

EECS 345: Homework 1

Introduction to Distributed Systems

Winter 2008

Important Dates

Out: Monday February 4, 2008.

Due: Tuesday February 12, 2008.

Submitting your homework: Please use the course submission site. There is a link to it from the class site.
Submit only ASCII text files.

Problems

1. Give an example of where distribution and replication transparency failed in Grapevine.
2. In a structured overlay network, messages are routed according to the topology of the overlay. What is an important disadvantage of this approach?
3. What dominates the cost of process migration and how does the Sprite implementation (and Accent's) deal with that?
4. Discuss one issue that limits the deployment of IP multicast and explain how this is solved/avoided by overlay multicast approaches.
5. High-level name servers in DNS, that is, name servers implementing nodes in the DNS name space that are close to the root, generally do not support recursive name resolution. Can we expect much performance improvement if they did?