MSc Project Report

Cloud Based Voting System using Blockchain for Secure and Tamper Proof Data Storage

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Abstract

Digital transformation era has begun. With the advancements of the technology, cloud computing, Blockchain and decentralized applications are becoming so popular around the world. Systems are being globally accessible, secure, user friendly for the end users. By grasping the power of Cloud Computing and Blockchain this research project was developed and deployed on the cloud for ease of access and ease of infrastructure management.

The Blockchain is a term that is come to mean many things to many people. For developers it is a set of protocols and encryption technology for securely storing data on a decentralized network. For business and finance it is a decentralized ledger and the technology underlying the explosion of new digital currencies. For technologist it is the driving force behind the next generation of the Internet. For others it is a tool for radically reshaping the society and economy taking us into a more decentralized world. Whichever way people look at it, Blockchain becomes a term that captures the imagination and fascinates many as the implications of such technology are truly profound.

For the first time in human history people anywhere can trust each other and transact within large peer to peer networks without centralized management. Trust is established not by centralized institutions but by protocols cryptography and computer code. This greatly strengthen the capacity for collaboration and corporation between organizations and individuals within peer networks enabling us to potentially form global networks of collaboration without centralized formal institutions.

This report aims at producing a Cloud based Voting System with Blockchain Technology. The application was implemented with the support of programmable Ethereum Smart Contracts with Solidity programming language alone with the Blockchain technology for web and mobile users. Android, Java, Angular and Javascript have been used to develop the web application and mobile application.

Key Words:

Cloud Based Application, Blockchain, Ethereum, Smart Contracts, Decentralized Application