

ABSTRACT

At this time, the demand and need for pakcoy vegetables is growing rapidly. Farmers who garden using hydroponic methods have difficulty ensuring the growth of pakcoy in the nursery phase, because pakcoy plants require the appropriate moisture and soil moisture content. The difficulty of monitoring pakcoy plants directly becomes the background in making the monitoring process using the platform Internet of Things.

Platform The Internet of Things is a system web server that can carry out a process monitoring based on the Internet of Things to help home farmers ensure data on humidity, temperature and light intensity sensors in a greenhouse. The relay actuator performs automatic watering based on soil moisture. The research was conducted to prove the system functions by testing functionality website, Quality of Service (QoS) based on parameters delay and throughput on the Telecommunication and Internet Protocol Harmonization Over Networks (TIPHON) standards, and test results server.

The results of the feature functionality testing on the website can be accessed by the admin. The QoS test results obtained are based on parameters delay and throughput on the TIPHON standard release 3 with the ETSI TR 101 code 329-7 and using software wireshark. The value delay average obtained in the process database to the Application Programming Interface (API) is 0.141s, while the API process to the database is 0.139s. Based on the TIPHON standard, the value delay is in a very good range because it is <150s. The test results throughput obtained in the process database to API are 743,812 kbps, while the API process to the database is 723,813 kbps. Based on the TIPHON standard, the value throughput is in the moderate range because it is still in the 700-1200 kbps range. The capability test results server of each feature are good.

Keywords: Database, Website, Web Server, Internet of Things, pakcoy.