

Abstract : Data classification is broadly defined as the process of organizing data based on relevant categories so that it can be used and protected more efficiently. Classification of data divided into several classes, one of which is health data, which needs are essential for data exchange because health data has confidentiality and a large amount for transfer. Electrocardiogram (ECG) requires timeliness in exchanging data. Currently, the MQTT Protocol is the most commonly implemented protocol in the IoT area, due to the compatibility of MQTT with lightweight data to run on it. As for health data, it is far from light data classification. There should be more resilient protocols for use in large scale data or continuous data. In this study, a comparison between MQTT and other protocols to process health data has conducted. AMQP is an open-source protocol that provides features suitable for the high requirements for exchanging data on ECG data. This study describes the performance between the MQTT protocol and AMQP protocol that is principled in the publisher-subscriber, by comparing the time delay and throughput to measure the data transmission in real-time. This results in the AMQP protocol delay is less than 1 second per transfer, and the throughput gets an average output of 15209265.86 Bit per second for ten attempts, while the MQTT protocol gets 46 seconds per transfer and throughput gets an average output of 17592975.29 Bit per second. Proving that in the case of health data with ECG data as the dataset used, another protocol besides MQTT, which is the AMQP protocol is better in terms of exchanging data in large and continuous capacity.

Keywords : Classification, Health Data, Publisher, Subscriber, Protocol .