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(57) Abstract :

Advancements in Internet of Things (IoT) technology are helping medical applications take a rapid growth in remote health care domains. With IoT, bio-medical sensors are attached to a system and such systems will then form a Wireless Sensor Network to exchange information amongst them. IoT devices have limited resources in terms of computational power, memory and energy. Security and privacy are of paramount importance in IoT based systems. Blockchain is a technology that uses distributed database to execute so called smart contracts. The transactions are recorded in ledgers and are immutable. By combining security, decentralization and autonomous capabilities of the blockchain technology with IoT, we can resolve privacy and security issues in the latter. The present invention disclosed herein is a Novel method of integrating Blockchain Technology with IoT in Medical Applications that comprises of: IoT Devices with Sensors (101); Local Hub (102); Miner (103); Policy Validations (104); Cloud Storage (105); used to integrate Blockchain Technology with IoT to resolve privacy and security issues in IoT based systems. In present disclosure, an architecture that integrates blockchain with IoT is presented, and its advantages are demonstrated using a medical application that monitors vital body parameters such as heart rate and blood pressure. The present invention disclosed herein shows a minimum processing delay of approximately 0.1 seconds for two sets of nodes when simulation is performed with Network Simulator (NS)-3.27 version for 45 blocks.

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