

SECURE DATA AUDITING WITH PROXY CODE REGENERATION IN CLOUD DATA DEDUPLICATION ENVIRONMENT

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ABSTRACT

In last few decades cloud computing technology is widely developed. At the user's end, outsourcing of data becoming an attractive trend to release heavy management of data. There are certain problems have been introduced during existing system analysis. Among these entire problem we proposed an approach which gives the relief for the problem of data duplication on cloud server as well as integrity check of original data. Cloud & users unaware of the type of data that previously stored on cloud server & this is the main reason behind data deduplication check. In our system there are two types of secure modules have been used namely, SecCloud & SecCloud+. Data tags are generated at the time of data uploading on cloud for duplication check. For secured data deduplication on encrypted data SecCloud+ is implemented. Apart from this work system provide the data recovery by contributing new data recovery concept known as, "erasure coding". With experimental setup our system works efficient in terms of storage and security parameters. It reduces the cloud server bandwidth & also saves the storage space.

Keyword: - Proof of retrievability, proof of ownership, deduplication, cloud storage

1. INTRODUCTION

Cloud storage is the model enterprise network in which data is stored in virtualized pools of storage which is hosted by third parties. There are different types of facilities provided by the cloud such as, less expensive services, simplified convenience etc. From the study of existing system, it is aimed that 40 trillion GB data is expected to store & utilized on cloud server [4]. Many services provided by the cloud to the third parties which have some limitations such as, data duplication, integrity verification, problem during data transmission etc. There are main two problems in cloud computing such as, data deduplication and data integrity check due to rapid growth of outsourcing data to the cloud. As per the analysis of J. Li, 75% digital data is duplicated copies. Data deduplication introduced a new technology namely, data deduplication which means there is need of reduction of duplicate data from cloud server. De-duplication leads to remove important threats from the storage system [2][3]. In proposed deduplication approach cloud notify to their users or clients if similar data is available on it. This approach is static which causes another problem of data integrity on cloud server. There are many cases in which data integrity check problem is visualized. Proposed system works on the problem of data deduplication & data integrity check. SecCloud and SecCloud+ have been represented in this work. SecCloud is the comprehensive language based approach implemented for data integrity auditing similar to MapReduce cloud. It suggest user to create tag before uploading it on cloud. It also provides fined-grained functionality & also enables secured de-duplication approach in cloud storage. It mainly works to preserves the leakages of side channel information. The user generated tags are preserved as hash value at the auditor's end. Proof of relationship is designed between cloud server & end user's. It verifies that the client owns claimed file exactly. PoW is conducted at the time of file uploading procedure. Cloud server works as authenticator in