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## Lab 5

Lab Report: This lab was pretty straightforward. I was able to see the TCP in action which was cool. Wireshark is almost second nature at this point. I completed this lab 100% independently with no help from outside resources (excluding provided content).

- 1) IP (client): 192.168.1.102 & TCP port # (client): 1161
- 2) IP (gaia.cs.umass.edu): 128.119.245.12 & TCP port # (gaia.cs.umass.edu): 80
- 3) IP (Personal): 192.168.95.64 & TCP port # (Personal): 55241
- 4) The sequence number is 0 and the SYN can be indicated by setting the syn flag to 1
- 5) The sequence number is also 0. The value is 1 in the acknowledgement field. The client told the destination what value. The values/flags of syn and ack are both 1.
- 6) Sequence Number of TCP (segment with HTTP POST): 1
- 7&8) EstimatedRTT: 189.875 ms (when alpha = .125)

Sequence #	RTT (ms)	Length
1	about 190	565
566	about 189	1460
2026	about 189	1460
3486	about 189	1460
4946	about 190	1460
6406	about 190	1460

- 9) The minimum amount of available buffer space: 5840 bytes. The lack of receiver buffer space doesn't ever throttle the sender.
- 10) There are no retransmitted segments. I looked for any repeating segment numbers.
- 11) The receiver acknowledges 1460 bytes of data in ack. They would double if it was acknowledging every other segment.
- 12) File size: 177851 bytes / Total time: 7.593 = Throughput: 23,423.021 Bps
- 13) slowstart phase: Packet 1-13. The data doesn't take the normal exponential to linear approach as with situation studied prior.
- 14) My personal shows slowstart phase: Packet 1-219 (this after analysis may be an error on my part)