CS 194   S. Shenker
Spring 2005   I. Stoica

Homework Assignment #4— Due: May 4, 2005 @ 11:59:59pm

Total: 10 points

1. (**2 points**) Explain the difference between NFS and Coda file name spaces. State an advantage of the NFS name space, and one advantage of the Coda name space.

2. (**2 points**) Consider a distributed file system in which a client issues R reads and W writes on a file of size S bytes. Assume that the network load generated by a write or a read operation is m bytes, and that the writes do not increase the file size. Under what condition, the remote access model generates less network load than the upload/download model? (*Note:* the condition should be a function of m, S, R, and W.)

3. (**2 points**) In its design, Chord decouples correctness from efficiency. Explain what aspect of Chord design ensures correctness, and what aspect of Chord design ensures efficiency.

4. (**1 point**) Describe how web resources are accessed in Akamai?

5. (**3 points**) How could OpenDHT be used to support end-host multicast? You can have the clients forward O(log n) packets (where n is the number of clients), but how can the clients use OpenDHT to coordinate the forwarding of packets.