Abstract

Nowadays Dynamic Proof of Storage (DeyPoS) could be a helpful cryptographic primitive that permits a user to survey the integrity of outsourced files and to efficiently update the files during a cloud server. Though researchers have planned several DeyPoS schemes in single-user environments, the matter in multi-user environments has not been investigated sufficiently. A sensible multi-user cloud storage system requires the secure client-side cross-user deduplication technique, that permits a user to skip the uploading method and obtain the possession of the files now, once different house owners of identical files have uploaded them to the cloud server. To the best of our data, none of the fundamental DeyPoS will support this system. During this paper, we tend to introduce the construct of deduplicatable dynamic proof of storage and propose an economical creation referred to as DeyPoS, to realize dynamic DeyPoS and secure cross-user deduplication, at the same time. Considering the challenges of structure diversity and personal tag generation, we tend to exploit a novel tool referred to as Homo morphic documented Tree (HAT). We tend to prove the protection of our construction, and therefore the theoretical analysis and experimental results show that our
construction is economical in observe.

References


Index Terms

Computer Science Information Sciences

Keywords

Deduplication, Cloud Storage, encryption, Proof of Ownership, Revocation