



Review

Blockchain technology as a Fog computing security and privacy solution: An overview

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Abstract

The emergent of Fog computing as an extension of Cloud computing, from the center of the internet architecture to the IoT end user's devices, aims to enhance the processing power of the resource-constraint IoT devices and deliver them other services since it locates close to these devices. This extension was also suggested to boost the standard of IoT system implementations thus decreasing energy consumption and latency for those applications that need fast responses. However, as stated in recent literature, Fog computing may have some important security and privacy challenges. On the other hand, Blockchain, which was generated and used in cryptocurrencies, has been applied in a wider range of applications due to the security, privacy, distributed trust management, and reliability features provided. Among the applications, which have recently been attractive about blockchain is Fog computing. Blockchain in Fog computing may achieve a distributed and trusted, identity management, secure data, reputation, and payment systems. This survey discusses the state-of-the-art impact of the blockchain on the security and privacy of Fog computing. The findings elucidate the vision of blockchain in Fog computing-security and privacy-based enhancement and draw attention to open challenges and future research directions.

Keywords

FC; BC; Challenge; Security; Privacy

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