ABSTRACT

Software Define Network (SDN) which is a new technology that refers to a new concept in designing, monitoring and implementing a computer network. Aruba Van Controller has centralized control in a network architecture running on the OpenFlow protocol. Benefits on the SDN network will be used for firewall implementation. By using the SDN architecture to install a firewall, engineers can automatically add rules from an OpenFlow Controller to multiple network devices.

This study simulates block internet access using packet filtering on an SDN network using the Aruba Van Controller. Testing connectivity after installing packet filtering uses 3 methods, namely by sending ICMP packets for testing connectivity between hosts, testing connectivity for 30 times for inter-hosts using ICMP and testing connectivity to websites with the Curl command.

The scenario in the test is to block internet access between hosts and block internet access from hosts to the website. The results of Packet Filtering that have been installed on the SDN network with the Aruba Van Controller run very optimally to filter packets according to the test scenario that has been made, which results in 100% packet loss after the packet filtering rule is installed. The results of connectivity testing with ICMP for inter-host and Curl for host to website in each scenario get an average of 100% packet loss, and for the test results 30 times on inter-host testing using ICMP get an average packet loss value of 100% packet loss, and testing to the website using Curl with the test results to the detikcom website of 100% packet loss and to the Google website of 100% packet loss.

Keywords: SDN, Aruba Van Controller, Openflow, Firewall, Packet Filtering