

Exercise No. 6
Peer-To-Peer Networks
Summer 2010

Exercise 1 *Principle of Multiple Choice*

Implement a simulation for the principle of multiple choice in a programming language of your own choice.

Simulate the insertion of 32,768 peers into the hash space and collect statistical data:

1. What interval sizes do occur?
2. How often do those sizes occur?

Run the simulation 50 times each for $c \in \{1, \dots, 32\}$ and approximate

3. the probability for creating an interval with the different sizes, and
4. the variance of the interval size.