

ABSTRACT

NGN (Next Generation Network) is a global network in the future that integrate all the services the application service especially application service based on Internet Protocol (IP) or often called to as the IP-based application. At this time the development of IP based services that have been many applied , including VoIP, *e-mail*, chat, IPTV and the others. But for now many services are still separated with other services. The problems that arise and how to integrate the *servers* of each service's purpose to complete the NGN.

This Final Project is integration of VoIP (Voice over Internet Protocol) *server* with the *E-mail* (Electronic mail) *servers* and the interconnection with enum (Electronic Number Mapping) *server*. The integration of these have new services, namely *voicemail to e-mail* and click to call. Service result of the implementation of which is then analyzed the value of PDD (Post Dial Delay) for the click to call service, and analysis of system performance in handling the *voicemail to e-mail* service.

Delay obtained from the testing process asterisk are 355,803 ms, 0701 ms for enum, for HTTP (Hyper Text Transport Protocol) request Zimbra 21,163 ms and 9808 ms for Router. The value of PDD PC to PC without enum is 1151 s for traffic call 35 call/second, and background traffic 90Mbps. While for the PC to PC with enum are 1321 s and to the PC without FXs enum are 0.2357 s and 0.2580 s with enum. System capability to serve *voicemail* services are for large files *voicemail* service over the 50KB *many voicemail to e-mail* service can handled depends on the ability to serve in the Zimbra *server* message every minute. While for *voicemail* files less than or equal to 50KB *many voicemail to e-mail* service can handled are 300 per minute.