Harrison Chen (10075185) – Assignment #3 Analysis Report

Question 1

Average packet size was computed by averaging (using the Excel average function) the packet size of all captured packet size (frame.len in *tshark*). It was found that the average packet size was 4944.49 bytes. We were able to use Excel by outputting the *tshark* capture as a .csv file.

Question 2

Average throughput of received traffic was computed by:

Throughput = Average Packet Size / Round Trip Time of Packet

38035 bits/sec = (4944.49 bytes * 8 bits/byte) / (1.04 seconds)

Where:

- Average packet size was already computed from Question 1
- Round trip time of packet was computed by subtracting the overall *tshark* capture start time from the *tshark* end time (end time – start time = 4:38:12 – 4:37:08 = 1.04 seconds)
- Bytes per second was converted to bits per second as Google recommended throughput as a bits/sec measurement

Question 3

After extracting traffic analysis data using UDP fields, no UDP traffic was found. The top three sender port numbers by volume were:

Sender Traffic: Port 80, Port 33644, and Port 443 (see tables below).

Receiver Traffic: Port 33644, Port 80, Port 50260 (see tables below).

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Tables:

Q1, Q2

Question 1 - Average Packet Size	4944.49 bytes
Question 2 - Average Throughput:	38035 bits/sec

Q3

Source Traffic Table		
Port Number	Traffic Count	Traffic Percentage
80	31589	52.50%
33644	26062	43.31%
443	1048	1.74%
50260	418	0.69%
42692	412	0.68%
22	405	0.67%
56418	218	0.36%
35556	3	0.00%
35560	3	0.00%
35562	3	0.00%
35530	2	0.00%
35532	2	0.00%
35534	2	0.00%
57958	2	0.00%
35528	1	0.00%

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Destination		
Port Number	Traffic Count	Traffic Percentage
33644	31571	52.46%
80	26078	43.33%
50260	831	1.38%
443	636	1.06%
22	414	0.69%
42692	403	0.67%
56418	217	0.36%
53	6	0.01%
35530	3	0.00%
35532	3	0.00%
35556	3	0.00%
35560	3	0.00%
35562	3	0.00%
35534	2	0.00%
57958	2	0.00%
123	1	0.00%
33221	1	0.00%
35528	1	0.00%
38727	1	0.00%
43611	1	0.00%
49651	1	0.00%
53343	1	0.00%
57241	1	0.00%
60225	1	0.00%