

SSN College of Engineering, Kalavakkam
Department of Computer Science and Engineering
V Semester - CSE 'B'
UCS1511 NETWORKS LAB

Academic Year: 2020-2021

Batch: 2018-2022

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Due Date: 20.9.20, 22.10.20

Exercise 8: PERFORMANCE EVALUATION OF TCP AND UDP

1. Write tcl script to do evaluate the performance of TCP and UDP sharing a bottleneck link
 1. Create six nodes and the links between the nodes as
 - a. 0 → 2 2Mb 10 ms duplex link
 - b. 1 → 2 2Mb 10 ms duplex link
 - c. 2 → 3 0.3Mb 100ms simplex link
 - d. 3 → 2 0.3Mb 100ms simplex link (link 2 → 3 is a bottleneck)
 - e. 3 → 4 0.5Mb 40ms duplex link
 - f. 3 → 5 0.5Mb 40ms duplex link
 2. Align the nodes properly.
 3. Set Queue Size of link (n2-n3) to 10 (or) 5.
 4. Setup a TCP connection over 0 and 4 and its flow id, window size, packet size
 5. Setup a UDP connection over 1 and 5 with flow id, type, packet size, rate, random fields
 6. Set different colors for TCP and UDP.
 7. Run the simulation for 5 seconds, and show the simulation in network animator and in trace file.

Analyze the performance of TCP and UDP from the simulation.