

Exercise No. 8
Algorithms and Methods for Distributed Storage
Winter 2008/2009

Exercise 12 *Balls into bins*

Assume, $cn \ln n$ balls are randomly placed into n bins. Prove the following statements:

1. The probability that any bin remains empty is at most $O(n^{-c+1})$.
2. With high probability, no bin receives more than $k \log n$ balls for some $k > c$.