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An Attribute Based Secure Data Self-Destructing and Time Server

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Abstract: Recent years all are using the cloud server. The reason of cloud server easy to use and having the security. Once we upload the file store to the cloud server then that files access the world wide and any time. Here access the cloud server from the many users so have changes to unauthorized user access the other users file. So we are providing the file key for storing file in cloud server. When user want the file from the cloud server that time must give the file keyset. In existing system user like to share the file into friends circle that time upload the file into cloud server. Once that friends are download the files from the cloud server. Then that files store in permanently at cloud server. This main disadvantage of this unauthorized user access the file and chances to miss use the files. So this is big challenge to store files with secure in cloud server. So we are learning in this paper how to overcome this problem and file store in secure. In proposed when user want to share the file into friends circle via cloud server that time give the key for file download. And here additionally user allocate the particular time interval for the access the files from the cloud server. When friends want to access the file. That time asking to file user. File user send the file key and also time interval. That time only friends are access the file. If before and after the time interval that file can't access from the friends circle. This is mainly used for the secure the file in cloud server.

I. INTRODUCTION

Cloud computing is considered as the next step in the evolution of on-demand information technology which combines a set of existing and new techniques from research areas such as service-oriented architectures (SOA) and virtualization. With the rapid development of versatile cloud computing technology and services, it is routine for users to leverage cloud storage services to share data with others in a friend circle, e.g., Dropbox, Google Drive and AliCloud [1]. The shared data in cloud servers, however, usually contains users' sensitive information (e.g., personal profile, financial data, health records, etc.) and needs to be well protected [2]. As the ownership of the data is separated from the administration of them [3], the cloud servers may migrate users' data to other cloud servers in outsourcing or share them in cloud searching [4]. Therefore, it becomes a big challenge to protect the privacy of those shared data in cloud, especially in cross-cloud and big data environment [5]. In order to meet this challenge, it is necessary to design a comprehensive solution to support user-defined authorization period and to provide fine-grained access control during this period. The shared data should be self-destroyed after the user-defined expiration time.

II. LITERATURE SURVEY

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| PAPER NAME | AUTHOR NAME | ALGORITHM USED | DISADVANTAGE |
|--|---|----------------------------|--|
| Attribute-Based Encryption for Fine-Grained Access Control of Encrypted Data | V. Goyal, O. Pandey, A. Sahai, | Randomized algorithm | <p>Disadvantage of encrypting data is that it severely limits the ability of users to selectively share their encrypted data at a fine-grained level. Suppose a particular user wants to grant decryption access to a party to all of its Internet traffic logs for all entries on a particular range of dates that had a source IP address from a particular subnet.</p> |
| “Revisiting the Security Model for Timed-Release Encryption with Pre-Open Capability | J. H. Cheon, N. Hopper, Y. Kim, and I. Osipkov, | Polynomial time algorithms | <p>Many legal systems require that classified governmental information is disclosed after a certain period of time. This can be achieved by using a TRE-PC scheme, through which the classified information can be encrypted by the public key of a special agent which is responsible for disclosing classified information. Note that no original classified information is required to be stored, and in the case that the information needs to be prematurely released, a pre-open key can be sent to the special agent which is able to decrypt the encrypted classified information.</p> |

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| <p>A Secure Cipher text Self-Destruction Scheme with Attribute-Based Encryption</p> | <p>J. Xiong, Z. Yao, J. Ma, X. Liu</p> | <p>symmetric encryption algorithms</p> | <p>there are security problems in the schemes of. Besides, these decentralized solutions adopt the symmetric encryption algorithms, which will bring complex key management and distribution problems. To solve these problems, an improved system called SafeVanish is proposed [</p> |
| <p>SoK: Secure Data Deletion</p> | <p>J. Reardon, D. Basin,</p> | <p>cryptographic scheme</p> | <p>There is a wealth of adversarial bounds corresponding to a spectrum of non-equivalent computational hardness problems, so others may benefit from dividing this spectrum further. However, for all the approaches discussed in this paper, it suffices to distinguish between adversaries who can break cryptographic standards such as AES and those who cannot.</p> |
| <p>SeDas: SELF - DESTRUCTION DATA SYSTEM FOR DISTRIBUTED OBJECT BASED ACTIVE STORAGE FRAMEWORK</p> | <p>L. Zeng, S. Chen, Q. Wei, and D. Feng</p> | <p>Shamir Secret Sharing Algorithm</p> | <p>There are multiple storage services for a user to store data. Meanwhile, to avoid the problem produced by the centralized “trusted” third party, the responsibility of SeDas is to protect the user key and provide the function of self-destructing data</p> |

III. CONCLUSIONS

With the rapid development of versatile cloud services, a lot of new challenges have emerged. One of the most important problems is how to securely delete the outsourced data stored in the cloud servers. In this paper, we proposed a novel KP-TSABE scheme

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which is able to achieve the time- specified ciphertext in order to solve these problems by implementing flexible fine-grained access control during the authorization period and time-controllable self-destruction after expiration to the shared and outsourced data in cloud computing. We also gave a system model and a security model for the KP-TSABE scheme. Furthermore, we proved that KP-TSABE is secure under the standard model with the decision 1-Expanded BDHI assumption. The comprehensive analysis indicates that the proposed KP-TSABE scheme is superior to other existing schemes.

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