ABSTRACT

The current virtualization technology can combine existing resources such as computers, operating systems and storage media to be used virtually on a cloud computing infrastructure. In addition, virtualization technology today also allows network devices to work virtually and no longer depend on their physical devices. As the growth of cloud computing increases the amount of traffic and request on the cloud server services, so the workload received by the server becomes larger.

Therefore, one solution to divide the server workload is to use load balancer. Load balancer is a device commonly used as a traffic load regulator in a network on a number of servers using load balancing techniques. Load balancing is a technique for distributing the traffic load on two or more connection lines in a balanced way, to optimize the traffic, maximize throughput and avoid overload on one of the connection paths.

In this final project has been implemented and analyzed load balancer as a service in OpenStack cloud environment. From the result of the research, it is known that the server performance using load balancing is better than the single server, because the workload and traffic load are no longer served by one server again but the load is divided into three servers and on the load balancing system there is a health monitor that can Reducing the number of queues. In this research is also known, the algorithm is best used for load balancing is least connection, because it can minimize the number of frame drop and decrease CPU Utilization by 17%.

Keywords : *LBaaS, Load Balancing, NFV, OpenStack, Cloud Computing*