

Survey on Efficient Keyword Search Scheme over Encrypted Data on Mobile Cloud Storage

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Abstract -- Mobile Cloud Storage is the cloud resource accessed by mobile units. Mobile devices provide mobility services which is the most unavoidable reason for a user. A user generally dislikes working on sticky place. Thus mobile devices play an unavoidable role in the part of user's day today life. Though mobile phones has many advantages it also has some various challenges in it such as battery consumption, network traffic etc. Designing of module which should be appropriate for handling various challenges will be solution for all users. Security scheme which has fewer complexes in means of time and usability module which supports multi keyword will be better one for accessing the Mobile Cloud Storage.

Index Terms -- Mobile cloud storage, mobile units, time complexity

I. INTRODUCTION

Clouds are huge storage of resources and services which can be accessed anytime anywhere. Cloud Storage is a e-data storage model which can be accessed from both connected and distributed resources over a network. MCS-Mobile Cloud storage ensures services such as storage and retrieval of data or files to the mobile users through wireless communication. MCS is quiet popular online storage service as it provides the file share option without affecting the resources of the mobile units and providing high availability of data.

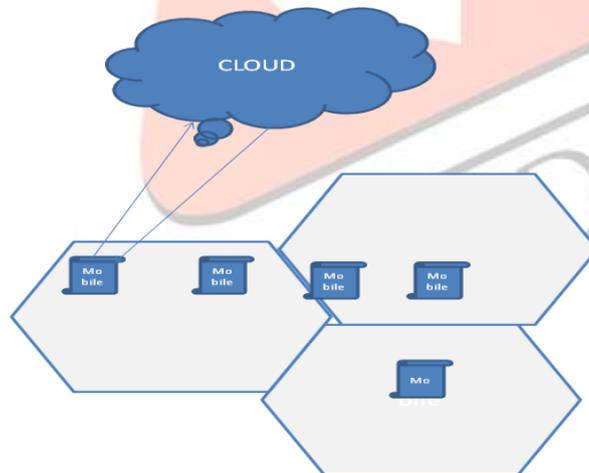


Fig 1 Accessing of cloud resource by mobile units

The data privacy risk is the most important in both cloud and mobile cloud storage system, so data is encrypted and then it is outsourced on to cloud by the data owner, and retrieves data by secured search mechanism.

Mobile Cloud Storage imported some traditional data encryption methods. But the traditional encryption methods incurred new challenges, in consideration of limited computing power, battery capacities, accessing and data sharing approaches through wireless communication. So the design of mobile cloud storage scheme should be efficient in both network traffic and energy consumption with security requirements through wireless communication.

II. LITERATURE REVIEW

Mobile electronics devices such as mobiles phones, Personal Digital assistants are power backed from batteries which are liable to size limitation and hence fore the capacity. Best energy management needs a better understanding of how, when and where the energy is being used. The approach is to measure the a hardware data acquisition (HDAQ), DuT(Device under Test) and a host system. Openmoko Neo Free runner smart phone allows us to perform detailed analysis and breakdown of its power consumption. Further we take HTC Dream and Google Nexus to check. The developed system supports for different scenarios is the biggest merit of this setup. However, this is not possible to the same degree on a typically mobile electronics device.

The cloud has various privacy issues. The data owner(who uploads) and the data user(who downloads) are main participants in the cloud access system. The data owner provides security by encrypting both index and files before outsourcing into the cloud. To improve the efficiency and privacy RSSE scheme is proposed which enables ranking for single keyword query. The RSSE scheme achieves data and index privacy, because the relevance scores in the searchable index are encrypted OPSE with OPM. This approach reduces traffic over the network. However, multi keyword search is not possible.

The efficient ranked keyword search scheme for achieving highest utilization of encrypted data stored at remote place (cloud computing) through OPSE technique. The OPSE is further enhanced to withstand against various adversaries. Crypto primitive OPSE will be a better replacement for OPSE and which ensures one to many order preserving mapping function.

In order to increase the utility of the user multi keyword support should be given to the user. Multi keyword can be achieved through many techniques. The implementation of Boolean search either brings all the results or none. It directly degrades the network performance. Considering co-ordinate matching technique for building a multi keyword engine will be efficient when compared to that of a Boolean search.

III. CONCLUSION

The security and the usability are the unavoidable terms in the cloud storage model. However, the migration of users from cloud to mobile cloud adds time complexity and network traffic into consideration. Security scheme which has fewer complexes in means of time and usability module which supports multi keyword will be better one for accessing the Mobile Cloud Storage.

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