Lecture 20 (4/2) Self-Test

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

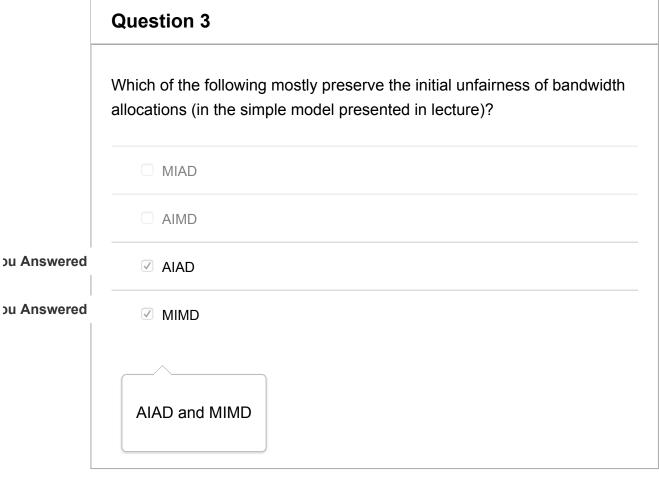
Score for this survey: **1** out of 1 Submitted Apr 4 at 8:58pm This attempt took 3 minutes.

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

Question 2

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

	O AIMD	
	O MIMD	
	O AIAD	
ou Answered	MIAD	
	MIAD	
r		
ı		



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			
ou Answered	Receiving a cumulative ACK for new data			
	○ A timeout			
	Receiving a cumulative ACK for new data			
	Question 5			
	Congestion control can be implemented purely at end-hosts, without any special support from routers.			
ou Answered	• True			
	○ False			
	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.

ou Answered

	☐ 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	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?

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YAG

ou Answered

No

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

Question 10		
Congestion collapse was solved by Berkeley researchers!		
• True		
○ False		
True		
	Congestion collapse was solved by Berkeley researchers! True False	

Survey Score: 1 out of 1