Group members: -

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TCP Analysis

Plot of average throughput:

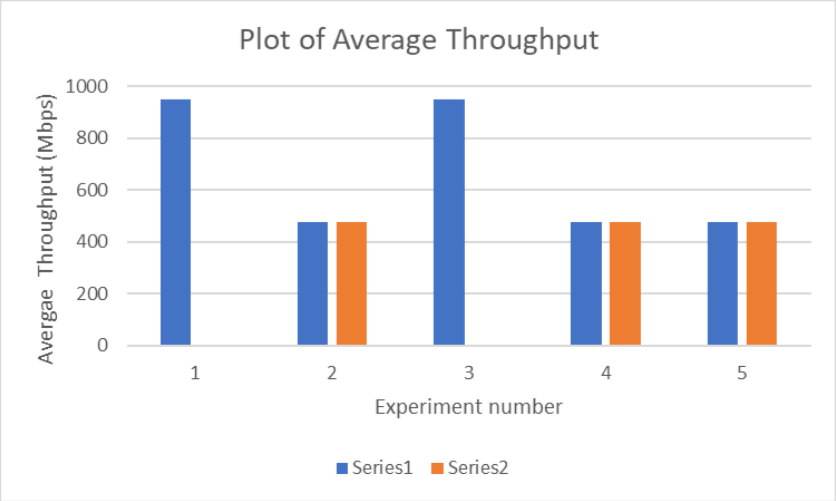

Fig. 1: Plot of average throughput (Mbps) for different experiments

The average throughput difference between experiments 1 and 3, as well as between experiments 2 and 4, for both Bic and Dctcp is less than one unit. Across multiple trials, it is observed that Dctcp's throughput is slightly lower than Bic's on average, although not significantly so. In experiment 5, a comparison between sender 1's throughput of 475.151758 and sender 2's throughput of 475.143127 reveals that Dctcp's throughput marginally lags behind Bic's. Analysis of flow monitor xml data indicates that Dctcp exhibits slightly less growth in packet size during the protocol's exponential phase compared to Bic. The sequence progression for Bic is 40, 180, 420, 500, 540, and 580, while for Dctcp it is 40, 140, 320, 500, 540, and 580.

Plot of average flow completion time:

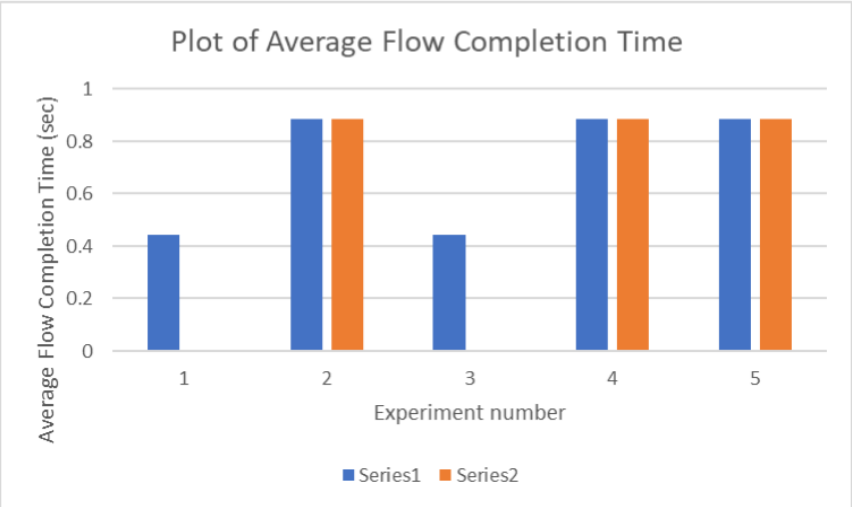

Fig. 2: Plot of average flow completion time (sec) for different experiments

Analysis:

Based on the Excel data, we observe that when comparing experiments 1 and 3, as well as experiments 2 and 4, the average flow completion time consistently shows a slight advantage for Bic over Dctcp. However, in experiment 5, the average flow completion time for sender 1 (using Bic) was higher than that for sender 2 (using Dctcp).