

BLACK MONEY MONITORING WITH SECURED CLOUD DATA STORAGE USING BIG DATA ANALYSIS AND BLOCKCHAIN TECHNOLOGY

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ABSTRACT: One of the challenge in cloud computing is that cloud vendors may provide varying and possibly incompatible ways to isolate and interconnect virtual machines located in different cloud networks. To overcome this issue we have proposed a mechanism called as tenant mechanism which means a group of users share a common access with some specific privileges. In order to store Sensitive data we have used Private Cloud data storage ad similarly for public data we used Public data storage. With Cloud computing and Big data analysis, we have implemented Block chain concept for monitoring money exchange and also in identifying overall user behaviour with personal identification by integrating all customer transactions like banking transaction that exceeds more than Rs. 50,000, Land Registrations, Gold Purchase or any foreign money exchange to avoid Black Money transactions.

Keywords: PaaS, IaaS, SaaS, Big data, Blok chain.

1. INTRODUCTION

Cloud computing is a fast-growing technology that has established itself in the next generation of IT industry and business. The need to store, process, and analyze large amounts of datasets has driven many organizations and individuals to adopt cloud computing. It is a model for allowing ubiquitous, convenient, and on-demand network access to a number of configured computing resources that can be rapidly provisioned and released with minimal management effort or service provider

interaction. It has a number of favourable aspects to address the rapid growth of economies and technological barriers. Cloud computing provides total cost of ownership and allows organizations to focus on the core business without worrying about issues, such as infrastructure, flexibility, and availability of resources. Moreover, combining the cloud computing utility model and a rich set of computations, infrastructures, and storage cloud services offers a highly attractive environment where scientists can perform their experiments.[4]

Cloud service models typically consist of PaaS, SaaS, and IaaS. PaaS (Platform as Service) refers to different resources operating on a cloud to provide platform computing for end users. SaaS (Software as Service) refers to applications operating on a remote cloud infrastructure offered by the cloud provider as services that can be accessed through the Internet. IaaS (Infrastructure as Service) refers to hardware equipment operating on a cloud provided by service providers and used by end users upon demand. Cloud service provider will contain the large amount of data in their data storage. They will maintain all the user information to authenticate the user when they were login into their account. The user information will be stored in the database of the Cloud Service Provider. The cloud server will redirect the user requested job to the resource assigning module to process the user requested job[4]. The request from all the users will process by the resource assigning module. To communicate with the client and with the other modules of the cloud network, the cloud server will

establish connection between them. The cloud service provider will send the user job request to the resource assign module in First in First out (FIFO) manner.

Big Data is a term used to describe a collection of data that is huge in size and yet growing exponentially with time. In short such data is so large and complex that none of the traditional data management tools are able to store it or process it efficiently. Ability to process Big Data brings in multiple benefits, such as- Businesses can utilize outside intelligence while taking decisions, improved customer service, early identification of risk to the product/services if any and better operational efficiency [3]. This Big data technology can be used for creating a staging area or landing zone for new data before identifying what data should be moved to the data warehouse. In addition, such integration of Big data technologies and data warehouse helps an organization to offload infrequently accessed data.

Block chain technology created the backbone of a new type of internet. Originally devised for the digital currency / Bit coin. Bit coin has been called “digital gold,” and for a good reason. The block chain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value[1].

With Cloud deployment, Block chain and Big data, we implemented a concept for monitoring all the cash and cashless transactions made by an user and in case of any malpractices, it is then reported to the necessary officials

2. EXISTING SYSTEM

In our day to day life, there are many numbers of transactions that are being made with different types of cash involved in it. Not all these transactions are monitored or noted or taken into account[2]. There may be some chances that, they could be done illegally and for tax calculation the following are the factors that are taken in to account , purchasing land, gold and other assets by investing huge number of cash. But some people are not properly paying their income tax for their property while purchasing. At present we don't have any proper tracking system to monitor those fraudulent activities. To overcome this issue we have proposed a methodology in this paper for Monitoring Black Money Transaction with Secured Cloud Data Storage with Big data Analysis and Block chain Technologies.

3. PROPOSED SYSTEM

In our proposed system we used both public and private cloud data storage. Private cloud is used for sensitive data storage and public cloud is mostly used for normal data storage. We implemented this concept for banking system, to identify overall user behavior with personal identification. Integration of all his / her transactions like Banking, Land Registrations, Gold Purchase or any cash transactions more than Rs.50,000 is accounted and monitored using the block chain concept.

There are not many ways in which we can monitor all the types of transactions irrespective of the amount involved in it. Even though digital money and digital transactions are quite a hit in today's world, there are still so many people who aren't aware of it but only doing these transactions with real time cash. So it is high time we monitor these various amounts of cash involved in these transactions. The advantages of using this system in this project are:

- Tracking system for purchasing property.
- Notification for income tax payment.
- Cloud storage for public and private information.

The architecture diagram for our proposed system is shown in Fig 3.1

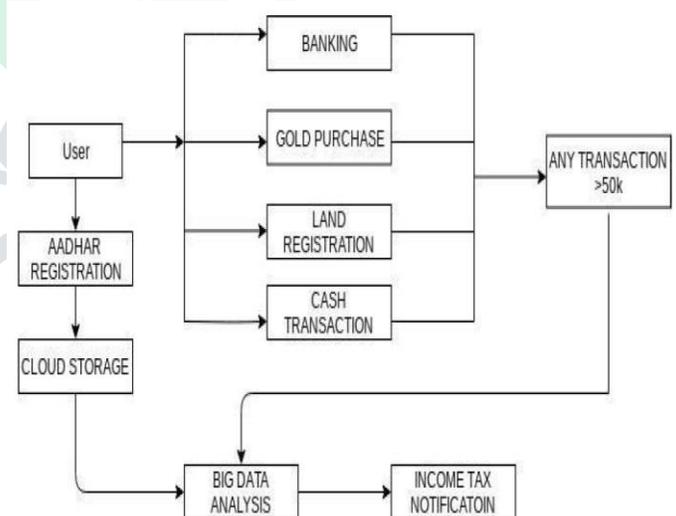


Fig 3.1 Architecture diagram

The above architecture explains about the entire process of our proposal. User will register their basic information with their Aadhar number and they made transaction on their bank account, purchase gold and land using their account. That transaction information is stored on block chain and cloud, but in

cloud it will stored in three folders like gold, land and bank. Big data will analyze that information using Map Reduce and send that information to RBI about the transactions that are more than Rs.50, 000.

4. IMPLEMENTATION

The proposed system is implemented by using the following modules:

- User registration
- Bank server
- Land registration and gold purchase
- Cloud deployment
- Block chain deployment
- Big data Analysis & black money notification

4.1 USER REGISTRATION

The first module in the proposed system is the User Registration. In this module we are going to create a user application by which the user is allowed to access the data from the server. Here first the user wants to create an account and then only they are allowed to access the network. Once the user creates an account, they are to login into their account and request the job from the server. Based on the user's request, the service provider will process the user requested job and respond to them. All the user details will be stored in the database.

4.2 BANK SERVER

Service Provider will contain information about the user in their data storage. In mean time, the bank service provider will maintain all the user information to authenticate when they are trying to login into their account. The user information will be stored in the database of the bank service provider. To communicate with the Client and with the other modules of the Company server, the bank Server will establish connection between them. For this purpose we have created a User Interface Frame.

4.3 LAND REGISTRATION AND GOLD PURCHASE

In this module we implement land registration and gold purchased details that have to be monitored. Here, user name, land documents, price and selling price of the land are also noted and also we monitor the gold purchase of every user and all other property details will be monitored based on user' ID.

4.4 CLOUD DEPLOYMENT

User will upload their data to the cloud server and request for a particular file is send to cloud server. To deploy our system we use drop box cloud storage to store our details. Here we store sensitive and normal information on private and public cloud server respectively.

4.5 BLOCK CHAIN DEPLOYMENT

A block is a container data structure. The average size of a block seems to be 1MB. Here every certificates number will be created as a block. For every block a hash code will generate for security purposes. With that we store all transaction information like land purchase, gold purchase and all other purchasing details will be stored on block chain. For every transaction a block will be created with hash code to refer the other block. Transaction detail will be more secure on block chain.

4.6 BIG DATA ANALYSIS AND BLACK MONEY NOTIFICATION

Throughout all the transactions done, here we monitor proper payment of tax amount that has to be paid. Since there are many number of forgeries that happen on daily basis in purchasing of land where people show a fake price for land purchase and gold purchase. So in this module we get the details of purchasing rate more than 50K. If user purchasing rate is increased more than 50K, system will alert the income tax notification to the user. Using Aadhar number we can monitor all the bank transactions.

5. SCREEN SHOTS

Fig 5.1 User Registration

Fig 5.4 Gold Purchase Form

Fig 5.2 User's Bank Details

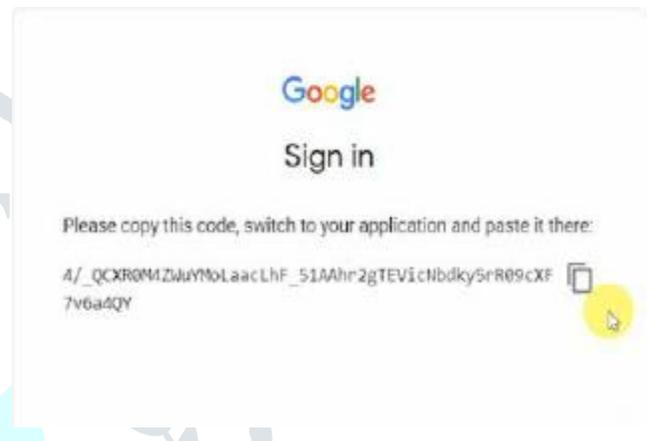


Fig 5.5 Code sent to Admin for Tracking the User

User ID	Amount >50,000
1234567891	52300
9952327939	64800
9843439817	56400
8875649321	86501

Fig 5.6 Sample report at Admin's mail with amount >50,000 and its corresponding User ID

Fig 5.3 Land Registration Form

6. FUTURESCOPE AND CONCLUSION

The current system does not monitor all the transactions made by the people. The fact that all transactions can be monitored and are put under scanner avoids all the illegal activities. This greatly helps the government to keep track of all the money that is being used and solves the biggest problem of our nation which is corruption. All the transactions are made legal and monitored closely so that all the citizens pay their income tax without fail which

would greatly help in increasing the welfare of the nation.

Thus our paper infers that we provide a tracking system while purchasing gold or any asset above 50,000. Nowadays forgeries level is increasing in a smarter way so that we provide a more secure way in tracking the money using block chain technology which is highly efficient.

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