IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal



Volume 5, Issue 1, October 2025

Study on Integration of Blockchain and Big Data Challenges Cloud Computing

Mr. Anand Deepak George Donald¹ and Dr. Anupam Chouksey²

Research Scholar, Computer Science & Engineering, LNCT University, Bhopal, India ¹ Guide, Computer Science & Engineering, LNCT University, Bhopal, India ²

Abstract: The blockchain technology is sweeping the globe. Blockchain has emerged as a disruptive technology for the future generation of multiple industrial applications because to its decentralised, transparent, and secure nature. Cloud of Things, which is possible by the marriage of cloud computing with the Internet of Things, is one of them. Considering the need for security and efficiency as a problem, this paper proposes a safe and efficient smart home design that combines blockchain and cloud computing technologies to provide a comprehensive solution. The decentralised nature of blockchain technology allows it to provide processing services and create transaction copies of obtained sensible user data from smart homes. Blockchain, a distributed ledger technology that provides an immutable log of transactions recorded on a distributed network, has lately gained popularity as the underlying technology of cryptocurrencies and is revolutionising data storage and processing in computer network systems. Blockchain is seen as a possible option for future data-driven networks (DDNs) to provide safe data storage, sharing, and analytics, user privacy protection, strong, trustworthy network governance, and decentralised routing and resource management.

Keywords: Integration, Blockchain, Big Data, Cloud, Computing







