## *ABSTRAK*

*Developments in technology and data communications have reached a stage where all the hardware has been using IP-based intelligent control system that can be controlled through a data communications at speeds up to Gigabyte persecond. But the problems that exist today, the development of data communications technology are not offset by the development of the network and its access speed reliable access to Virtual Machine. Therefore, we need a system that Vitual dynamic, efficient, and reliable to support those needs.*

*Model system Define Software Network (SDN) over OpenStack is one innovation of open source-based access network systems managed by OpenStack Foundation. OpenStack system is able to cope with the problem, especially management device Virtual Machine in the provision of network devices very much so as to minimize the number of network devices without compromising the reliability of the network, because in this system using Platform Nova particularly nova-scheduler and nova-compute reliable to manage the needs of virtual processor, RAM and hard drive partition data for a Virtual Server or other network devices.*

*From the results of the design platform nova in this thesis can be concluded that the performance nova platform can be said to go well from the start to launch the instance using the ISO image to the average spawning time of 9.5 seconds and 14.84 seconds for the image Qcow2. Server performance can be said to be going well with the conditions 1 to 4 compute ready burdened by a scalable virtual machine CPU Utilization rose to 97.61% and then back to normal at startup is completed ie 5-7%. The length of time is influenced spawning of large / small specifications measurable flavor used flavor m1.small 14.84 seconds and using flavor m2.small 16.2 seconds*



***Key Words** : OpenStack, SDN, Neutron, Virtual Switch, Virtual Server, Virtual Machine, Nova, Nova plugins, Icehouse, cinder, glance, swift.*