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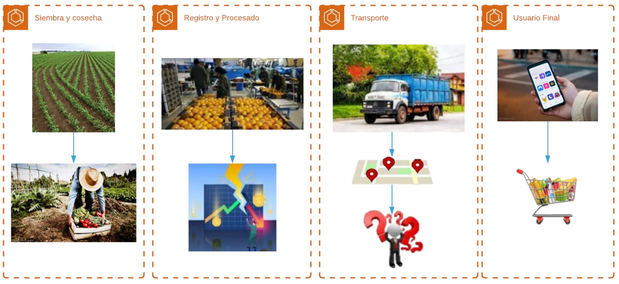
STUDY FOR SECURITY IN THE TRACEABILITY OF AGRICULTURAL PRODUCTS USING BLOCKCHAIN IN INTERNET OF THINGS

PROBLEM

Traceability in agricultural products carries certain risks respecting to the safety of its products and their information, since it is almost impossible to carry out a complete manual monitoring, because the human factor intervenes a lot.

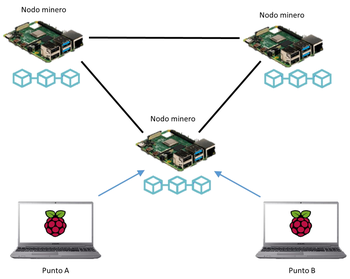


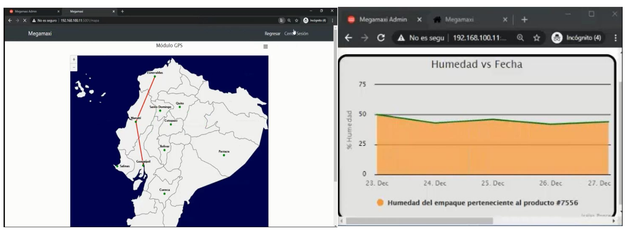
OVERALL OBJECTIVE

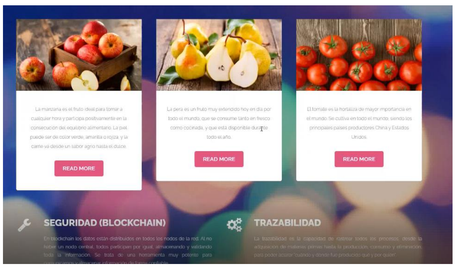
Implement an information security system in the traceability of agricultural products using Blockchain in the Internet of Things for the mitigation of cyber attacks.

PROPOSAL

It is a system that will allow hypermarket owners to monitor each of the monitoring stages by means of RFID tags, temperature and humidity sensors, as well as GPS tracking and that the end user can observe the complete product tracking. , adding information security through Blockchain.

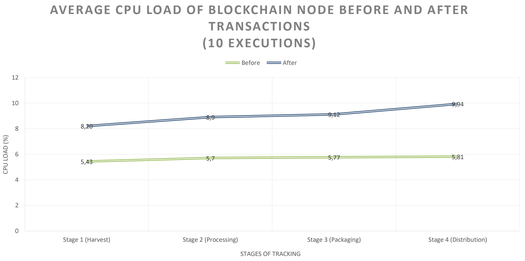


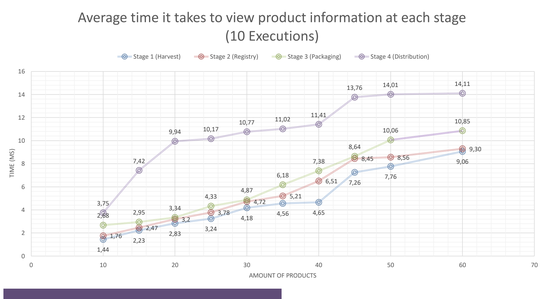




RESULTS

The metrics were evaluated under the criteria of two scenarios: physical implementation and the use of the web application; which
demonstrates that the system is consistent and with high data availability.





CONCLUSIONS

- The IoT devices used in this implementation allowed low-cost remote monitoring, which means a better control of the product information obtained at each stage of the traceability process
- In order to separate the information that the user and IT staff can view, a login was implemented with credentials that distinguish the functionalities of both.
- The use of the web application allowed the user to know the most relevant details of the product immediately, allowing to make a decision about the purchase of a product.