ABSTRACT

The need of adequate bandwidth, high mobility, and multimedia services, at this time issued of IMS technology concept (IP Multimedia Subsystem) to complete the NGN technology (Next Generation Network) based *Softswitch*. Occurrence of the new concept of technology is to encourage companies and research institutes to implement in the form of software (for example, asterisk and OpenIMS). Software - software if installed on the computer can be act as a server with variety services. Those servers have each advantages and disadvantages. The problem that arises is how the servers can be connected each other, so each client and server can be interconnected.

Asterisk and OpenIMS use SIP signal protocol to enable both of them to be connected. To facilitate the relationship of both, can be used Enum server that is able to translate the numbering address such as PSTN (E.164) to URI address (Uniform Resource Identifier). In this final task, OpenIMS and Asterisk server is interconnected through Enum server. Then analyze the server performance and value of PDD (Post Dial Delay) from that system.

From the test, we obtain the maximum PDD value is 493.656 ms for a call from OpenIMS user to analog Asterisk telephone (FXS) with a arrival call each servers is 30 call/s. OpenIMS able to serve maximum 30 call/s with computer processor 1.55 GHz, while the Asterisk with computer processor 3.0 GHz able to serve maximum 55 call/s. Enum on server with 1.15 GHz computer processor capable of serving maximum of 8156 queries / s.

Keyword : NGN, OpenIMS, Asterisk, ENUM, PDD