Critical Issues of IoTs in Distributed Blockchain in Iran

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Internet of Things (IoT) refers to the distributed smart sensor objects, sensor networks and wearable devices with the purpose of exchanging information and services through sensor networks are the key for creating smart environments. Present IoT data is not trustworthy in the external environment, as data manipulation is lacking when data is shared with other parties. To overcome the above-mentioned limitation of IoT, the emerging secure decentralized storage technology; the blockchain technology refers to the distributed database or ledger that preserve connected devices record sets as a new thing. Therefore, we aim to identify the essential implementation requirements of blockchain in the IoTs by content analysis. In the second phase evaluate interpretation of experts by Delphi method. Panel of information technology experts consists twelve members who work on IT sector. Finally, we use Analytic Hierarchy Process method under interval type 2 fuzzy logic for ranking codes. An important part of the results revealed the importance of Regulations and governance (0.31), Standards (0.21), Privacy (0.16), Security flaw (0.10), Scalable data management (0.08), Network speed (0.05), Complexity (0.03), Interoperability (0.03) and Fork (0.02) in security challenges of IoTs in Blockchain. According to the results of this study, the growing needs of the users for secure communication in IoT network infrastructures while adopting blockchain as a security solution. However, adopting blockchain in the IoT environment imposes certain security and trust issues/requirements.

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