Abstract

Internet of things is a collection of devices that are distributed, interconnected, and exchange data. This distributed results in a challenge of authorization, where IoT devices should only be accessible to authorized entities. Most IoT security methods are centralized on one entity and vulnerable to a single point of failure. One potential technology is Blockchain. Blockchain comes with several characteristics, such as decentralized and distributed. But the requirement to run a blockchain is contrary to the IoT device capabilities, so it requires an intermediary. The author designed and implemented an intermediary in the form of middleware as Blockchain-based access control to manage IoT devices communication. Middleware can connect between Blockchain and IoT devices and still maintain the characteristics of Blockchain.

Keywords: Blockchain, Access Control, Middleware, IoT