

作业布置时间：2023-10-21

作业提交时间：2023-11-01

1. 教材（第六版）第二章课后 P21. Suppose that your department has a local DNS server for all computers in the department. You are an ordinary user (i.e., not a network/system administrator). Can you determine if an external Web site was likely accessed from a computer in your department a couple of seconds ago? Explain.

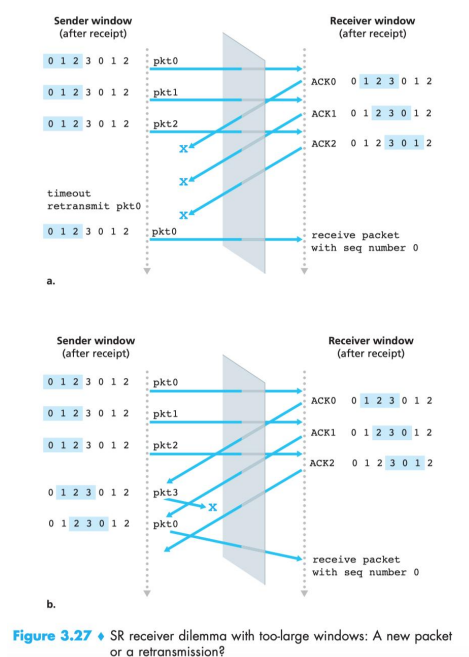
2. Let's examine the bytes captured by Wireshark, which represent the initial portion of the TCP segment header.

**dd 47 00 15 3b d1 39 ae 00 00 00 00 ... ..**

a. Can we determine whether this segment was sent from the client to the server or from the server to the client? Please provide a justification and an explanation to support your answer.

b. What kind of application layer data could potentially be transmitted within this segment?

3. Consider the GBN and SR protocols. Suppose the sequence number space is of size  $k$ . What is the largest allowable sender window that will avoid the occurrence of problems such as that in Figure 3.27 for each of these protocols? (第六版第三章课后 P23)



4. Answer true or false to the following questions and briefly justify your answer: (第六版第三章课后 P24)

a. With the SR protocol, it is possible for the sender to receive an ACK for a packet that falls outside of its current window.

b. With GBN, it is possible for the sender to receive an ACK for a packet that falls outside of its current window.

c. The alternating-bit protocol is the same as the SR protocol with a sender and receiver window size of 1.

d. The alternating-bit protocol is the same as the GBN protocol with a sender and receiver window size of 1.