Abstract

Cloud Computing is a novel computing paradigm which is recognized as an arbitrary to traditional reference technology right to its intrinsic resource-sharing and low-maintenance characteristics. One of the virtually fundamental services offered by CSPs (Cloud Service Providers) is cloud storage. To increasing reliability and efficiency of data storage in the cloud the technique used is replication but its drawback is data loss and higher space consumption. One way to increase the data reliability and reducing the storage space in the cloud is Erasure Coding. In Erasure Coding, the data is fragmented and further encoded mutually into data pieces and stored in different locations. The arbitrary benefit of the Erasure Coding is that the corrupted data can be absolutely reconstructed into separate information. Erasure code comprises of two coding techniques regenerating code and locally repairable code. Regenerating Code is used for balancing storage space and its bandwidth. The Locally repairable code is the technique used to overcome the Disk I/O overhead in the Cloud Storage. But applying erasure code in cloud storage increases access time. So this paper explored the storage space efficiency of erasure codes and the repair traffic efficiency of replication. As a
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new area of research in replication and erasure coding technique can be combined using for data storage in the cloud for enhancing its overall efficiency.

References


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Index Terms
Keywords

Erasure coding, Cloud storage, Regenerating codes, Locally repairable codes.