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Experimental Analysis of Secured Distributed Cloud Data Storage

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Abstract

Benefits of cloud data storage are often go with risks of confidentiality, integrity, and availability related with the loss of information, denial of access for a long time, information leakage, conspiracy and technical failures. In this article, we provide an experimental analysis of reliable, scalable, and confidential distributed data storage based on Residue Number System (RNS). We analyze it using real cloud providers and considering data redundancy, speed of data encoding, and decoding to cope with different user preferences. The analysis shows that the proposed storage increases safety and reliability of traditional approaches, and reduces an overhead of using data storage by appropriate selection of RNS parameters.

Keywords: *Multi'cloud, Security, Safety, Reliability, Residue, number, system*

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