

ABSTRACT

Software Defined Network (SDN) is the latest technology in lightweight architecture. However, there are still doubts about the security of the network, especially those in the Data Center. Various studies have used many security methods to secure networks on SDN. Such as the Intrusion Prevention System (IPS) and Intrusion Detection System (IDS).

But there are still shortcomings in terms of security which implies the performance in the network. To solve this problem the Method of Packet Inspection (DPI) is used. There are many functions provided by DPI technology in package inspection. DPI carries out exploration from layer 7 (application) to layer 1 (physical), it will make it easier for administrators to monitor and analyze in depth on the changes that are running with real time.

In this final project, the reduction in throughput to an average of 0.00 Mbits / sec and an increase in the latency value of 12,616 seconds caused by DDoS attacks resulted in communication between hosts not running (No route to host). Testing is done on the SDN network that is implemented with the DPI method to produce detection and blocking traffic with the best performance.

***Keywords:**Software Defined Network (SDN), Deep Packet Inspection (DPI), Distributed Denial of Service (DDoS).*