ABSTRACT

VoIP (*Voice over Internet Protocol*) is a technology that transmits voice over IP (Internet Protocol) network. The weakness of *VoIP* over conventional telephone is poor sound quality. This is due to poor service quality and server deployment could be placed in different geographic areas and difficult to send VoIP over the internet, this can increase operational costs. Therefore, cloud computing is the solution in the problem of service improvement. Other than that, service improvements can be made with the selection of the right codec. It underlies this research to analyze the quality of VoIP services on Amazon EC2 cloud computing by comparing three different codecs, namely G.729, G.711 alaw and iLBC. The quality of services of VoIP can be measured by calculating the value of MOS (Mean Opinion Score) in a subjective and objective way. In this research got that in subjective obtained codec G.729 better, while in objective obtained that G.711 alaw codec better. G.711 alaw, G.729 and iLBC are suitable for use in the cloud. **Keywords : VoIP, EC2, MOS, G.729, iLBC, alaw**