ABSTRACT

The development of internet services is supported by adequate network infrastructure. Network infrastructure services such as routing, traditionally using proprietary hardware. Virtualization technology on network function or NFV (Network Function Virtualization) makes this service can be implemented as a software application that can run in virtual environment called Virtualized Network Functions (VNFs). In general, this service uses hypevisor (hardware-level virtualization) to create a virtualization environment, but now virtualization technology has an alternative implementation using the technology containers (Operating system-level virtualization). Containers in its development become one of the technologies that have a good performance in isolating and running applications and have a low latancy delay. So it can reduce the application and operation of the application. Containers can also be implemented on an NFV that can build virtual environments to perform networking service functions.

In this final task will be tested that resulted analysis of a containers by using platform Docker that will run VNF in the form of virtual router. This study aims to determine the performance of Docker when running a virtual router that is passed by FTP service and streaming video using delay, packet loss, jitter, throughput parameters.

From the results of testing and analysis, it can be concluded that both services run well on the NFV network on the Docker Container. Based on testing on both services, it can be proven that the built network has good performance, it can be proved in the measurement results where the test using video streaming service and FTP meet the criteria of ITU-T G.1010 standardization.

***Keywords**: Containers, Docker, Network Function Virtualization, QoS.*