Preserving Shared Data Integrity with Public Auditing Mechanism In Cloud

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ABSTRACT

In the current information technology scenario cloud storage is one of the best database platforms which provide the high security to stored data, and also decrease the burden of local data storage and maintenance. Main problem in cloud computing was the problem of data security and data access by unauthorized users. Storage and sharing of data in cloud can be changed simply by user. To overcome this data modification idea by cloud signature is provided to each individual who access data in cloud once the data modified by the user on block the user must ensure that the signature is provided on specific block when user get revoked from accessing cloud the existing user of that cloud must resign data signed by the revoked user to resigned data user must download the entire data and signed it. This difficulty is rectified with novel public auditing mechanism.

Keyword: - *Public Auditing, Cloud Computing, user revocation, data recovery.*

1. INTRODUCTION

Cloud storage services, is common place for cloud shared across multiple users and cloud data to be stored. Public auditing for shared data, while preserving identity privacy remains to be an open ultimate test. When we share data among various users, it encourages cloud storage [1]. The way to preserve identity privacy from the TPA, because the identities of signers on shared data may point out that a desired user in the group is a higher valuable target than others, which is one of the sign ificant problem introduced during public auditing for shared data in the cloud. We apply our project so as to accentuate the efficiency of user revocation in the cloud and provides highly developed scheme for cloud data signatures and thus avoiding unnecessary loss of time of the user to sign these data blocks again and again. Digital signature is a scheme use for demonstrating the authenticity of a digital message or documents which are uploaded by the valid or authorized user. To protect the integrity of knowledge within the cloud and it's best to introduce a 3rd party auditor (TPA) to perform auditing tasks on behalf of users. Such as third party auditor enjoys computation/communication resources that users might not possess. Previous information possession (PDP), 1st planned by, permits a booster to perform public auditing on the integrity (of information of knowledge of information) keeps in Associate in the untrusted server while not retrieving the complete data [3]. Resultant work centered on however dynamic information and information privacy may be supported throughout the general public auditing method. However, most of the previous works solely specialize in auditing the integrity of non-public information.A privacy-preserving public auditing mechanism for shared information in Associate in the untrusted cloud, so the identity of the signer on every block in shared information isn't disclosed to the third party auditor (TPA) throughout Associate in auditing task [4]. By protective identity privacy, the TPA cannot comprehend that user within the cluster or that block in shared information may be a higher valuable target than others. info used for verification are computed with ring signatures; as a result, the dimensions of verification info, further b ecause the time it takes to audit with it, are linearly increasing the number of users in a very cluster. to create matters worse, once adding new users to a bunch, all the prevailing verification info can be re-computed if ring signatures are used, introducing a big computation burden to any or all users. To propose a replacement privacy-

preserving mechanism to audit information keeps in a very untrusted cloud and shared among an oversized variety of users in a cluster. We tend to make the most of the cluster signatures to construct homomorphic authenticators, so the third party auditor is ready to verify the integrity of shared information while not retrieving the complete information, however cannot reveal the identities of signers on all blocks in shared information [5]. Meanwhile, the dimensions of verification info, further because the time it takes to audit with it, aren't affected once the quantity of users sharing the info will increase.

2. PROBLEM STATEMENT

Problem of efficient and secure public data authorization inspection for shared data this schema still

Not secure against the data leakage of cloud storage server from unauthorized attacker and revoked

Group user revocation in cloud storage system.

3. RELATED WORK

Boyang Wang, Baochun Li, and Hui Li with data storage and sharing services in the cloud, users can easily modify and share data as a group. To ensure shared data integrity can be verified publicly, users in the group need to compute signatures on all the blocks in shared data. Different blocks in shared data are generally signed by different users due to data modifications performed by different users. For security reasons, once a user is revoked from the group, the blocks which were previously signed by this revoked user must be re-signed by an existing user. The straightforward method, which allows an existing user to download the corresponding part of shared data and re-sign it during user revocation, is inefficient due to the large size of shared data in the cloud. In this paper, we propose a novel public auditing mechanism for the integrity of shared data with efficient user revocation in mind. By utilizing the idea of proxy re-signatures, we allow the cloud to re-sign blocks on behalf of existing users during user revocation, so that existing users do not need to download and re-sign blocks by themselves. In addition, a public verifier is always able to audit the integrity of shared data without retrieving the entire data from the cloud, even if some part of shared data has been re-signed by the cloud. Moreover, our mechanism is able to support batch auditing by verifying multiple auditing tasks simultaneously. Experimental results show that our mechanism can significantly improve the efficiency of user revocation.[1]

4. PROPOSED SYSTEM

The deficiency of these schemes motivates us to explore how to design an efficient and reliable scheme, when achieving secure user revocation. We propose a construction which not only supports group data encryption during the data processing, but also realizes efficient and secure user revocation. Idea is to apply vector commitment technique over the database. Then we used the Asymmetric Group Key Agreement (AGKA) and group signatures to support decrypted data base modified among group users and effective group user revocation respectively. The group user uses the AGKA protocol used for encrypt/decrypt the share database. The group signature will prevent the problem of cloud and revoked group users, in the user revocation phase where the data owner will take part and the cloud could not revoke the data that last modified by the revoked user

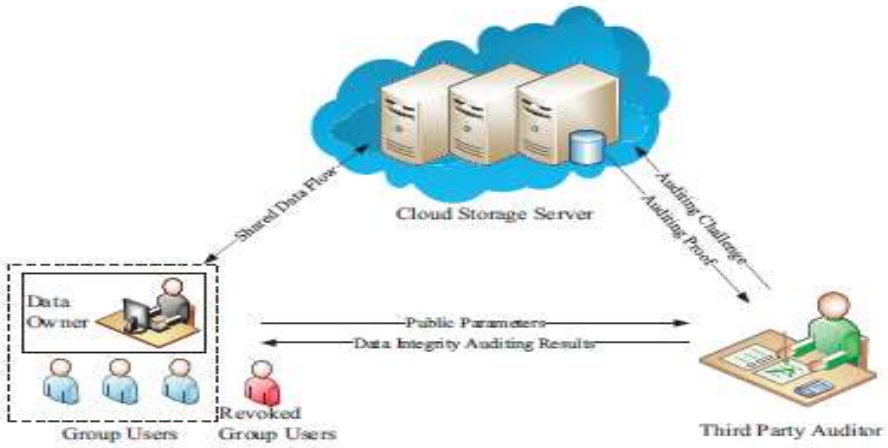
***CONTRIBUTION*:**

We will explore on the secure and efficient shared data public auditing with some new featured with data backup and storage as there ever increasing data storage on cloud there is a need to the duplicated files is removed and available more storage space hence we will be using deduplication algorithm for eliminating this problem

6. IMPLEMENTATION DETAIL

A. System Overview

The proposed system shows the following architectural view



. *User module can perform following operation.*

1) Registration

In this each user register his user details for using files. Only registered user can able to login and proceed in cloud server

2) File Upload

In this user upload a block of encryption files in the cloud by using his secret key this ensure the files to be protected from unauthorized user.

3) Download

In that module download the file using his secret key to decrypt the downloaded data of blocked user and verify the data with encryption .This ensure the files to be protected from unauthorized user.

4) Reupload

This allow the user to need to reupload the downloaded files of blocked user into cloud server with resign the files(i.e.) the files is uploaded with new signature protected the data from unauthorized user.

5) Update/delete file

6) Key generation: generate key by applying key generation algorithm.

2] Auditor module:

File Verification

The public verifier can audit the integrity of shared data without need to retrieving the entire data from the cloud , Sometimes if some blocks in shared data have been re-signed by the cloud

3] Admin module:

View Files:

In this public auditor view the all details of upload, download, blocked user, reupload.

Block User:

In this admin block the unauthorized user account to protect the integrity of shared data

7. ALGORITHM

Construction of panda:

Panda include six algorithms: key_gen, re_key, sign, re_sign, proof_gen, proof_verify.

key_gen: it is used for key generation like private key and public key by each client in this process.

re_key: re-sign key of each pair of client is evaluated

re_sign – revoked user block resigning by this key.

proof_gen -- cloud produced proof data under the challenge of public verifier

proof_verify -- conform the correctness of a proof by the cloud.

7. CONCLUSIONS

Finally Conclude that how to securely audit public data and how to put security public data when share data. Also, To Proposed a new public auditing mechanism for shared data with efficient user revocation in the cloud. When a user in the group is revoked, the semi-trusted cloud to re-sign blocks that were signed by the revoked user with proxy re-signatures. Experimental results show that the cloud can improve the efficiency of user revocation, and existing users in the group can save a significant amount of computation and communication resources during user revocation

8. REFERENCES

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