Lecture 20 (4/2) Self-Test

Due Apr 16 at 5pm **Points** 1 **Questions** 10
Available after Apr 2 at 5pm **Time Limit** None

Score for this survey: **1** out of 1
Submitted Apr 4 at 8:58pm
This attempt took 3 minutes.

Question 1

Which of the following drive bandwidth allocations to fairness (in the simple model presented in lecture)?

ou Answered

- (•) AIMD
- ( ) MIMD
- ( ) AIAD
- ( ) MIAD

AIMD

Question 2

Which of the following drive bandwidth allocations to maximal unfairness (in the simple model presented in lecture)?

AIMD

MIMD

AIAD

ou Answered MIAD

MIAD

Question 3

Which of the following mostly preserve the initial unfairness of bandwidth allocations (in the simple model presented in lecture)?

MIAD

AIMD

ou Answered AIAD

ou Answered MIMD

AIAD and MIMD

Question 4

To a sender in a TCP transfer, which of the following best indicates that the network is not congested?

- Receiving the 3rd duplicate ACK
- Receiving a cumulative ACK for new data
- A timeout

ou Answered

Receiving a cumulative ACK for new data

Question 5

Congestion control can be implemented purely at end-hosts, without any special support from routers.

- True
- False

ou Answered

True. Not only is this possible, but it's the common case today!

Question 6

In practice, no one uses delay-based congestion control.

ou Answered

- (•) True
- ( ) False

False. BBR is used by Google and is the most recent example.

Question 7

The idea of using pricing to control congestion is best described by which of the following:

- ( ) Users do not have to pay for traffic sent during times of congestion, because their performance was bad

ou Answered

- (•) Users pay more if they send traffic during times of high congestion
- ( ) Users must request a fixed allocation of bandwidth and pay based on the size of their allocation

Users pay more if they send traffic during times of high congestion

Question 8

In what ways can routers assist the process of congestion control.

- [ ] They can inform end-hosts about the current level of congestion
- [ ] They can choose to not drop packets
- [ ] They can suggest a good starting rate to end-hosts

ou Answered

- [x] All of the above

They can inform end-hosts about the current level of congestion

They can suggest a good starting rate to end-hosts

Question 9

I want to use a loss-based congestion control protocol but I would like to avoid having packets experience high queueing delays. My friend has a suggestion: rather than have routers wait until their queues are full to drop packets, she suggests modifying routers such that a router will, with some probability *p*, drop a packet when its queue exceeds some threshold *T (T < queue size)*. The parameters *p* and *T* can be adjusted to control the delay my packets will incur. Could this idea have the desired effect?

- [ ] Yes

ou Answered

- [x] No

Yes! This is in fact the idea behind "Random Early Detection" (RED). **https://en.wikipedia.org/wiki/Random_early_detection (https://en.wikipedia.org/wiki/Random_early_detection)**

Question 10

Congestion collapse was solved by Berkeley researchers!

ou Answered

- (•) True
- ( ) False

True

Survey Score: **1** out of 1