Lecture 22 (4/9) Self-Test

Due Apr 23 at 5pm **Points** 1 **Questions** 10
Available Apr 9 at 5pm - Jun 1 at 11:59pm about 2 months **Time Limit** None

Score for this survey: **1** out of 1
Submitted Apr 16 at 1:23pm
This attempt took 2 minutes.

Question 1

Consider host A communicating with host B over a network path that has an RTT of 100ms and a bandwidth of 100Gbps. Assume an MSS of 125bytes. According to the TCP equation, what is the drop rate required to achieve a rate of 100Gbps?

- 1.5 x 10^-14
- 1.5 x 10^-10
- 1.5 x 10^-7
- 1.5 x 10^-4

ou Answered

1.5 x 10^-14

Question 2

Continuing with the above question, roughly how many hours would pass between packet drops?

- 1.85
- ou Answered 18.5
- 185

185

Question 3

Which of the following would ameliorate the problem highlighted in the above question?

- Use a more aggressive multiplicative decrease factor (e.g., on a loss, decrease CWND by 3x instead of 2x)
- ou Answered Use RCP
- ou Answered Use a larger Initial CWND
- ou Answered Past a certain threshold CWND, use a more aggressive additive increase rule (e.g., increase CWND by +10xMSS after a period of no loss)

Use RCP

Past a certain threshold CWND, use a more aggressive additive increase rule ...

Question 4

Consider two TCP connections A and B, with the following properties:

- Connection A: MSS = 1000bytes, RTT = 100msec, drop probability = 1%
- Connection B: MSS = 2000bytes, RTT = 500msec, drop probability = 4%

What is the ratio of A's throughput to B's?

- 25
- 5
- 1
- 1/5

ou Answered

5

Question 5

Using Fair Queuing at routers eliminates the need for dynamic rate adjustment at senders.

ou Answered

- (•) True
- ( ) False

False

Question 6

Max-min fairness means that all flows get an equal bandwidth allocation

ou Answered

- (•) True
- ( ) False

False

Question 7

The use of ECN can:

ou Answered

ou Answered

ou Answered

- [x] Improve fairness
- [x] Reduce queuing delay
- [x] Increase packet loss
- [ ] Reduce packet loss

reduce queuing delay and reduce packet loss

Question 8

If RCP were universally deployed, there would be no point in implementing ECN.

ou Answered

- (•) True
- ( ) False

True.

Question 9

With RCP, hosts can no longer cheat (to obtain more than their fair share of bandwidth)

ou Answered

- (•) True
- ( ) False

False. RCP just tells the sender what rate it should send at. It doesn't enforce that senders only send at that rate.

Question 10

With TCP, short flows can suffer unduly long transfer times. Using ECN would fix this.

ou Answered

- (•) True
- ( ) False

False.

Survey Score: **1** out of 1