

## ABSTRACT

The advent of IP-based network is one big step in the field of telecommunication network and IP network, because we could miss the wide range of data, goodsound, pictures, video, etc. Next Generation Network(NGN) is one of the IP-based technology. This makes a wide range of devices from different platforms forconnected.VPS technology is a technology that leverages virtualization, so the user doesn't need to know the physical form of the existing infrastructure. The prevalence of the concept of virtualization of release physical dependence, as in the VPS itself can be madeof more than one physical, so that can minimize costand physical devices that exist.

In this final project implemented VoIP server on a VPS (*Virtual Private Server*) based OpenVZ virtualization and VoIP Server on a dedicated server. By using a PHP script that is run on the server, so that both other VoIP server can make calls and receive calls, this can be known with capacity of calls that can be handled by a VoIP server.

From the measurement results it can be concluded that the performance of *dedicated* server tend to be better than VPS server, it can be seen from the value of the *CPU usage* and *memory usage* from both servers. The highest value of *CPU usage* from VPS and *dedicated* server are 61.4% and 57.6%. *Memory usage* of dedicated server, is higher than VPS when using 2GB and 4 GB of RAM, but *Memory usage* of dedicated lower than VPS when using 6GB of RAM, dedicated 4.9% and VPS 14%. From delay and throughput measurement results obtained highest delay value for VPS is 21.564 and for dedicated is 21.564 ms. Both are well categorized according to the ITU-T and *throughput* highest value of VPS is 0.089Mbps and for dedicated is 0.088 Mbps. All of them is considered as a good value based on ITU-T standardization.

**Keyword** : *Virtual Private Server, virtualisasi, OpenVZ, VoIP*