

## ABSTRACT

Voice Over Internet Protocol or VoIP is a technology that allowed packaged form of voice, video and data to get through internet protocol network. Cloud Computing technology is an internet based computation which contains resources like processors, storages, networks, and *software* that have been virtualized and given as services on internet. This virtualization concept allows us to develop more than one physical services on cloud computing in order to use physical resources efficiently. Users usually have Personal Computers as their access medias. The efficient use of computers or access media can be overcome with Thin client network. The problem is we still don't know whether the quality of the services will be better than that of access media network without thin client.

On this final project, asterisk server will be implemented on cloud computing as dedicated server by using Proxmox VE which is connected to main computer. This main computer will be connected to Thin client to access VoIP services. At this point, Thin client is used as a client that is basically a tool connected to monitor, keyboard, mouse act just like main computer.

Based on test, we get the difference on some QoS parameters like delay, jitter, and throughput between Asterisk server with thin client network and without thin client network. We get the result that VoIP services on thin client network is better based on parameters average with 20.41 ms of delay, 1.31 Mbit/s of throughput. In Non Thin Client Network, we get the result 22.15 ms of delay , 0.21 Mbit/s of throughput. Whereas QoS with two voip calls in non thin client network is 18.26 ms of *delay*, 0.464 Mbit/s of *throughput*, in thin client network is 20.285 ms of *delay*, and 0.761 Mbit/s of *throughput*.

**Keyword** : *Cloud Computing, Proxmox VE, Thin Client, VoIP, Asterisk Server*