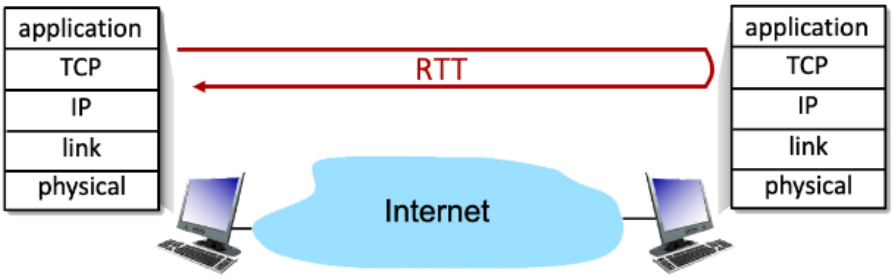
1-TCP RTT Estimation

Worksheet 2 Solutions

Suppose that TCP's current estimated values for the round trip time (*estimatedRTT*) and deviation in the RTT (*DevRTT*) are 300 msec and 18 msec, respectively. Suppose that the next three measured values of the RTT are 380 msec, 220 msec, and 200 msec respectively.



Compute TCP's new value of *DevRTT, estimatedRTT,* and the TCP timeout value after each of these three measured RTT values is obtained. Use the values of α = 0.125, and β = 0.25. Round your answers to two decimal places after leading zeros

Solution:

DevRTT is calculated with the following equation:

(1-0.25)*DevRTT + 0.25 * |estimatedRTT - sampleRTT|

EstimatedRTT is calculated with the following equation:

(1-0.125)*estimatedRTT + 0.125*sampleRTT

TCP timeout = estimatedRTT + (4*DevRTT)

1. The estimatedRTT for RTT1 is 310
2. The DevRTT for RTT1 is 33.5
3. The timeout for RTT1 is 444

1. The estimatedRTT for RTT2 is 298.75
2. The DevRTT for RTT2 is 47.62
3. The timeout for RTT2 is 489.25

1. The estimatedRTT for RTT3 is 286.4
2. The DevRTT for RTT3 is 60.40
3. The timeout for RTT3 is 528.00