

Analysis and Design of Mobile Cloud Computing for Online Banking Application System

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Abstract

The paper discuss about interfacing of cloud computing with the mobile computing technology, recently many of the industries / organizations host their important files in the cloud for the lateral retrieval or in case the failure of storage devices with the company. So might preventing the data most of the companies are moved to cloud computing technology but this paper deals with the integration of cloud computing technologies with the mobile application process for online banking process.

Keywords: Cloud Computing, Mobile Application, Online Banking.

I. INTRODUCTION

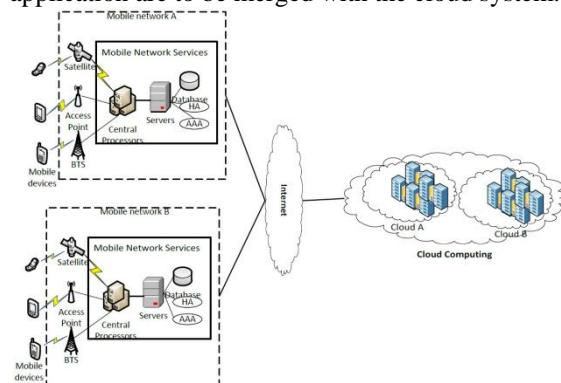
Cloud Computing is the technology which evolved in the year of 1999 for the purpose of hosting the website salesforce.com later in the year of 2002 the Amazon cloud services provides the cloud storage activities for the multiple usages. The cloud consists of different categories such that software as a service, platform as a service and application as a service which is commonly known as SaaS, PaaS and AaaS. But in our paper the application as a service is taken out for the cloud computing system for online application and some of the less security are in the wireless system, so our application provides the maximum level of security.

Online Banking is the recent developing for easy use of banking system from anywhere, anyplace but most of the online banking systems are achieved by the browser. But our system purposes the application for online banking in smart phones through Android or IOS method.

II. CLOUD INFRASTRUCTURE

The cloud is the main storage in this system so a perfect infrastructure has to be developed. Virtual storage has to be placed because the infrastructure has to be developed for the banking system and there should more security has to be provided and applications information are to be

updated regularly by the automation process and application are to be merged with the cloud system.



Mobile Cloud Infrastructure

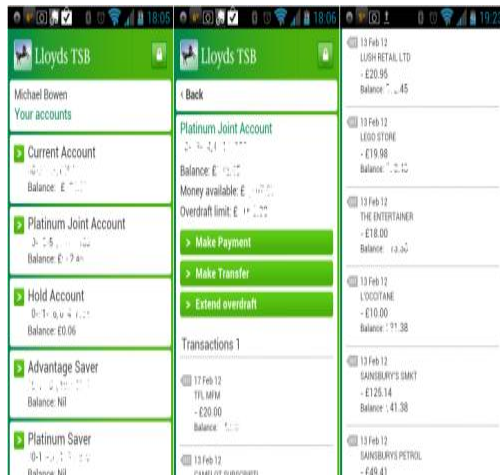
The mobile devices connect with the respective network provider for the signals and achieve the access point and it will shares the information from the satellite to the central processor and further it is connected to the database of the server and through the internet the cloud computing storage is achieved and the data which is requested by the client is moved vice versa, where the above figure 1 shows the entire process of the mobile cloud computing data sharing processes.

III. FUNCTIONAL ACTIVITIES

The application building is the important process in the mobile computing technology where in this case the application which has to be created for the online banking system and this application should be provided with the more security and complexity enriched with the UI based methodology. Some of the recent applications are Android Apps and Apple App Store where these are the two major application processes which are being developed with the java language for the Android Application and Mac OS is used for the Apple Application Store.

Online Mobile Application is the process which consists of large number of requirements such as fund transfer, cheque transfer and transaction process are some of the important process in the mobile banking application which could be applied in

all cases of the system and in this system we merge the cloud computing techniques with the mobile application in order every data are processed in the applications are to be transferred through the cloud by the quick processing system where these are the functional activities of the mobile application development for the online banking system.



Example application view of the Mobile Banking

The sample view of the mobile banking application is shown in the figure 2 and the application preview is stated as that the different categories of accounts that user consists for example joint account or self account and what kind of transaction has to be processed such as fund transfer or cheque payment and finally the processed acknowledgement is shown at final preview.

IV. SECURITY CONTRIBUTION

The security contribution is the important process in the banking application development process where security is provided in the different ways such as biometric scanning, iris identification and password protection. Where this three criteria are provided in the banking application system in order to secure more form the attackers and hackers, by combining of these security methods.

The application would get stronger and the user requirements is suggested by the app and provides the necessary security options where some of the applications consists of only one type of security but the advanced mobile banking app consists of multi-security preventions, Where these security information are transferred to the cloud and process every data are to be retrieved respectively where all data are in secured process.



Biometric Identification on applications

The Three Categories of Security Preventions are,

- Biometric Identification
- Iris Analyser
- Password Protection

A. Biometric

The biometric is the process which reads the finger print of the human and process the information after the complete verification of the finger prints the accounts are to be activated also it could be designed for when there is a large amount of transactions are processed.

B. Iris

The iris is the most advanced level security for the banking application every human eye is unique and then it would be applied in the banking application system for high security by showing the eye scanning based and it will analyse from the source and can be accessed, the iris also be obtained for the specific type of important transaction process.

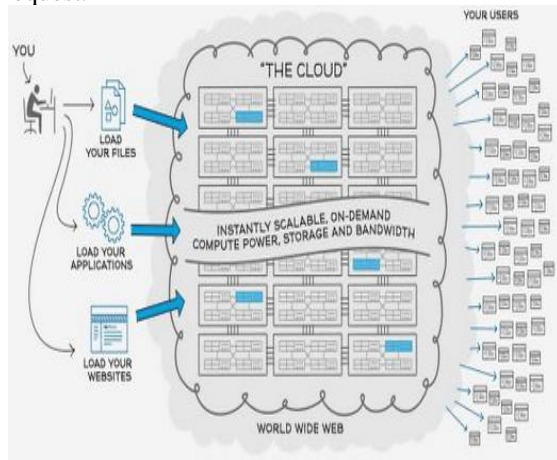
C. Password

The password is the normal security provided in all the applications of the mobile system but the system has the two level security codes for more prevention. The single level will always access one way method but the two levels will send another confirmation from the user to start the process of the first level of the password verification system.

V. SCALABILITY & RELIABILITY

The scalability is the one of the challenges in the cloud computing technology where the number of users are increasing in the cloud based computing there should not be any delay of process should be occurred and transferring where there is large number of users are processing the data and there should not be any slow kind of process are too shown to users every process in the cloud are active and this process

is done by splitting up of the every big process into a small segmented process so the server can easily process every information of the client request.



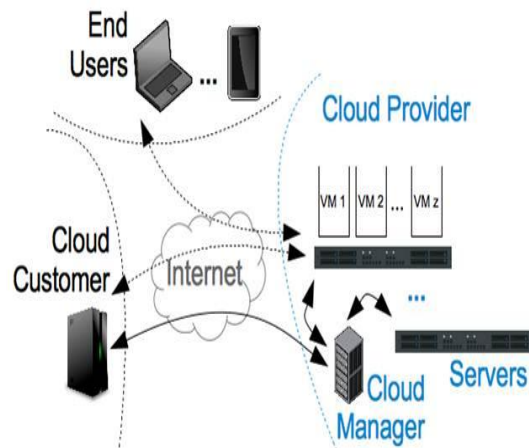
Scalability & Reliability Process

The term reliability is defined as the providing security to the data and information are stored by the client some of the non premium will be not secure in the cloud storage, usually most of the cloud has higher security and the data cannot be lost. Virtual machine system is act as cloud for sometimes for the quick recovery of the data and the main directory does not work the data will not get completely failure

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and the virtual cloud will



Mobile Cloud Computing

take the charge and the cloud system will not be shut down our account for the apparent reason there will be the continuous working of our account information and most of the cloud providing services can act immediately if any of the file get lost and it can be retrieved quickly, the cloud server will always keep backup files of the every online banking users and these will not be missed at any of the situation.

VI. CONCLUSION

Thus the mobile cloud computing is one of the leading technology for the online mobile application user where they could keep their data securely without accessing from the other user also they can be able to retrieve through the cloud also the applications could have security with the biometric, iris and password protection process where the scalability and reliability has some important features for the application which will produce the effective and efficient banking applications to the smart phone technology.

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