ABSTRACT

Virtual Network Function (VNF) is a network function that has been abstracted. VNF need to be implemented on a virtual environment, like hypervisor and container. VNF has the same function as it physical hardware. But, it doesn't mean that VNF has same performance level as its physical hardware.

A VNF in the form of vRouter (RouterOS) run on top of a hypervisor (VMware ESXi) has been tested on this research. This reseacrh has been done by doing user benchmark to test vRouter performance based on throughput, jitter, packet loss, latency and cpu usage. Then, increasing the vCPU on the VM to see if the amount of vCPU affecting the performance result of vRouter.

The test results and analysis showed that vRouter with same specification as its physical hardware has 42,07% less performance than its physical hardware. But, if we increase the capacity of its vCPU, it will increase the performance by 13% more than its physical hardware. So, vRouter need more vCPU capacity so it can match its physical hardware performance.

Keyword : *virtualization, nfv, hypervisor*