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Enhancing Security of Internet Banking Through Location Based Data Encryption Algorithm

[1] Rasika Jare [2] Bharati Sutar [3] Kiran Shirke
[1][2][3] Department of Computer Engg , Pune University
Suman Ramesh Tulsiani Technical Campus: Faculty of Engineering,
Old Mumbai Pune Hwy Kamshet, Maharashtra 410405 , India

Abstract :-- **Cloud computing is a new approach in the field of information technology and development of computer technologies based on the World Wide Web. One of the most important challenges in this area is the security of cloud computing. On the other hand the security of access to critical and confidential information in banks, institutions and etc is extremely essential. Sometimes even with the enormous costs, it is not fully guaranteed and it is compromised by the attackers. By providing a novel method, we improve the security of data access in cloud computing for a company or any other specific locations using the location-based encryption.**

Key Words: **-- data encryption, GPS, mobile computing, location-based service**

I. INTRODUCTION

We are developing banking application using Location Based Encryption. As compare to current banking application which are location-independent, we are developing banking application which is location dependent. It means in Cryptography Cipher-text can only be decrypted at a specified location i.e. location-dependent approach. If an attempt to decrypt data at another location, the decryption process fails and reveals no information about the plaintext. This is important in real time application, example in military base application, Cinema Theater. But our system is flexible enough to provide access to customer to his/her account from any location. Our system also provide solution to physical attack using virtualization, in which customer is allowed to perform fake transaction for his/her physical security purpose.

A. Existing System

This technology enables individuals, companies and etc. To store their data and information on the cloud and they can access their own data at any time, from any place and using any computer through the internet. It is even possible to deploy a platform in a cloud and use it (instead of installing software on a personal computer). This technology is certainly a big advantage and always beside the advantages.

Disadvantages Of Existing System

- Regarding the current structure of cloud computing, this method is considered not fully developed and gradually progresses toward evolution.
- The biggest challenge raised about cloud computing and many researchers are working on it, is “security”.
- Users (people, companies, institutions and etc.) do not know what will happen to their data and information in the cloud and whether other people can gain access to their data and so on.

B. Proposed System

Data security in the cloud is so important. Users (individuals or companies) are concerned about the access to the information by unauthorized users. Now suppose that data is some critical and confidential information from a bank, or a company and etc. Certainly the necessity of access control in the cloud computing is more than ever and is a very important part of data security in cloud.

In our method we use the user's location and geographical position and we will add a security layer to the existing security measures.

Our solution is more appropriate for banks, big companies, institutions and examples like this. The only

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thing we need is an Anti-Spoof and accurate GPS that companies can afford to buy.

Also implementing the Geo- Encryption algorithm on the cloud and the user's computer (which is connected to the GPS) is required.

System Architecture

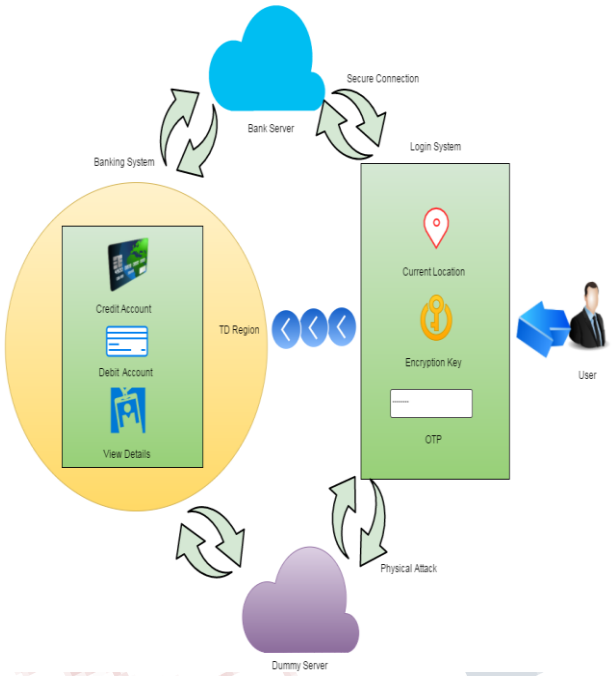

Fig.1 A sample of data flow diagram

Advantages

- Data security in cloud.
- It is more appropriate for banks, big companies, Institutions.

II. CONCLUSION

Location based encryption and "Geo-Encryption" algorithm were also reviewed. Finally a new security level was added to the existing security measures using location-based encryption. This method can be used in several places such as banks, big companies, institutions and have the desired performance For questions on paper guidelines, please contact the Technical Paper Sub-committee as indicated on the conference website.

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