

ABSTRACT

Smart library is a web-based library information system, smart libraries can record borrowing and returning book transactions automatically with the help of a computer system. Smart libraries also make it easier for the public to access information and with the existence of smart libraries, the library system can change to an automated system where almost all services can be carried out independently or self-service. The purpose of this study was to determine the results of the measurement parameters of Throughput, Packet Loss, Delay and Jitter from the performance of a series of work systems based on RFID. Knowing the performance of the smart library system designed at the Telkom Purwokerto Institute of Technology. The research method used is to design a WLAN topology using an infrastructure wifi topology. Then data retrieval and analysis of the performance of the WLAN for the implementation of a smart library system based on NodeMCU used parameters of throughput, packet loss, delay and jitter. From the results of the research, the parameters of Throughput, Packet Loss, Delay and Jitter from WLAN were successfully tested with the following results: Throughput of 31,358 bps, packet loss of 0.33%, delay of 5.08 ms and jitter of 11.21 ms which small-scale standardized systems get good results and are feasible to use. Infrastructure topology can be implemented properly according to the function of Access Point which is the gateway and broadcasting search data to all nodes (NodeMCU series and RFID Reader) Smart Library system.

Keywords : *Infrastructure, Wireless Local Area Network, Smart library, RFID*