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Thesis “Implementation Of A Peer-to-Peer Reputation System”

We are developing a peer-to-peer (p2p) distributed storage system called *Kangoo*. While many components have successfully been implemented already, Kangoo can still be exploited by selfish peers which do not contribute any resources. In order to cope with this problem, we have designed (in theory) a mechanism dubbed *Havelaar* which rewards peers which do not only download but which also upload.

In this thesis, you will implement (part of) the Havelaar reputation system and integrate it into Kangoo. If time permits, or if you decide to collaborate with a friend on the thesis (e.g., in the form of a lab), the Havelaar reputation system can even be extended by a BitTorrent-like tit-for-tat distribution scheme.



Figure 1: Logo of the Kangoo Distributed Storage System.

This project provides you with the opportunity of becoming familiar with the architecture and code of an exciting P2P system. Moreover, besides a major implementation part, you are likely to tackle some algorithmic / theoretic issues as well.

You will be supervised not only by Stefan Schmid, but also by the two developers of Kangoo. However, independent working is expected.

Skills Good programming skills, interest in peer-to-peer computing, basic “CS theory” background, independent working.

Contacts

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