

ABSTRAC

Nowadays, PBX central has developed to be a IP-PBX (Internet Protocol – PBX), because of IP-PBX have many more function than PBX. Not only easier in control but also more efficient in cost. Because IP-PBX need less cost to develop and maintenance it self. Also, IP-PBX support VoIP application so user could be add by using softphone.

On this Final Assignment, make an IP-PBX server using PC was done. In this context, use Asterisk software which is open source so cheap and easy in next developing. Next, compare and analyze VoIP performance between using one server and two server. Quality of Service that measured are call bandwidth, delay, jitter, throughput, and packetloss. Next, use R factor to count the MOS value. End to end configuration done with several scenario which divide into few case.

The result from measurement then analyzed and get parameter values which are totality in good level, so using VoIP communication between two IP-PBX central fairly good to use.

Keywords : IP-PBX, Asterisk, VoIP, QoS, MOS