

## **ABSTRACT**

*Administering intravenous infusions to patients is the most common medical practice carried out by nurses. Nowadays, intravenous infusion in hospitals was commonly administered manually, where errors such as setting up infusion drops, and late replacement of intravenous infusions still occurred. Intravenous infusion works with pressure and gravity, if the pressure is weak due to the exhaustion of the infusion fluid it can cause clots that can result in blockages if it enters the blood vessel. In this research, a device is designed to support the monitoring of real-time IV infusion fluid based on the duration of infusion drops per minute and the infusion weight obtained from the load cell sensor. This device has successfully centralized the information obtained into a cloud database so that infusions can be monitored and information on the remaining infusion fluid can be stored and updated in real-time. In addition to creating infusion monitoring, this research compares the remaining infusion fluid based on the calculation of drops per minute (DPM) value upon the reading value in the load cell sensor. From the results of the research, adding the Moving Average method to the load cell reading reduces the error value in data collection by the average error value from the original error of 1.191% to the average error of only 0.396% or below 1%. This research also shows that there is a duration difference in spending 1 bottle of infusion between the usage of load cell monitoring and manual DPM calculations.*

**Keyword :** *Internet of things, Load cell, Moving average*