

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 9: SIMULATION OF ROUTING PROTOCOLS

Write tcl script to simulate the routing protocols in wired networks

1. Create 12 nodes and the links between the nodes as
 - a. 0 → 8 1Mb 10 ms duplex link droptail
 - b. 1 → 10 1Mb 10 ms duplex link droptail
 - c. 0 → 9 1Mb 10 ms duplex link droptail
 - d. 9 → 11 1Mb 10 ms duplex link droptail
 - e. 10 → 11 1Mb 10 ms duplex link droptail
 - f. 11 → 5 1Mb 10 ms duplex link droptail
2. Align all nodes properly
3. Setup a UDP connections over 0 and 5, 1 and 5 with flow id, type, packet size, rate, random fields.
4. Set different colors for different for different flows.
5. Use distance vector routing protocol.
6. Make links 11-5 and 7-6 down for 1 second.
7. Run the simulation for 5 seconds, and show the simulation in network animator and in trace file.

Similarly write another tcl script to simulate link state routing protocol. Also show the flooding in the simulation.