



Information-theoretically Secure Regenerating Codes for Distributed Storage

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(Submitted on 26 Jul 2011)

Regenerating codes are a class of codes for distributed storage networks that provide reliability and availability of data, and also perform efficient node repair. Another important aspect of a distributed storage network is its security. In this paper, we consider a threat model where an eavesdropper may gain access to the data stored in a subset of the storage nodes, and possibly also, to the data downloaded during repair of some nodes. We provide explicit constructions of regenerating codes that achieve information-theoretic secrecy capacity in this setting.

Comments: Globecom 2011

Subjects: **Information Theory (cs.IT)**; Distributed, Parallel, and Cluster Computing (cs.DC); Networking and Internet Architecture (cs.NI)

Cite as: [arXiv:1107.5279 \[cs.IT\]](#)
(or [arXiv:1107.5279v1 \[cs.IT\]](#) for this version)

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