Computer networks homework

Note: Every student needs to prepare just one word document for all homework assignments, then send it to your monitor. Monitor then send all collected homework to teacher. Word doc file name: student ID + name, there is no + sign.

计算机网络(第 5 版)高清晰英文原版 by Andrew Tanenbaum.pdf

Homework 1:

Chapter 1: 16, 17

Homework 2:

Chapter 2: 22, 24, 25

Homework 3:

Chapter 3: 16, 17

Homework 4:

1. Explain why networks might use an error-correcting code instead of error detection and retransmission.

Homework 5:

1. You are asked to design a reliable byte-stream protocol that uses a sliding window (like TCP). This protocol will run over a 1Gbits/s network. The RTT of the network is 100 ms, and the maximum segment lifetime is 60 seconds.

Question: How many bits would you include in the AdvertisedWindow and SequenceNum fields of your protocol header?

2 (self-practice, no need to submit). Read the man page or other documentation for the Unix/Windows utility netstat. Use netstat to display the current IP routing table on your host. Explain the purpose of each entry. What is the practical minimum number of entries?

3 (self-practice, no need to submit). Use the Windows tracert to determine how many hops it is from your host to other hosts in the Internet baidu.com. How many routers do you traverse just to get out of your local site?

Homework 6:

Chapter 6: 19