

Homework 5

CS 380
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Craig A. Rich

- 1 (Ch. 6, Problem 14) Why does UDP exist? Would it not have been enough to just let user processes send raw IP packets?
- 2 (Ch. 6, Problem 23) A process on host 1 has been assigned port p and a process on host 2 has been assigned port q . Is it possible for there to be two or more TCP connections between these two ports at the same time?
- 3 (Ch. 6, Problem 25) The maximum payload of a TCP segment is 65,495 bytes. Why was such a strange number chosen?
- 4 (Ch. 6, Problem 26) Describe two ways to get into the *SYN RCVD* state of Figure 6-33.
- 5 (Ch. 6, Problem 27) Give a potential disadvantage when Nagle's algorithm is used on a badly congested network.
- 6 (Ch. 6, Problem 28) Consider the effect of using slow start on a line with a 10-msec round-trip time and no congestion. The receive window is 24 KB and the maximum segment size is 2 KB. How long does it take before the first full window can be sent?
- 7 (Ch. 6, Problem 31) A TCP machine is sending windows of 65,535 bytes over a 1 gigabit/sec capacity channel that has a 10-msec one-way delay. What is the maximum throughput (in bytes/sec) achievable? What is the line efficiency (as a percent of capacity)?