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Wireshark Assignment - 2

Q _ 1: What are the packet numbers (which appear in Wireshark program) of the packets used for 3-way handshake protocol that initiates the first TCP connection? What are the segment numbers of those packages and the port numbers used on client and server sides?

A_1:

Packet Number	Sequence Number	Client Port	Server Port
1	0	40542	80
2	0	40542	80
3	1	40542	80

- Source and destination ports change in packet 2 but client and server ports are same.

Q_2: What are the first 5 packet numbers and segment numbers of all TCP packets transferring the **"wireshark_assignment2.png"** image data? What are the packet numbers of corresponding ACK segments and the data amount they acknowledged? Draw a table which have **packet number**, **segment number**, **ACK packet number**, and **ACKed data** columns and fill the table with the required information.

A_2:

Packet Number	Sequence Number	ACK Packet Number	ACKed Data
10	6373	931	10136
12	16509	931	4344
16	20853	931	8688
18	29541	931	7261

- **Wireshark_assignment2.png transferred in 4 TCP packets instead of 5.**

Q_3:How long does it take to transfer **"wireshark_assignment2.png"** image data (from the time the first TCP data packet sent to the time the last acknowledgement received at the server side)? Show your work. Plot Round Trip Time - Time graph of related TCP packets. (**Hint:**Select one of those TCP segment in the "listing of captured packets" window that is being sent from the server to the client. Then select: Statistics->TCP Stream Graph- >Round Trip Time Graph.)

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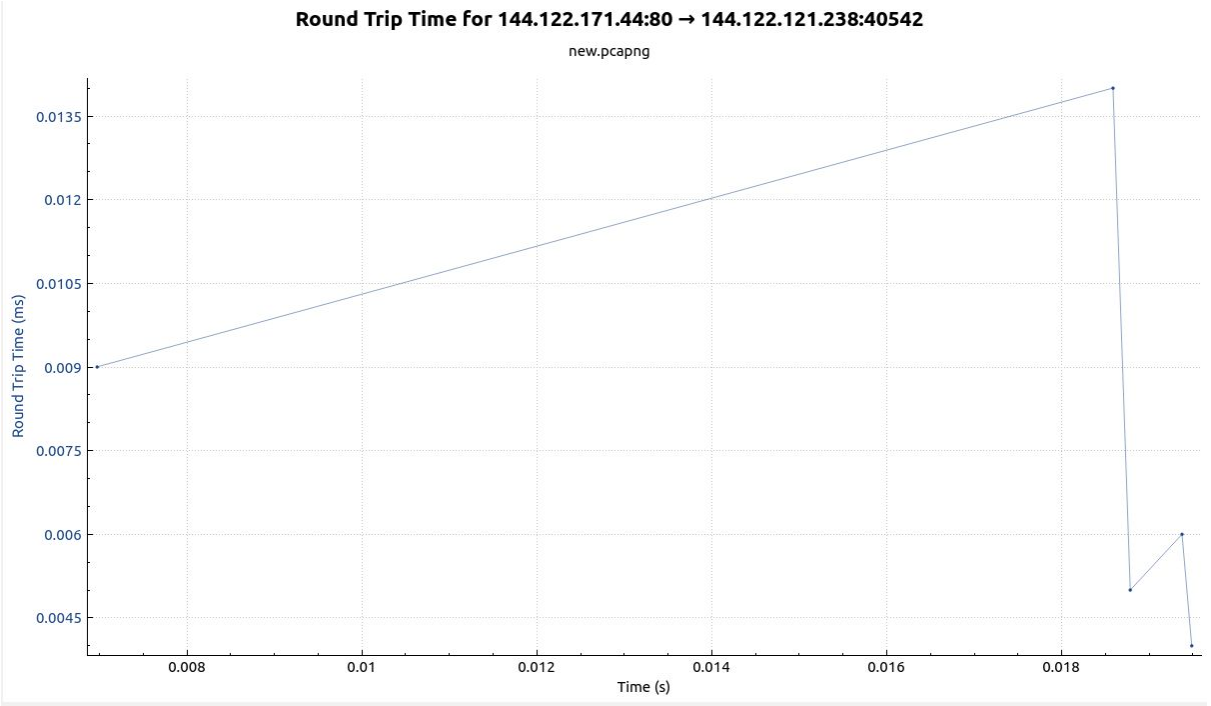
A_3:

Data transfer time: 0.01949 - 0.01723 = 2.3ms



All of the packets that are sent from the server have the same graph.

Q_4: Are there any retransmitted segments in your trace file? Justify your answer with respect to your Wireshark output monitoring.

A_4: I filtered retransmissions with *tcp.analysis.retransmission* command and there is no retransmitted segments.