Provably Secure Fine-Grained Data Access Control over Multiple Cloud Servers in Mobile Cloud Computing Based Healthcare Applications

MICANS INFOTECH

ABSTRACT

- Mobile Cloud Computing (MCC) allows mobile users to have on-demand access to cloud services.

- A mobile cloud model helps in analyzing the information regarding the patients' records and also in extracting recommendations in healthcare applications.

- In mobile cloud computing, a fine-grained level access control of multi-server cloud data is a pre-requisite for successful execution of end users applications.

CONTINUE

- In this paper, we propose a new scheme that provides a combined approach of finegrained access control over cloud-based multi-server data along with a provably secure mobile user authentication mechanism for the Healthcare Industry 4.0.

- To the best of our knowledge, the proposed scheme is the first to pursue fine-grained data access control over multiple cloud servers in a mobile cloud computing environment.

EXISTING SYSTEM

- The cloud computing is an important domain that is extremely needed in healthcare applications .

- The proposed a mobile cloud model in which the information regarding the patients' records is analyzed and also it can extract recommendations.

- Since the healthcare applications desire increasingly more computation and communication resources, these need access to large amounts of data within and outside the boundaries of an organization too.

CONTINUE

- Mobile Cloud Computing (MCC) allows mobile users to have on-demand access to cloud services.

- A mobile cloud model helps in analyzing the information regarding the patients' records and also in extracting recommendations in healthcare applications.

- In mobile cloud computing, a fine-grained level access control of multi-server cloud data is a pre-requisite for successful execution of end users applications.

PROPOSED SYSTEM

- The proposed scheme is the first to realize fine-grained data access control over multiple cloud servers in a mobile cloud computing environment.

- The proposed scheme provides a combined approach of mutual authentication of users and fine-grained access control over the multi-server environment.

- The user authentication and fine-grained server data access control procedure avoid any involvement of registration center (except setup and registration phases).

CONTINUE

○ Design of proposed scheme is mostly based on oneway hash function and bitwise XOR operations, thereby making it practically apt for a battery-limited mobile devices and resource-limited smart card.

○ The proposed scheme is provably secure to defend possible security attacks. Moreover, it supports mobile user untraceability and anonymity.

HARDWARE REQUIREMENTS

- Processor   -   Pentium –III

- Speed   -   1.1 Ghz

- RAM   -   256 MB(min)

- Hard Disk   -   20 GB

- Floppy Drive   -   1.44 MB

- Key Board   Standard Windows Keyboard

- Mouse   -   Two or Three Button Mouse

- Monitor   -   SVGA

SOFTWARE REQUIREMENTS

- Operating System : Windows 8

- Front End : Java /DOTNET

- Database : Mysql/HEIDISQL

CONCLUSION

- In mobile cloud computing, a fine-grained level access control of multi-server cloud data is quite necessary.

- Implementation of fine-grained data access control in a multi-cloud server environment is an open research issue.

- In this paper, we designed a new scheme that provides a combined approach of fine-grained access control over cloud-based multi-server.

- data along with a provably secure mobile user authentication mechanism.

CONTINUE

- The authentication process avoids computationally expensive cryptographic operations in order to make it practically apt the battery-limited mobile devices and resource constrained smart card.

- As the proposed scheme does not involve the *RC* in the authentication process, it has also low communication cost as compared to that for the existing related schemes.

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