

ABSTRACT

Virtualization is running on top of hypervisor which is a program for creating and running virtual machine. Virtualization also managed a number of hardware resources such as RAM, CPU, and storage owned by the original hardware to be used in conjunction with the virtual environment. One implementation that can be used with virtualization is the Network Function Virtualization or commonly called NFV. This concept utilizes virtualization technology to create a Virtualized Network Function (VNF), which has the same function with the original device.

In this final project research conducted about the performance of bare-metal hypervisor (XEN, VMware ESXi) and hosted hypervisor (Kernel-based Virtual Machine, or KVM). This study aims to determine the performance of the hypervisor third in the running VNF with overall performance parameter (IOzone read and write, speed ram, cpu intensive test and unpack the kernel), throughput, and scalability.

From The test results and analysis can be concluded that the system can run VNF on different hypervisor. For the overall performance metrics, XEN has the highest value of 88.20% with a performance of the server hardware. For throughput parameters, KVM has a top speed performance with throughput 19.29 GB / s. As for the parameters of scalability, VMware has excellent scalability shown by its slightly performance degradation in throughput when running multiple VNFs.

Keywords : Virtualization, Hypervisor, Network Function Virtualization