerned with moving between networks. Highlighting the network layer shows more details. we can see the source and destination IP addresses. Here IP version is 4

Differences: The transport layer protocol is where the difference between the 3 packets lies;

-The TCP layer handles the message part. The message is broken down into smaller units, called packets

The seq number is sent by the TCP client, indicating how much data has been sent for the session (also known as the byte-order number).

The ack number is sent by the TCP server, indicating that it has received cumulated data and is ready for the next segment

If any of the steps in connection establishment doesn't occur, means that connection is not established between client and server and there is some type of intrusion in network.

The transport layer is where applications communicate via the use of ports (it starts from the byte 34-53). we can see that the source port is 60810, while the destination port is 1234 . and seq. No. 5 ,ack. 4 ,header length 0 bytes

-User datagram protocol is an OSI transport layer protocol for client- server network applications.

the first eight bytes of a datagram contain header information (as shown in our 2 UDP packets, it starts from the byte 34-41), while the remaining bytes contain message data.

A UDP datagram header contains four fields of two bytes each:

Source port number

Destination port number

Datagram size

Checksum

The user datagram is also where applications communicate via the use of ports. Looking at the capture , we can see that

The source and destination ports are the same in the UDP unicast packet, however they are different in the UDP multicast