

EE450 Introduction to Computer Networks - Fall 2019 - HW 5

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October 8, 2019

1 Reading Assignment:

Chapter 2

2 Problems to be solved:

- 2.1 Chapter 2, Page 171: R11 (15 points) Why do HTTP, SMTP, and POP3 run on top of TCP rather than UDP?**
- 2.2 Chapter 2, Page 172: R19 (15 points) Is it possible for an organization's Web server and mail server to have exactly the same alias for a hostname (for example, foo.com)? What would be the type for the RR that contains the hostname of the mail server?**
- 2.3 Chapter 2, Page 172: R21 (15 points) In BitTorrent, suppose Alice provides chunks to Bob throughout a 30-second interval. Will Bob necessarily return the favor and provide chunks to Alice in this same interval? Why or why not?**
- 2.4 Chapter 2, Page 172: R25 (15 points) Besides network related considerations such as delay, loss, and bandwidth performance, there are other important factors that go into designing a CDN server selection strategy. What are they?**
- 2.5 5. Chapter 2, Page 175: P7 (20 points)**
- 2.6 6. Chapter 2, Page 178: P20 (20 points) Suppose you can access the caches in the local DNS servers of your department. Can you propose a way to roughly determine the Web servers (outside your department) that are most popular among the users in your department? Explain.**