ABSTRACT

DESIGN OF SERVER VOIP BASED HPC CLUSTER ON LAN NETWORK USING MPI

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VoIP (voice over internet protocol) is the capable technology to slide over sound or video through IP network. Since success of sound transfer through IP network with best quality, emerge largely sound transfer through package network (IP). At the moment that used general processing sort in server VoIP namely single processing.

Beside that bandwith, server appearance increasingly influences resulted VoIP service quality. More and more good appearance of server VoIP, then more and more good resulted service quality. Therefore, required high specification computer in order to resulted VoIP service more and more good. Parameter of the VoIP service quality can be measured from delay, jitter packet loss, and mos that occurs in communicating.

Parallel processing today is implemented in multimedia managing. It is very diverse such as HPC cluster. With implementing HPC cluster, we can work together combine several computer with lower specification in order to work together in finishing the project. Hence, in this mini thesis will combine two computer that has lower specification as based-VoIp server that has high computer specification. In this examination , observed parameter includes delay, jitter packet loss, and mos which occur when 10 users employs communication.

From the examination result that carried out on banwith 256 Kbps, 128 Kbps, 64 Kbps on server single PoIP and based- HPC cluster. Conclusion that resulted sound of single server VoIp more good than based- HPC cluster. Significantly sound slope occurs on banwith 64 Kbps with 10 users. Nevertheless, sound quality average that resulted in good category.

***Keywords**: VoIP, HPC cluster, delay, jiter, packet loss*