

that has to be moved, and consequently also the time it takes to reorganize.

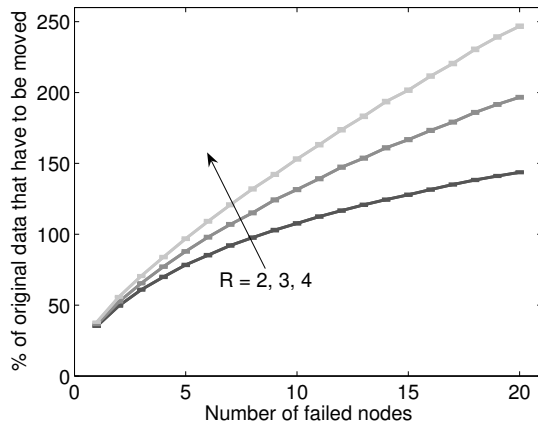


Fig. 7. Relative amount of data that has to be moved during reorganization

V. CONCLUSION

In this paper, we presented and evaluated an architecture for a virtual mobile subscriber database based on a one-hop DHT. The requirements and design issues influencing the system layout are described, and a basic overview on the developed architecture is presented. It is shown that the design caters to the necessities of the application. It provides a trade-off between the system sojourn time on one hand and resource consumption on individual nodes on the other.

A performance evaluation model was presented, the results derived from it giving some insights into the basic workings of the lookup system. The underlying tradeoff of less storage space per node against longer search times and a higher load

on the system is illustrated. As future work, measurement results from an implemented prototype will be used to verify the analysis, as well as simulations. More emphasis will be placed on the system behaviour during transient phases, e.g., reorganization times.

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