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## LIGHTWEIGHT AUTHENTICATION FOR MQTT TO IMPROVE THE SECURITY OF IOT COMMUNICATION

A widely used application layer protocol for IoT communication is Message Queue Telemetry Transport (MQTT) protocol. The provision of security in MQTT protocol is an essential concern in IoT applications. In this paper, we show how the conventional secure MQTT protocol is vulnerable to cipher attack. Then, we present a novel approach to improve the MQTT security by providing lightweight authentication mechanism. The proposed approach is using chaotic algorithm with topic based self-key agreement and block cipher. Moreover, the empirical study is performed to measure the efficiency of proposed approach in Cooja simulated environment.

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