Chapter 7
A Review on the Importance of Blockchain and Its Current Applications in IoT Security

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ABSTRACT

In recent years, blockchain technology has attracted considerable attention. As blockchain is one of the revolutionary technologies that is impacting various industries in the market now with its unique features of decentralization, transparency, and incredible security. Blockchain technology can be used for anything which requires their transactions to be recorded in a secure manner. In this chapter, the authors survey the importance of the blockchain technology and the applications that are being developed on the basis of blockchain technology in area of IoT and security.

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BLOCKCHAIN IN IOT

Decentralized Framework for IoT Digital Forensics for Efficient Investigation: A Blockchain-based

Jung Hyun Ryuet.al.(2019) proposed 2 outlines the diagram of proposed advanced legal sciences system for IoT condition. The proposed structure is partitioned into three layers: cloud; blockchain; and IoT gadgets. For the most part, in an IoT domain, gadgets speak with the cloud. By 2020, the quantity of IoT gadgets is relied upon to increment to 26 billion . For this situation, it is practically difficult to examine countless IoT gadgets utilizing existing advanced measurable strategies. Figure 2 shows a review of proposed computerized criminological structure for IoT condition in this paper. Each IoT gadget stores information produced during the time spent speaking with different gadgets in the blockchain as an exchange. The IoT condition incorporates every little condition utilizing IoT gadgets: sensors; keen vehicle; savvy building; shrewd industry; brilliant home; brilliant matrix. In these conditions, cybercrime can happen whenever, and legitimate criminological system for it must be built up. In the IoT gadget classification, gadgets have different purposes, administrations, makers, advances, and information types. IoT gadgets send and receivelarge measures of information paying little heed to gadget client's will. For this situation, if the current criminological strategy is applied to every gadget framing an enormous number of connections, the examination turns out to be very difcult. Along these lines, in the proposed structure, the information created during the time spent correspondence of each IoT gadget are put away as an exchange in the blockchain. The computerized scientific agent abuses the put away trustworthiness of squares and the simplifed chain of guardianship process.

Secure Firmware Update for Embedded Devices in an IoT Environment: A Block chain Based

Boohyung Leeet.al.,(2017) In this paper, we center around a safe firmware update issue, which is an essential security challenge for the implanted gadgets in an IoT domain. Another firmware update conspire that uses a blockchain innovation is proposed to safely check a firmware adaptation, approve the accuracy of firmware, and download the most recent firmware for the installed gadgets. In the proposed plot, an inserted gadget demands its firmware update to hubs in a blockchain arrange and gets a reaction to decide if its firmware is modern or not. If not most recent, the implanted gadget downloads the most recent firmware from a distributed firmware sharing system of the hubs. Indeed, even for the situation that the variant of the firmware is upto-date, its respectability, i.e., accuracy of firmware, is checked. The