ABSTRACT

This study proposes an idea to detect infusion droplets with information systems through the Line that will be sent to nurses who are in the nurse's room as well as in other rooms, nurses can find out more quickly the infusion fluid conditions for each patient in the treatment room. This research methodology conducts literature studies and designs tools that can work automatically using the Arduino NodeMCU ESP8266 with the IR Obstacle sensor. Use CloudMQTT for delivery communication media in real time. Heroku Dyno which is a Platform as a Service for connecting data received on CloudMQTT can be sent to Line Bot.

To calculate network performance, the authors get an average delay of 35,512 ms when sending 3 users, while for results on sending more than 10 users get a value of 104.65 ms. The average throughput of 15513,593 bps on delivery with 3 users. As for the results of sending more than 10 users get a value of 4978,092 bps.

In addition, the authors measure the reliability and availability of tools by testing data retrieval 30 times every 15 minutes and randomly, with the results of reliability testing on this system worth 87% on the reliability of the system to detect infusion droplets and 83% on sending infusion status to the user, while the availability of tools has a 100% yield.

Keyword : *Infusion, NodeMCU, CloudMQTT, Heroku, Line*