Abstract

Cloud-based outsourced storage relieves the client's load of storage management and preservation by providing an equivalently flexible, inexpensive, location-independent platform. As clients no longer have physical control of data, outsourced data integrity checking is of crucial importance in cloud storage. It allows the clients to verify data intactness and correctness without downloading the entire data. As the verification is to be done at client end, the integrity checking protocol must be efficient to save client's time. Another aspect of the protocol is flexibility, which improves the quality of integrity checking by allowing user specific block partition size. Moreover in case of company oriented scenario, maintaining log records of each verification request can help in security analysis. Taking these three points into consideration, we have proposed the flexible, automated and log based RDPC model as: Auto ID-RDPC model for single-cloud storage. The proposed model is based on bilinear pairings and RDPC technique. The approach eliminates certification management with the help of Identity management and additionally provides log management towards data integrity. The model makes client free from initiating verification request and keeps track of previous records which reduces client's time. The principle concept here is to make data integrity checking a painless job for any client. Our results demonstrate the effectiveness of our approach.
References

Automated Identity based Approach to Verify Data Possession in Public Cloud


Index Terms

Computer Science

Distributed Systems

Keywords

Remote data Possession Checking; Identity Based Management; MD5 Technique;