

## ABSTRACT

Virtualization is a technology that allows us not see the real specifications therein such as operating systems, data storage, memory and even bandwidth. Virtualization technology can be underlies the emergence of new technologies. The technology is cloud computing technology and VPS. Cloud computing is becoming the trend of today's technology, so many companies that utilize this technology by offering services where computing resources include software, infrastructure, or virtualized platforms, and can be accessed as services on the internet form. In the same context, VPS virtualization technology also offers the flexibility to support user mobility as well.

By using Proxmox VE as virtualization engine, in this final project implemented and analyzed the performance of VoIP server with cloud computing technology and VPS based OpenVZ. In this case i use the asterisk as a VoIP server 11 that implemented to build a VoIP service to customers.

Based on the results of measurements of cloud computing performance, show that the cpu usage of a master slave only reaches 0.55% and at idle condition Node reaches 15-16%. Likewise on the memory usage of cloud computing in the Node reaches 366 MB and the master slave only 269 MB. In the VPS host, memory usage early (up idle) is at 500-512 MB. While the VPS host cpu usage is at 2.75% at idle. Based on the data, preferably cloud instance in terms of MIPS. In the QoS measurements showed that delay in cloud computing instance showed 58.57 ms whereas in VPS showed a delay of 57.67 ms and 34.04 ms at dedicated. Based on ITU-T standard delay < 150 ms, then QoS is still considered good. Jitter on a dedicated reached a value of 0.51 ms and 0.209 ms in the cloud. The lowest value contained in the VPS to 0.175 ms. While the performance servers effect on reliability MIPS to handle the number of simultaneous calls. In this case MIPS of VPS smaller than the cloud and dedicated. The highest number of successful calls are on a dedicated server.

**Keywords :** *VPS, OpenVZ, cloud computing, VoIP, Asterisk*