ABSTRACT

Cloud is a primary requirement for all people especially in the digital age. VoIP and video call is a service which is supported by opennebula cloud architecture, one of them a SIP server that kamailio can be integrated with opennebula. The problem arises when VoIP will be the need of the increasing need for technology to communicate with IP-based multimedia services.

To address the above, then made an implementation technology cloud opennebula used as VoIP providers-based voice and video call. Opennebula cloud is used as a place to set up the resource that is used as a VoIP server. VoiP servers being used i.e. kamailio SIP server. On the client side software used linphone. The hardware used in the form of a smartphone and a laptop that is used as a medium to make calls.

In this final project obtained the results of QoS and performance. On testing performance found that the best results on VoIP on the specs of ram 3 GB and 10 GB disk. On the results of testing performance used 10 users communicate with each other indicates that the increase in ram usage, disk usage and cpu usage occurs because the user who did the amount of ascent of the call. On the measurement of Qos for voice and video call at a distance of 7 metres was obtained the result that communication VoIP get the best results. At a distance of 7 m obtained results of voice delay average 0, 1ms, average 76Kbps throughput and packet loss average of 0.05%. On a video call results obtained result delay on average 8, 81ms, 410Kbps average throughput and packet loss average 0.07%.

Keyword: Operating Systems, Cloud, Opennebula, Server, QOS