

ABSTRACT

Virtual data center is one of the technologies that aim to reduce the number of physical data center by creating virtual machines within one physical server. To create a virtual machine on one physical server required a hypervisor. With the creation of the virtual data center so cloud computing technology will be able to implemented. One of the cloud computing platform that can manage the resources of the data center is Openstack. Threats of cloud computing technology is the public ip that highly vulnerable to DOS attacks (denial of service) which are syn flood attack. To prevent that will be built a virtual machine within the virtual data center that will serve as a router and firewall by utilizing technology that supports technology openvswitch SDN (Software Defined Network) using the Openflow protokol and sflow. By leveraging sflow-RT which is sflow collector as detecting attacks and opendaylight which is Openflow controller as pemitigasi attack then attack syn flood attack can be prevented before it enters the virtual machine data center of Openstack.

Keywords: Virtual data center, Openstack, SDN(Software Defined Network), Sflow, Openflow, Openvswitch, Sflow-RT, Opendaylight