CS348 Computer Networks

Assignment 5
Indian Institute of Technology, Patna

February 18, 2019

Instructions : You have to submit the solutions in tgz file with name assign5.tgz. The submission date is 24.02.2019.

Problem 1. The basic objective of this assignment is to understand the congestion control of TCP. Assume hosts are connected to a server through a common switch. The connections from the host to the switch may have different bandwidth. They communicate following a TCP protocol. The outgoing port at the switch has a fixed size buffer. You are supposed to implement the TCP AIMD protocol for congestion control and observe the throughput ratio with respect to the ratio of the RTT.

Problem 2. Consider the same scenario as discussed in the previous problem. However, instead of AIMD congestion control mechanism, implement CUBIC protocol for congestion control mechanism. Determine the throughput ratio with respect to the ratio of the RTTs.