ABSTRACT

The development of computer network technology as it is now very wide. One of them the use of WLAN (Wireless LAN). WLAN is a computer network that uses radio waves as its transmission medium. The number of users of WLAN technology in various places to make the amount of data or information flowing in the network need protection from people who are not entitled to access the data or information. This creates a security system in a WLAN network such as WPA2-PSK. WPA2-PSK uses AES (Advanced Encryption Standard) as its encryption. Selection of the selected security system that is WPA2-PSK can be seen the quality of the network by knowing the value of each parameter QoS. QoS is the ability of a network to provide good services. The process of analyzing the QoS of WLAN networks by applying WPA2-PSK is intended to find out the WPA2-PSK comparison using AES and TKIP encryption. By using access point, server and a client computer, the transfer of data packets with different file sizes. Then measured data packets on the parameters of delay, throughput, jitter, packet loss on each encryption. From this research, the average AES throughput result with file size of 15.18 Mbps and TKIP throughput of 18.68 Mbps. For the average AES delay of 0.52 ms and TKIP delay of 0.43 ms the result is good according to the existing standard <150 ms. For the average AES jitter result with each file size of 0.24 ms and TKIP jitter of 2.09 ms the obtained results are in good standard of 0-75 ms. The last result is packet loss AES and packet loss TKIP have the same average that is 0%, and the best results according to the category of packet loss.

Keywords: Wireless LAN, Network Security System, Quality of Service