ABSTRACT

Communication technology is one of the most important factors in aspects of life in the fields of science, business, and economics. One of the current technological developments is Voice over Internet Protocol (VoIP) where we can communicate via the Internet. In addition we need instant access to get information to be efficient in terms of time. On the other hand, this development requires a network infrastructure needs are very important both bandwidth requirements for the delivery of voice as well as system reliability in doing ministry. Here will be tested the feasibility of a click to call service are passed to IP-based networks

This final project implements the click to call services on an application server Mobicents that stand-alone. Of this implementation further analyzed call on the server from the aspect of its QoS parameters delay, jitter, packet loss and throughput. Additionally, it will be analyzed from other parameters, namely the post dial delay, CPU usage and memory usage. The analysis was performed based on the test results the process of sending the next command on the system for sending sound from client to client server towards the other and the background traffic. In this final project also tested on the performance of servers with wired and wireless media.

From the testing and analysis of one-way delay values obtained by 19.99319104 ms, jitter 0.307859479 ms, throughput 10732.4619 bytes / s, packet loss 0% and total PDD 0.277226437 s. Then for background traffic at 80 Mbps maximum value delay 19.9940779 ms, jitter 0.50287242 ms, throughput 10727.92687 bytes/s, packet loss 0% and total PDD 0.309896433 s. Then for the value of CPU usage and memory usage is highest row 11.34% and 29.4%. The results obtained are still below the maximum limit of standardized ITU-T, Cisco and the IETF, it is concluded the system can function properly. As well as using wired media will result in better performance than using wireless media.

Keywords : Click to call, VoIP, Mobicents, QoS, Post Dial Delay