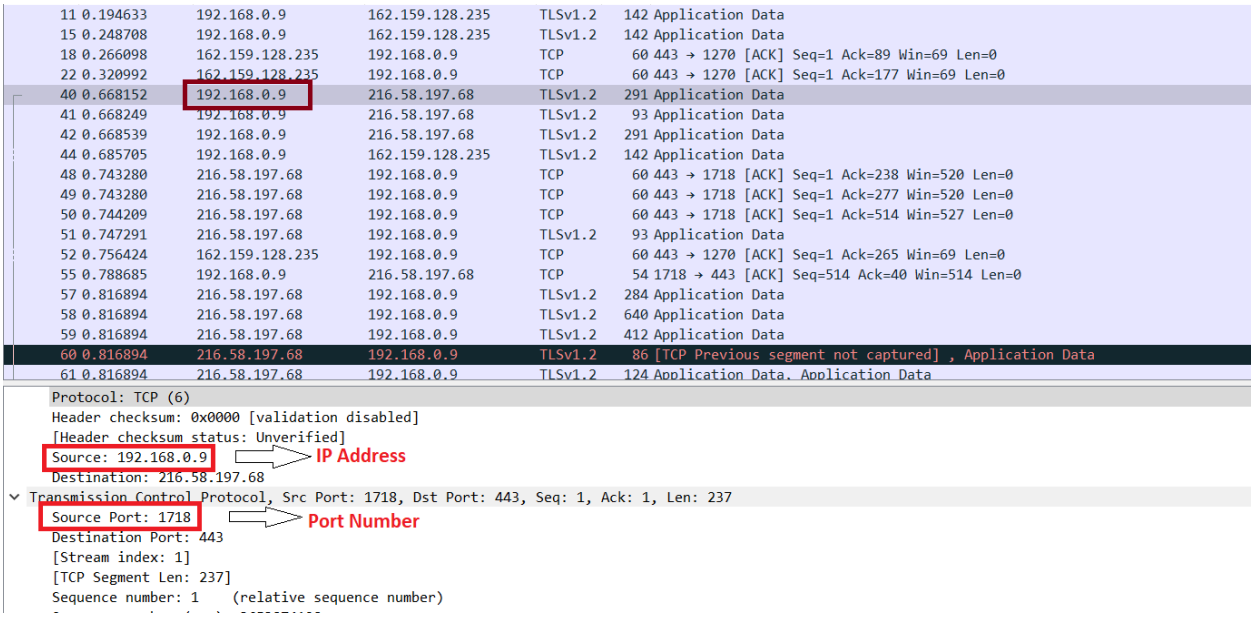
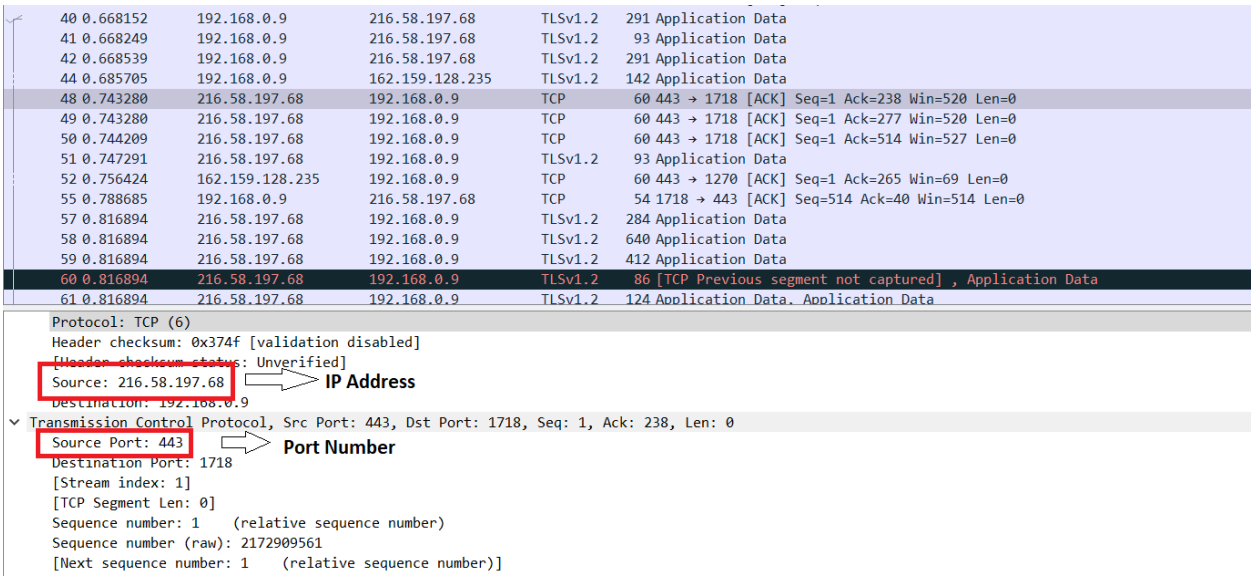
LAB-4

1. Pick a TCP request/response pair. Identify the IP address and port number used by the client and server. What are their sequence numbers? Observe the protocol number for TCP.

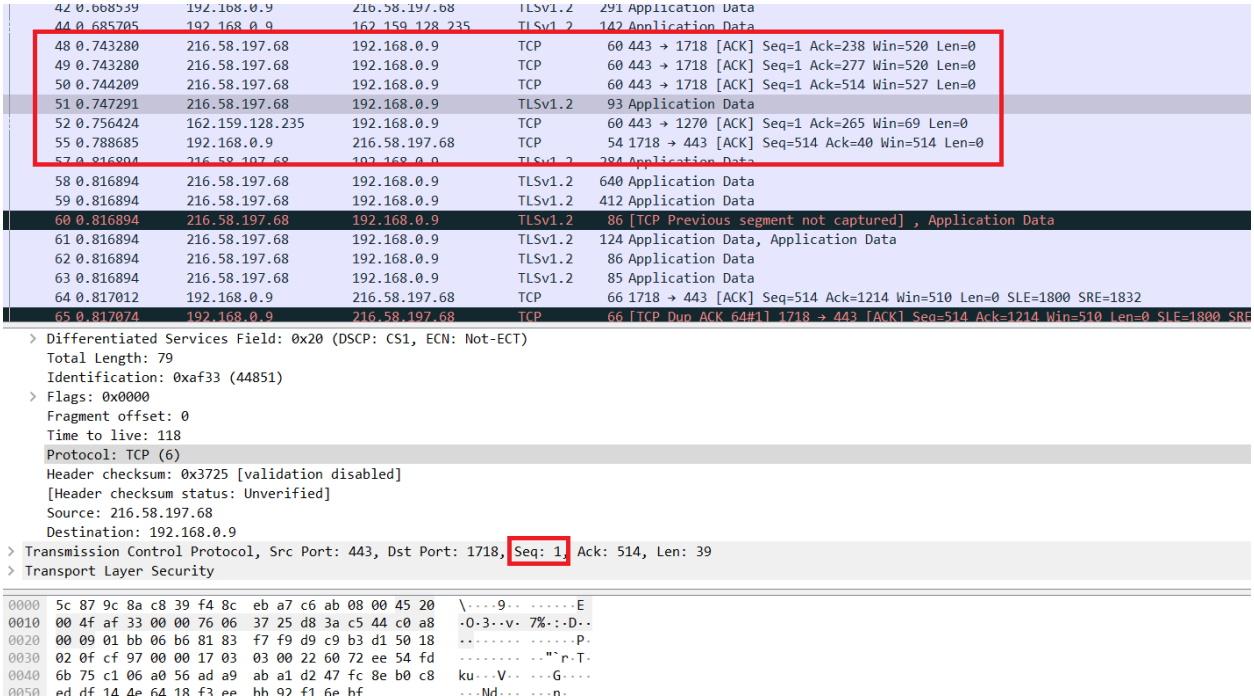
Client:



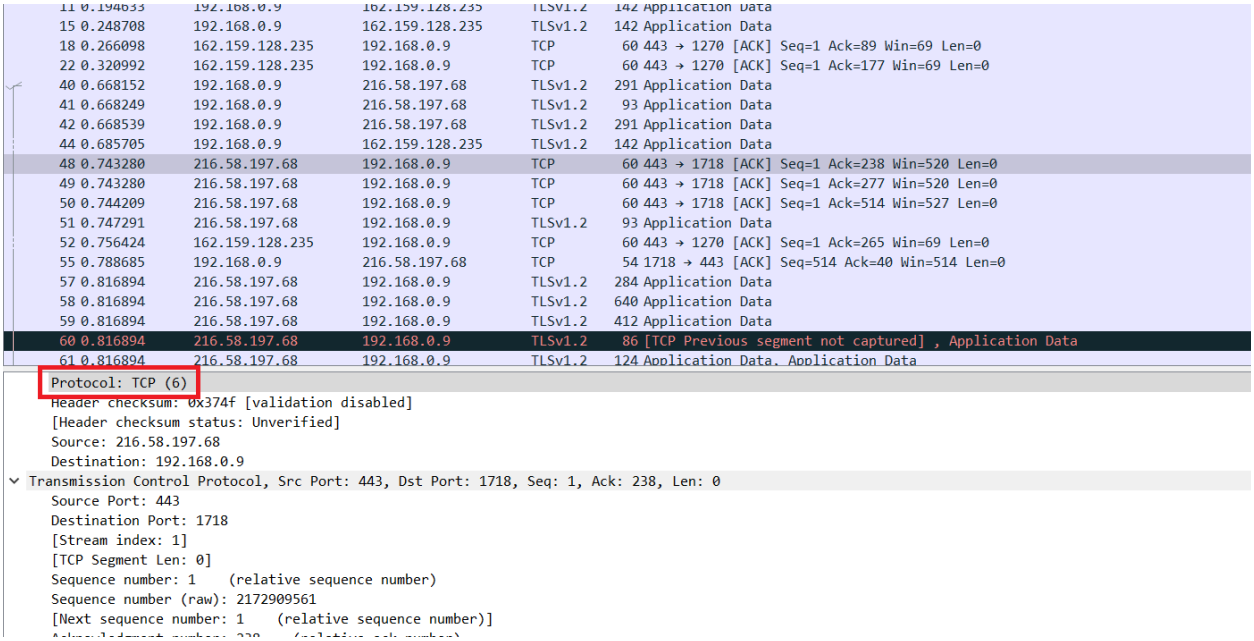
Server:



Sequence Number: 1,238,277,514…….

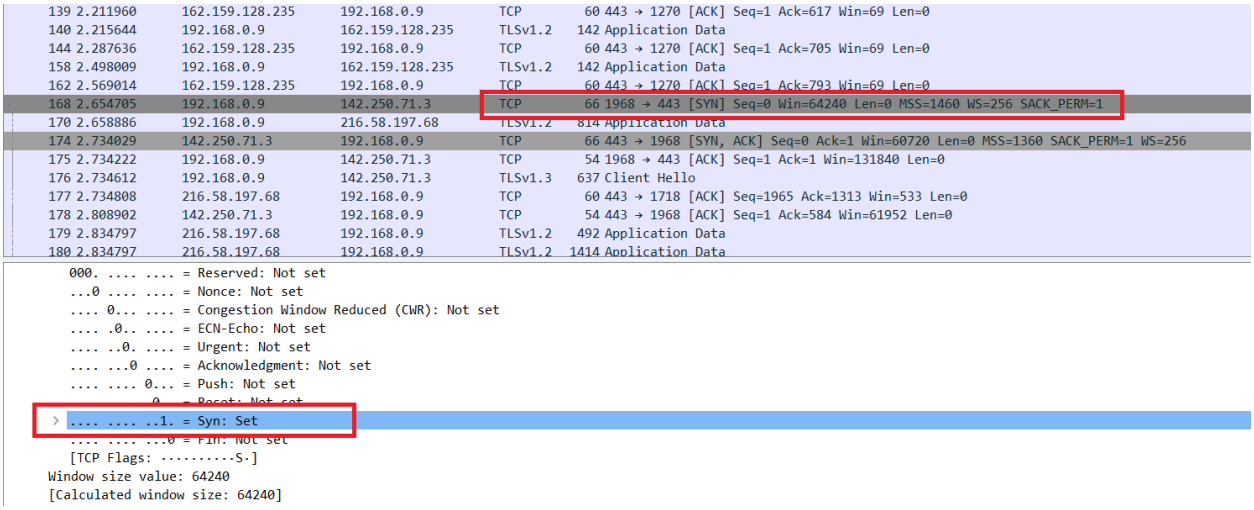


Protocol number: 6

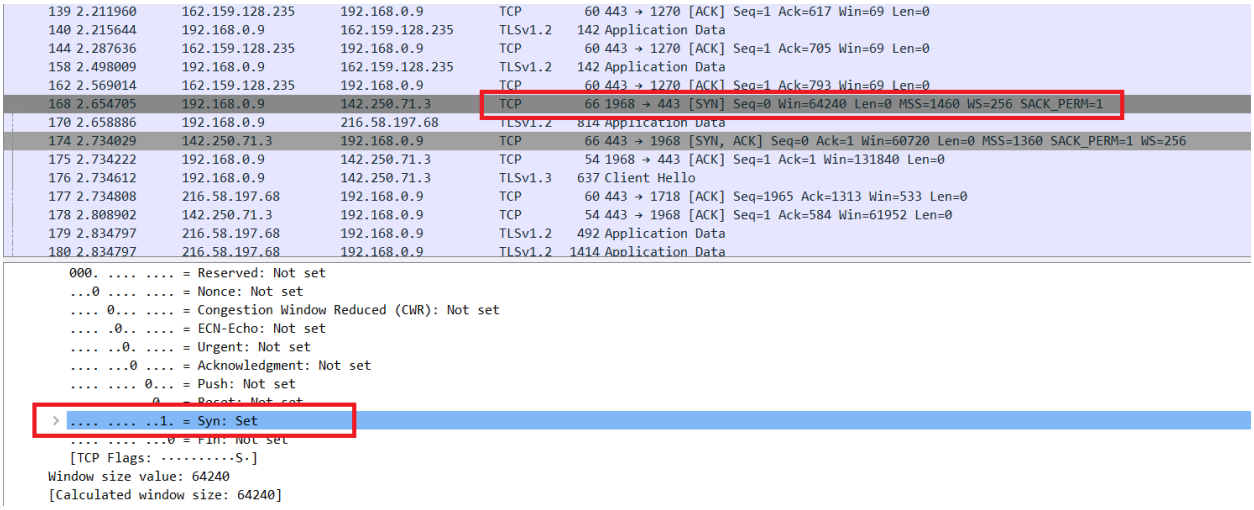


1. Observe the value of SYN flag in SYN and SYNACK messages from the client and server

Client:

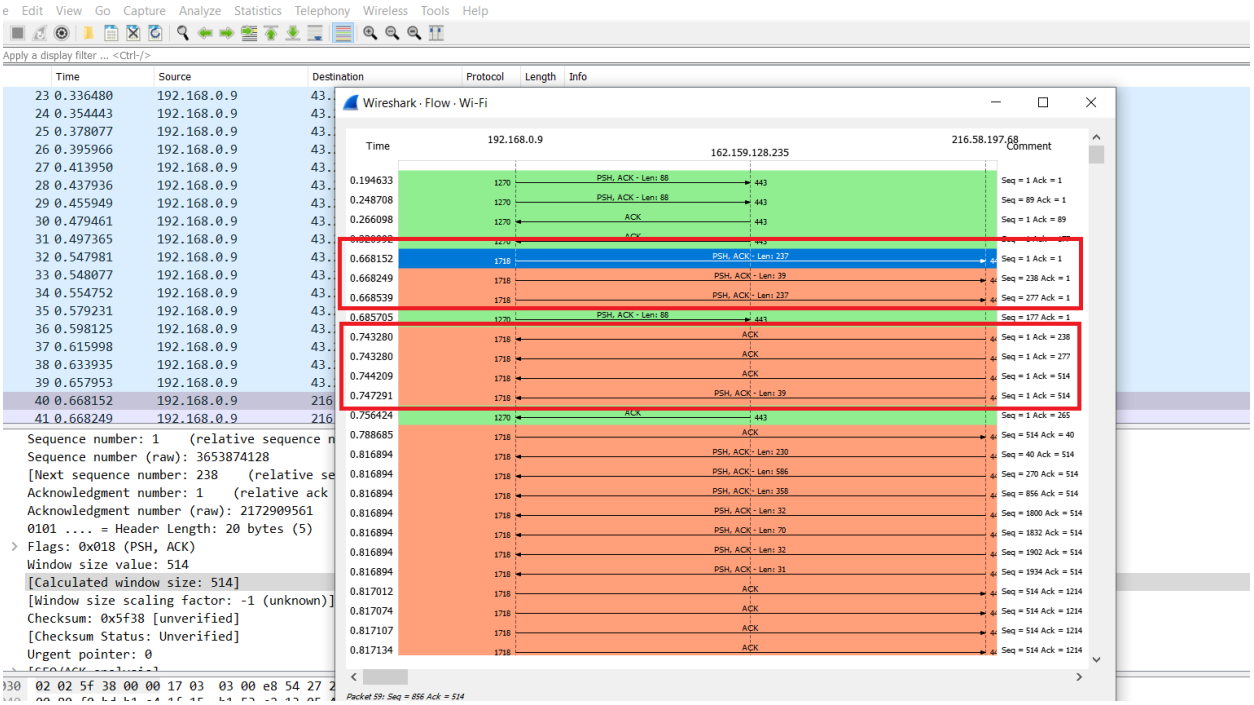


Server:

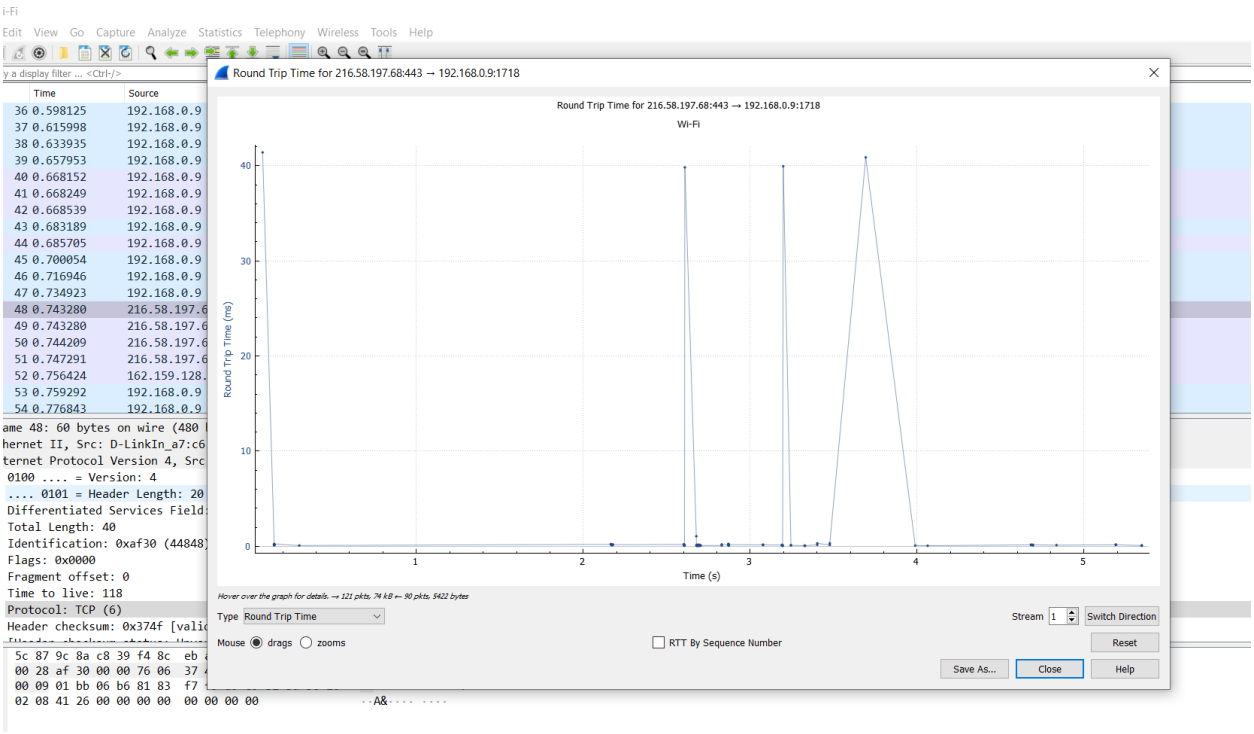


3. Do an HTTP operation involving multiple TCP transactions and observe the sequence numbers of request/response pairs. Observe the time for each request/ response. Calculate the round-trip time (RTT) based on these values. Plot the RTT graph (can be done by selecting a TCP segment, Statistics->TCP stream graph->RTT graph)

Seq = 1 sent at 0.668152; ACK received at 0.743280, its RTT = 0.075128
Seq = 238 sent at 0.668249; ACK received at 0.744209, its RTT =0.07596
Seq = 277 sent at 0.668539; ACK received at 0.747291, its RTT =0.078752
Seq = 514 sent at 0.788685; ACK received at 0.816894, its RTT =0.078209

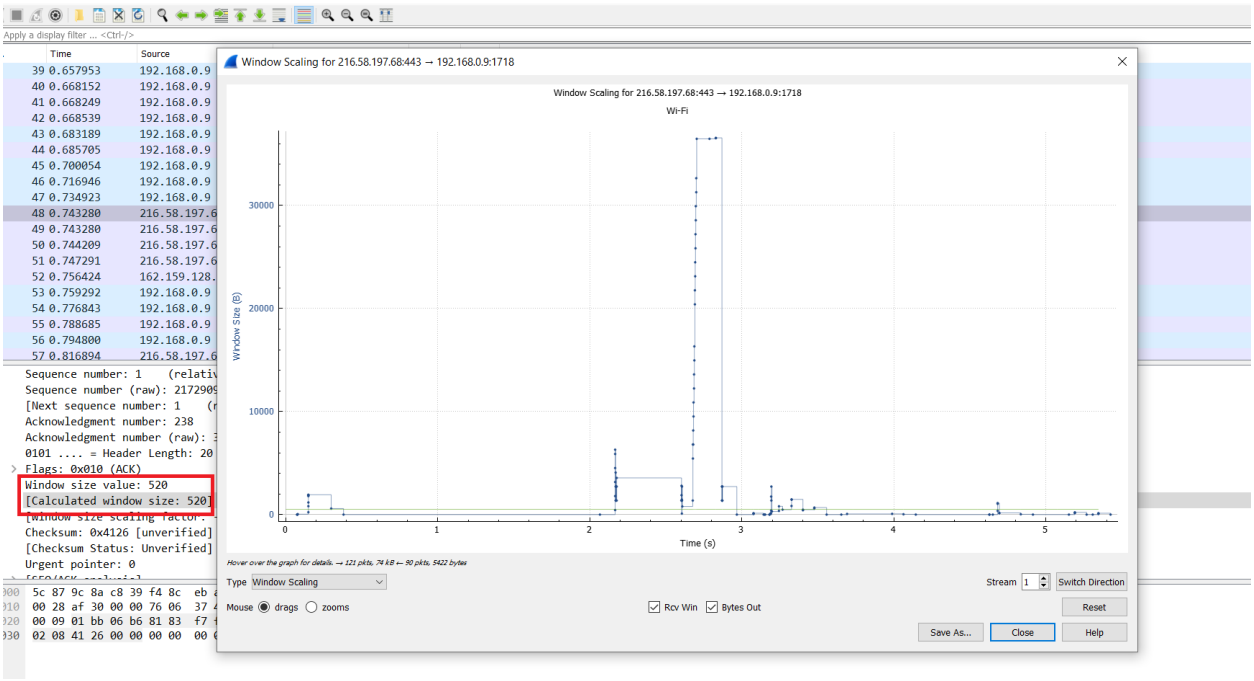


RTT graph:


Round Trip Time for 216.58.197.68:443 → 192.168.0.9:1718
Round Trip Time for 216.58.197.68:443 → 192.168.0.9:1718
Wi-Fi
Round Trip Time (ms)
Time (s)
Type
Round Trip Time
Stream
Switch Direction
Mouse
drags
zooms
RTT By Sequence Number
Reset
Save As...
Close
Help

4. Observe the growth of receive buffer in question 4. What is the size of send buffer?

The size of the receive buffer is 520



The size of send buffer is 514