Sean Blanchard

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L09: More TCP

Wireshark Capture

Use the following capture to answer the qanda: [L10-tcp-download.pcap (Links to an external site.)](https://429.scrivnor.cikeys.com/L10-tcp-download.pcap).

The capture contains a bulk data transfer.

qanda

1. Is the bulk transfer likely an upload or a download? Explain your reasoning.

**Uploading because we are sending big data to the server.**

1. Complete the following table (show work for sRTT):

| **segment no.** | **length** | **seq no.** | **sent at** | **ack'd at** | **RTT** | **sRTT** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 62 | 232129012 | 0.0000 | 0.023172 | 0.023172 | 0.023172 |
| 2 | 54 | 232129013 | 0.023265 | 0.053937 | 0.030672 | 0.0241095 |
| 3 | 619 | 232129013 | 0.026477 | 0.053937 | 0.027467 | 0.0245291875 |
| 4 | 1514 | 232129578 | 0.041737 | 0.053937 | 0.012207 | 0.02298891406 |
| 5 | 1514 | 232131038 | 0.054026 | 0.077294 | 0.023274 | 0.0230245498 |

0.053937 – 0.023265 = 0.030672

0.053937 – 0.02647 = 0.027467

0.053937 – 0.041737 = 0.012207

0.077294 – 0.054026 = 0.023274

(0.875)(0.023172) + (1 - 0.875)(0.030672) = (0.0202755) + (0.003834) = 0.0241095

(0.875)(0.0241095) + (1 - 0.875)(0.027467) = (0.0210958125) + (0.003433375) = 0.0245291875

(0.875)(0.0245291875) + (1 - 0.875)(0.012207) = (0.02146303906) + (0.001525875) = 0.02298891406

(0.875)( 0.02298891406) + (1 - 0.875)(0.023274) = (0.0201152998) + (0.00290925) = 0.0230245498