

Exercise No. 4
Peer-To-Peer Networks
Winter 2015

Exercise 1 *Chernoff*

Having m data blocks, we pass them through a hash function, resulting in $2m$ data blocks. Afterwards, they are distributed randomly among n peers ($n \gg m$) with a probability of failure p .

- What is the expected number of failed blocks?
- The data can be recovered if we have at least m data blocks. What is the probability that we can recover the data after it has been distributed?