

ABSTRACT

Currently, the development of telecommunications network technology advanced by leaps and bounds. Human needs are growing and diverse push information technology. Next Generation Network (NGN) is a network of the future that can be convergence of all platform-based network with Internet Protocol (IP). Embodiment can be supported by the NGN softswitch. The emergence of the concept of the technology is pushing many companies and institutions - research institutions to implement in software OpenIMS example, OpenSIPS, Asterisk, Trixbox, etc.. Software - the software if it is installed on a computer can be a *server* with a variety of services. *Server* - the *server* has its own advantages and disadvantages of each - respectively. The problem that arises then is how to keep the *server* - the *server* can be connected to each other, so that each *client* - each *server* can be interconnected.

OpenSIPS, OpenIMS, and Asterisk using the SIP *signaling* protocol to allow for interconnection. To facilitate interconnection, Enum *server* that can be used to translate the address numbering as PSTN (E.164) to address the Uniform Resource Identifier (URI). At this final project implemented and compared the performance of interconnection OpenIMS and OpenSIPS with Asterisk VoIP services.

Of testing and analysis obtained when comparing the interconnection between Asterisk OpenIMS and obtained the highest value of 0.62841 s with PDD call rate 250 s cps while interconnect OpenSIPS and Asterisk 0.61245 s obtained by call rate 250 cps. For SIP to PSTN communications, Asterisk interconnection between OpenIMS and obtained the highest value of 2.89814 s with PDD call rate 250 cps while interconnect OpenSIPS and Asterisk 2.6299 s obtained by call rate 250 cps. In addition, an analysis of the system, the QoS parameters and PDD.

Keywords: NGN, OpenSIPS, OpenIMS, Asterisk, ENUM, VoIP, PDD, QoS