

BIG DATA AND BLOCKCHAIN TECHNOLOGY MERITS AND DEMERITS.

Madan Mohan #1

#1 Ph.D. Scholar, Noida international university, Greater Noida, India. Email: mmphdcse@gmail.com

ABSTRACT

This PAPER describes the concept of data protection on a large scale and explains how large-scale data protection can be defined not only on the scale but also as a dataset. The document also checks how to store data stored on other platforms as well as the database. This series of blocks also talks about the decentralization of privacy in terms of technology.

The Blockchain system in this matter has three entities that comprise the users of mobile phones, individuals who are attracted to downloading and using applications which is part of the service, and the nodes which are concerned with the maintenance of the blockchain. The paper also goes into the details of having data anonymization which is a means of protecting personal data by using anatomy to anonymize datasets that must be fed with the most sensitive information of data that is not distinguishable [4]. It uses the diversity of data to ensure that the critical data is well diversely represented with some possible values that are set.

Keywords: *Big Data, Big data, blockchain technology*

BIG DATA

Big data is a word used to describe large-scale structured and unresolved data very much, it is very difficult to process data using traditional database and software technology.

Volume: The quantity of produced and stored data, Many factors contribute to an increase in volume, live streaming data and Storing transaction data, live streaming data, and data collections from sensors

Variety: There are data in all types of formats

Variability: Together with speed, the data flow may not be consistent with the periodic top of something height.

Complexity: When data comes from multiple sources, you also need to consider the complexity of the data. Before actual processing, the data must be linked, matched, cleaned, and converted to the desired format.

INTRODUCTION

In recent days there has been a rise in cases of reported surveillance and security gap which has compromised users' privacy in doubt of the current model where the third parties collect and control huge chunks of data which is personal. Although Big data does not necessarily represent the actual amount of data or size it cannot be processed via databases [5]. Due to this, it comes along with many privacy data issues which make it a major critical concern to any organization in our current companies and organizations of our world today. Therefore, these private issues must be addressed with greater and immediate effect to avoid more hazardous effects which may affect the companies or organizations either directly or indirectly. This issues also affect the performances of the company and its success may be limited to increase. This can lead to collapsing of companies and organizations. In order to avoid big losses which may lead to collapsing of

companies and organizations, the companies are therefore putting across measures in order to curb any exploitation which may lead to huge losses.

THESIS

When Big data is mentioned it does not necessarily mean that only the so-called elephant organizations are affected. Indeed, also the medium-sized and the smaller companies are also affected because these firms incur a large reduction in their privacy. It also affects the security threats of the firms. This is a big blow to the small and medium-sized organizations.

With the introduction of the cloud-based storage measures, it has facilitated the collection of data and mining of the same data.

According to the reports in the current days in one of the giant social network which is Facebook, large sums of data were collected [3]. This included much of the personal data stored on Facebook as well as the public data or information. One challenge with data collection is that when the data is collected it is analyzed. This has led the emergence of big companies which deals with this big data. They analyze personalized services. These companies due to their creativity and innovation with enhancement in of the new technology analyze these data then optimize it to make corporate decisions which enables them to predict the current and the future trends which may affect our economies. In addition to his, they also predict the occurrence of other activities thus to them this Big data is a good asset to the company which is very valuable in our economies.

For instance, the reason why these effects of big data may not be noted is that people don't have control of their information they feed in their accounts. This information concerns them as it is personal to them. There have been instances which said that the governments do surveillance In Facebook without informing the owners of the accounts immediately or before they did so.

BLOCKCHAIN TECHNOLOGY MERITS:

i. Process Integrity

Due to the security reasons, this program was made in such a way that any block or even a transaction that adds to the chain cannot be edited which ultimately provides a very high range of security.

ii. Traceability

The format of Blockchain designs in such a way that it can easily locate any problem and correct if there is any. It also creates an irreversible audit trail.

iii. Security

Blockchain technology is highly secure because of the reason each individual who enters into the Blockchain network is provided with a unique identity which is linked to his account. This ensures that the owner of the account himself is operating the transactions. The block encryption in the chain makes it tougher for any hacker to disturb the traditional setup of the chain

iv. Faster processing

Before the invention of the blockchain, the traditional banking organization take a lot of time in

processing and initiating the transaction but after the blockchain technology speed of the transaction increased to a very high extent. Before this, the overall banking process takes around three days to settle but after the introduction of Blockchain, the time reduced to nearly minutes or even seconds.

BLOCKCHAIN TECHNOLOGY

DEMERITS:

i. Power Use

The consumption of power in the Blockchain is comparatively high as in a particular year the power consumption of Bitcoin miners was alone more than the per capita power consumption of 159 individual countries. Keeping a real-time ledger is one of the reasons for this consumption because every time it creates a new node, it communicates with each other node at the same time.

ii. Cost

As per the studies as an average cost of the Bitcoin transaction is \$75-\$160 and most of this cost cover by the energy consumption. There are very fewer chances that this issue we can resolve by the advancement in the technology. As the other factor that is the storage problem might be covered by the energy issues cannot be resolved.

iii. Uncertain regulatory status

In each part of world modern money has been created and controlled by the central government. It becomes a hurdle for Bitcoin to get accepted by the preexisting financial institutions.

So, this was all about the advantages and disadvantages of Blockchain. Hope you like our explanation of Pros and Cons of Blockchain technology.

The absence of this whole question is that the difference which has happened, or the violation of the situation is unbearable. This is because security applications designed to store large amounts of data cannot capture or control the dataset.

The technologies available are also no effective in dynamic data management hence can therefore not control dynamic data but only the static data. The regular check out securities can never be able to detect the parches of security when there is continuous data streaming.

One drawback of the introduction of cloud-based storage as I mentioned earlier is that this big data in relation to integration. Storage has led to limitations to threats of security and privacy of personal information [1].

To protect transaction logs and data we have varying levels of the storage medium of data stored for instance the logs and the most sensitive information. This may not be enough since data transferred between various levels is uncontrollable.

Filtration of endpoints inputs and validation may also help. When all the data is validated at the endpoints this will enhance the security of the data since endpoints are mainly used to maintain data. Processing, as well as storage plus other critical tasks, are done with the aid of input and output data. Any entry and exit of data are very important as the data centers to be processed as information then stored in databases. Therefore, organizations must ensure their data and information is

properly authenticated in the best way as they can and make legit end devices.

We also need to secure the distributed frameworks as well as the calculations of processes involved. There are mainly two major preventions for securing the distributed frameworks which by the use of the MapReduce by securing the mappers, also by the protection of the data where there is an unauthorized mapper.

It is important for the organizations to perform real-time regular check-ups and make observations in real time, but due to large sums of data, many companies are thus unable to do the regular checkups. Encryption is also important when an organization or even an individual wants to secure their data. Encryption controls and the access to the data. Backing up of data is good but to make the stored data safer its good to use encryption in order to prevent access to your data.

Data providence is also important, data should be classified to know the origin. This provides correct authenticating, validating and accessing controlling of gaining of data. We also need to use granular access control for instance in the case of the big data stored by NoSQL databases requires authentication which is very strong.

Blockchain Security to Protect Data

The recent research has led to the development of techniques that targets privacy of personal data. These techniques include:

Data anonymization

This is a means of protecting personal data by using anatomy to anonymize datasets which must be fed

with the most sensitive information of data which is not distinguishable [4]. It uses the diversity of data to ensures that the critical data is well diversely represented with some possible values that are set. In recent days Bitcoin is one the many classes of accountable systems which have lately emerged. Bitcoins is a system that allows users to transfer their bitcoins which are the transfer currency without regulations but securely [2].

Blockchain Security uses various systems to offer protection against private issues such as Ownership of data, auditability, and transparency of data as well as control access which is fine grained.

Blockchain system has three entities that comprise the users of mobile phones, individuals who are attracted to downloading and using applications which is part of service and the nodes which are concerned with the maintenance of the blockchain. Users install the application on this platform in order to preserve the privacy of their data or information. There are sensor and locators that encrypts the data.

The building blocks of the blockchain security include the identities which are pseudo- identity, the blockchain memory which cannot be tampered, policies laid down permissions and functions which are auxiliary. In general, blockchains uses all nodes in decision-making process computationally.

CONCLUSION

Data that is personal or very sensitive should never be allowed to go to the third party. The third party is susceptible to misusing the data. All users of the data

whether on social media such as Facebook or organization should be very careful with how they handle their data. Data should be handled with a lot of care. All users should protect and own their data.

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