

## **ABSTRACT**

*Service Infrastructure as a Service is a type of cloud computing that rent the server resources in the form of virtualisasi. User can easily arrange infrastructure such as, media storage, memory, operating system, network capacity and others, which can be used by a user to run the application. but to build cloud computing resource needed very large computers and need more than one network card. To resolve the problem created an infrastructure as a service cloud computing system. Systems designed in this final project using a laptop and use suse openstack cloud.*

*System infrastructure as a service that is built using a single controller and node one node in the cluster, compute to run on a different laptop, using one network card, the two systems that are connected to the switch, the two systems are set by admin node so that the system can be set up easily. The configuration method that is used to build a system do with port Preboot Execution Environment (PXE) which can be done automatically. so that makes it easy for cloud engineer in the configuration node en masse.*

*Based on the test results of this final project is, at the system's cloud are built there are made there are 5 types of services i.e. packages save money saving packages 1, 2, business package 1, business package 2 and enterprise packages. Each service is made with different spesifikasi. In the package 1-efficient maximum instance running as many as 13 instance, using CPU resource with the value of the average 75.18%. RAM is used on a system with an average of 2802996.4 Kilobytes of storage usage and total 6.6 gigabytes. Maximum 2-saving package instance running as much as 6 instances, using the resource of CPU with an average rating of 73.3%, RAM used on a system with an average of 6.6 3066192 Kilobytes and gigabytes of storage. Business package 1 maximum instance running as much as 3 instance. Resource is executed simultaneously wear the CPU with an average rating of 73.3%, system RAM with an average of 3137918.4 Kilobytes and storage 6.3 Gigabytes, business package 2 maximum instance running as much as 1 instance CPU resource value of wear average 75.26% and RAM is used on a system with an average of 2898152.6 Kilobytes and storage 6.1 gigabytes. On the package maximum enterprise instance running as much as 1, the unused CPU resource with an average rating of 75.16% and RAM is used on a system with an average of 2937609.2 Kilobytes and storage 6.1 gigabytes. So the smaller the specification of flavor that made the more instance that*

*can be run or the greater specification of flavor that made the slightest instance that can be run.*

***Keyword : Infrastructure as a Service, Cloud Computing, SUSEopenstack***