

INTEGRATION OF MULTI CLOUD DEPLOYMENT WITH MULTI BANK & USER CARD WITH FORMULA BASED AUTHENTICATION

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Abstract - Big data is really chance based valuable knowledge for many handling of large amount of data where data storage, data analysis, search, sharing, transfer, Visualization, querying, updating and information privacy. In addition to Big Data, Business analytical and RFID like technology are made-up to be recent technologies in information industry. We are proposing an integrated application for Banking, Hospital, Passport & Ration. RFID is used as User Identification number for all these four applications. In banking application, User can add his / her multiple Bank accounts and multiple user accounts in a single card. On multi user accounts transaction, parent user can set the withdrawal Limit. On every transaction OTP will be verified. Formula authentication is verified for withdrawal of money above the limit. All the travel and hospital data are stored in multiple Cloud Servers. Cloud storage space can be used to switch applications for storing of sharing of resources on local servers. Big data is a extensive stretch for records sets so large to handle requests. Two Cloud Servers Drop Box and Google drive has been used to store ration, passport and hospital details in cloud. Mongo database is in structural format which is useful in identifying every particular user corresponded by a formatted data. User entity Authentication comprises User Name, Password and Radio Frequency Identification (RFID) Card are all stored in Mongo Data Base. Entire Data is slatted and stored in Two Servers parallelly. User Request is controlled by the Mongo Data Base and balance part is controlled by Drop box. The distributed storage system not only supports secure and strong data storage and recovery, but also lets a user forward the data in the storage servers to another user without recovering the information back.

Key Words: Big data, cloud connectivity, RFID, formula authentication, Integration

1. INTRODUCTION

Big data is an major term for any collected works of data sets so large and complex that it becomes difficult to process using habitual data processing applications. The challenges include analysis, capture, duration, search, sharing, storage, transfer, visualization, and privacy violations.

Big data is a term utilized to refer to the enhance in the volume of data that are complicated to store, process, and analyze through usual database technologies. For illustration, referred to big data as a large volume of

scientific data for visualization. numerous definitions of big data presently exist. Big data as characterized by three Vs: volume, variety, and velocity. The terms volume, variety, and velocity were introduced.

Big data are classified into different categories .The classification is important because of significant data in the cloud. The classification is based on five aspects: (i) data sources, (ii) content format, (iii) data stores, (iv) data staging, and (v) data processing.

Hadoop is an open-source Apache Software base development written in Java that enables the distributed processing of large datasets across clusters of commodities. Hadoop has two primary mechanism namely, HDFS and Map Reduce programming structure.

HDFS is a distributed file system intended to run on top of the limited file systems of the cluster nodes. HDFS is extremely fault tolerant and can scale up from a single server to thousands of machines, each contribution local computation and storage. HDFS consists of two types of nodes, namely, a name node called "master" and several data nodes called "slaves." HDFS can also include secondary name nodes. The name node manages the hierarchy of file systems and director namespace (i.e., metadata). File systems are offered in a form of name node that registers attributes, such as access time, modification, permission, and disk space quotas. The file content is split into large blocks, and each block of the file is separately virtual across data nodes for redundancy and to from time to time send a report of all existing blocks to the name node. Map Reduce is a simplified programming model for handing out large numbers of datasets pioneered by Google for data-intensive applications.

Cloud computing is a fast-growing technology that has recognized itself in the next production of IT industry and trade. Cloud computing promises dependable software, hardware, and IaaS delivered over the Internet and remote data centers. The need to store, process, and examine large amounts of datasets has driven many organizations and individuals to accept cloud computing. A large number of systematic applications for extensive experiments are presently deployed in the cloud and may keep on to increase because of the need of available computing facilities in local servers, reduced capital costs, and rising volume of data created and consumed by the experiments. In addition, cloud service providers have begin to combine frameworks for similar data processing in their services to help users access

cloud resources and deploy their programs. Cloud computing "is a model for allowing ubiquitous, suitable, and on-demand network access to a number of configured computing resources (e.g., networks, server, storage, application, and services). Cloud service models classically consist of PaaS, SaaS, and IaaS. PaaS, such as Google's Apps Engine, Salesforce.com, Force platform, and Microsoft Azure, refers to different assets operating on a cloud to provide proposal computing for end users. SaaS, such as Google Docs, Gmail, Salesforce.com, and Online Payroll, refers to applications in use on unreachable cloud infrastructure opened by the cloud provider as services that can be accessed through the Internet. IaaS, such as Flexi scale and Amazons EC2, refers to hardware tackle accessing on a cloud provided by service providers and used by end users upon claim. The increasing regard of wireless networks and mobile devices has taken cloud computing to new peak because of the inadequate processing competence, storage capacity, and battery lifetime of each device. This provision has led to the appearance of a mobile cloud computing standard. Mobile cloud services allow users to farm out tasks to external service providers. For example, data can be accessed and stored outside of a mobile device. Mobile cloud applications, such as Gmail, Google drive and Drop box, have become prevalent recently. Such applications look up mobile cloud concert and user experience. However, the boundaries coupled with wireless networks and the intrinsic nature of mobile devices have obligatory computational and data storage margins.

2. EXISTING SYSTEM

Present day, ATM system provides the user the capability of accessing any ATM card in any of the ATM system. This enables the user to access card in any of the ATM system without much of thorough for user specific card ATM system. The problem with existing system is that the user must carry all the user's ATM cards to access through the user's multiple accounts. The application developed is used for a Banking segment particularly for a Debit / ATM \card section. We can use RFID smart card as ATM Card for transaction.. This provides the individual, the comfort of accessing users multiple account of different banks using a single card. Usually, ATM machines are related to their respective bank servers and all bank servers are connected to a single interface i.e. National Finance Switch (NFS). When user swipes his ATM card at particular bank's ATM machine, then that ATM machine directly links to its bank server for legalization of ATM card. If the ATM card is belonging to the same bank then transaction proceeds else connects to the respective bank's server via NFS for further transaction. In most modern ATMs, the customer identifies him or herself by inserting a plastic card with magnetic strip or plastic smart card with a chip that contains his or her description number. The customer then verifies his or her distinctiveness by inward bound a pass code (i.e.) personal identification number (PIN) of four digits. If the number is entered erroneously several times consecutively (usually three), most ATMs will hold on to the card as a protection safeguard to prevent an unauthorized user from discover the

PIN by guesswork and so on. User can create account and get the ATM card from the bank. He can incorporate all his accounts of other banks in this single card with unique PIN numbers accordingly. User can locate up a formula based authentication. He can include all his family members' accounts details also in the same card. He can extract cash from their accounts after triumphant authentication of the corresponding PIN numbers.

3. PROPOSED SYSTEM

In this paper we propose, Integration of Big Data and cloud, we are developing this application for a Banking sector particularly for a Debit / ATM card section. In this module we are integrating three cloud, Mongo db, Drop box, Google drive. Mongo DB is used is to store user individual information.

In Drop box and Google drive ration details, passport details, hospitals data are split and stored in two cloud for security. Because if any one try to access user account they will get only one part data only. So through this we are giving security and easy way of accessing system.

We can use RFID smart card as ATM Card for transaction. User can create bank account and get the ATM card from the bank. He can join together all his accounts in additional banks can be integrated in this single card with unique PIN numbers accordingly. User can comprise all his family members accounts details also in the same card. He can withdraw cash from their accounts after successful authentication of the equivalent PIN numbers. we are proposing an integrated application for Banking, Hospital, Passport & Ration. In addition to that large amount of big data can be handled using multi clouds. Google drive and Drop box are used to store information. Mango database is used to store the structured data in the entry level of login system. RFID is used as User Identification number for all these four applications.

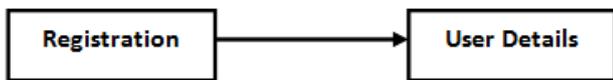
RFID Technology: RFID Technology can be used for identification, authentication, and data storage. They also provide a means of efficient trade transactions in a stretchy, secure, standard way with minimal human intrusion. RFID smart card readers use radio waves to be in touch with, and both read and write data on a smart card. When used for electronic expense, they are commonly located next to PIN pads, cash registers and other places of payment.

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accounts also. On multi user accounts transaction, parent user can set the withdrawal Limit. On every transaction OTP will be verified. Formula authentication is verified for withdrawal of money above the limit. . User can use that multi card in hospital to get their report. Multi card can also be used in passport to register the travel details. All the data are stored in multiple Cloud Servers.

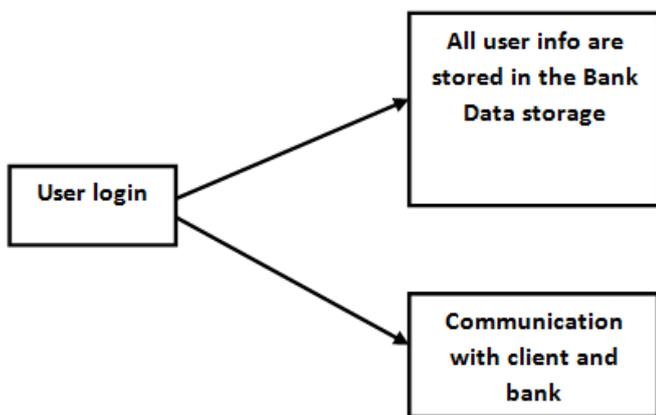
A. USER DETAILS

In this module user have to register their details in multi user smart card . Initially people have to register bank details ,passport details, ration details, hospital details in that single card. Once they register it will be used for four different places. All details will be stored on different cloud . So people will retrieve information from anywhere.



B. BANK SERVER

In bank server user details will be maintain. Those who are register their details in smart card those bank details will also be maintained by bank server. Why this bank server maintain these details? Reason is users are having different bank account and they merge their family members account into a single card. So we have to maintain a separate server for communication, Which will maintain all members account and it will communicate with corresponding bank when any transaction is made.



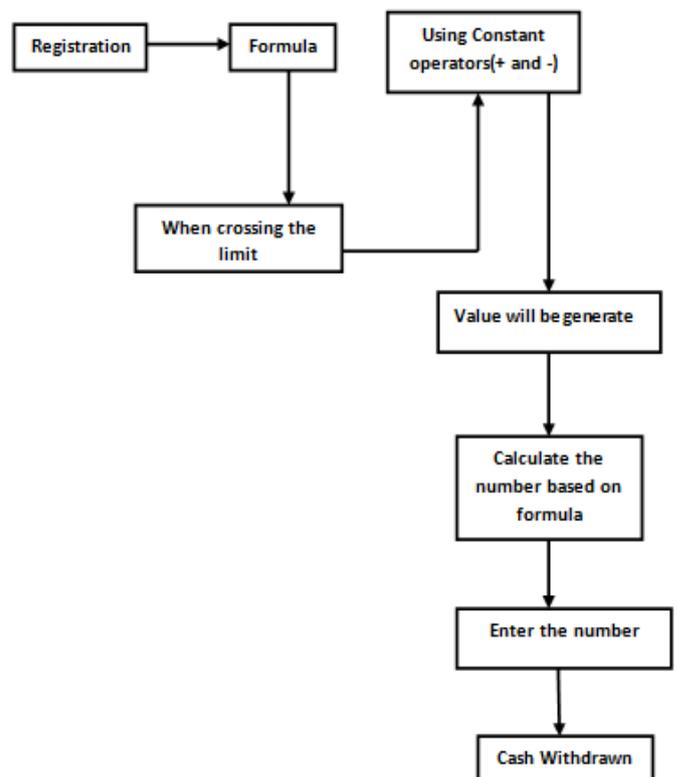
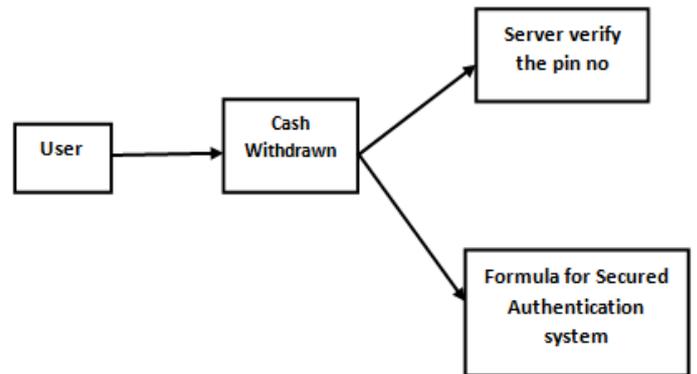
C. MULTI USER / MULTI BANK

Multi user / multi bank merges multiple person bank account in single card. Usually, for Eg., Every people are having ATM card and they get money from ATM whenever they need. But here what is the issue is if a person having account in multiple banks they should have to carry all types of bank ATM card. So, we are implementing a new idea . A single card will contain all bank details and they can combine their family members account also. All members of family can use this card.



D. FORMULA BASED AUTHENTICATION

A formula is set to the people who have multi user smart card for authentication. Because, the main purpose of multi user card is all person in a family have to use this card if they don't have sufficient amount in their account, So a parent user that is a person who have this smart card had a formula. If anyone withdraw amount beyond the limit, a message will be send to parent user. And he will give the formula to that person who withdraws the money. Finally, after the formula is given by the person he can withdraw the money. In formula, only plus and minus symbol should be used for simple calculation.

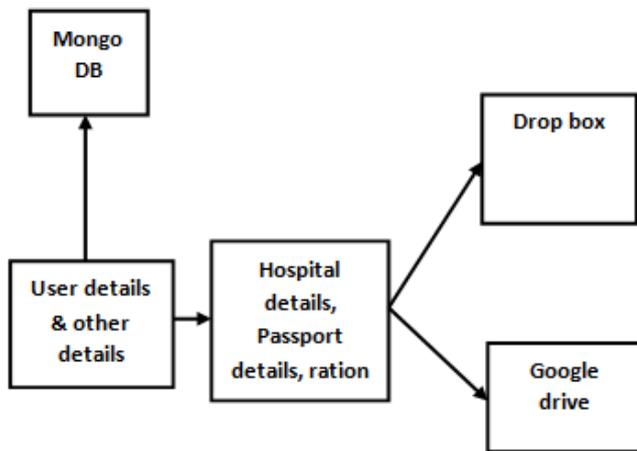


E.HOSPITAL AND RATION CARD DETAILS

Here user hospital details are maintained. By using this card user can attach their hospital details. Those details will be stored in different cloud. So user no need to carry any reports regarding the health issues ,using this card we can easily fetch the information anytime and anywhere.

In this ration user’s ration details will be maintained. Here the things bought from ration will be stored in different cloud.

Here the unstructured data can be chunk and stored in different cloud, whereas mongo database will be available in table format



4. CONCLUSIONS

Thus the project concludes that a single card will used for multipurpose instead of using a separate card for a family in a public sector.

The proposed smart card will used for Bank, Hospital, passport verification and ration card , so that in future if we implement this card publically there is no need for any separate card .

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