CISC 856 Homework: Stream Control Transmission Protol

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1. Answer questions 4-7, 9-15 from Chapter 16 in textbook

    Notes: a> In Question 11e, 5 should be 8.

               b> In Question 15: assume client closes the association

2. Take the online quiz, and submit the results to Prof. Paul Amer at amer@cis.udel.edu

3. SACK chunk

Type = 3	Flags = 0	Length = variable
Cum Ack=879		
rwnd = 10000		
Number of gap ACK blocks = 2		Number of Dup = 2
Gap ACK block 1 start= 3		Gap ACK1 block end = 6
Gap ACK block 2 start = 8		Gap ACK block 2 end = 10
Dulicate TSN = 883		
Duplicate TSN = 889		

    Show the content of receiving queue.

    Can there be a Gap ACK block starting from 1? Why?

4. What is the difference between Stream Sequence Number (SSN) and Transport Sequence Number (TSN)? Why is there no SSN or Stream ID necessary in the SACK chunk?

5. Download the wiresharp pcap file at: http://www.cis.udel.edu/~amer/856/sctp.12f.pcap. Answer the following questions by using the downloaded pcap file.

    a>list the packets related to association establishment and termination.

    b> What are the INIT tags, V-Tags, state Cookie values for these SCTP-PDUs, if they have.

    c> What is the relationship between INIT-ACK and COOKIE-ECHO? Why does the relationship exist?

    d> How does wireshark know that the protocol runing over IP is SCTP?

    e> Look at the last 4 SCTP-PDUs. How do the TSN numbers change?

    f> What is the purpose of the SID field?

    g> Do those 4 SCTP-PDUs belong to the same stream? Defend your answer.

    h> For each data chunk in the last 4 SCTP-PDUs, is the chunk ordered or unordered?

    i> How will the receiver treat to unordered data chunks when there are also ordered data chunks?