
COMP90007 Internet Technologies

Week 10 Workshop

Semester 2, 2019

Question 1

Why does UDP exist? Would it not have been enough to just let the user processes send raw IP packets?

Question 2

Both UDP and TCP use port numbers to identify the destination entity when delivering a message. Discuss possible reasons for why these protocols invented a new abstract ID (port numbers), instead of using process IDs (which already existed when these protocols were designed?)

Question 3

What is the key difference between TCP Tahoe and TCP Reno?

Question 4

Recall the Leaky Bucket algorithm we saw in class. If a sender has a burst data rate of 20KB/s for 20 seconds as data to send and we have a bucket size of 100KB with a output rate of 10KB/s: Does the Leaky Bucket algorithm achieve its aim of regulating output properly? If so explain how and show your calculations. If not, find the appropriate bucket size and discuss why we need more/less of a bucket size.

Question 5

TCP relies on timers for resending in case some ACKs are missing. If we set such timers to a fixed value of say 100ms, discuss what would be the advantages and disadvantages of such a static protocol design.