ABSTRACT

Nowadays, the development of technology is direct to the NGN concept, where the calling process will be based on IP. Different addressing system between packet and circuit network is become a barrier. The solution to consolidate those different platforms is Electronic Number Mapping or ENUM. ENUM can make phone number into domain name by using Domain Name system architecture. In the implementation IP user can contact PSTN user only turned around ENUM number.

To know how communication path between user IP with E.164 user, has been done research at TELKOM. In the laboratory Examination infrastructure set in such a manner so almost near real condition. Research done by doing some call from IP phone, like call from IP to IP, IP to PSTN, IP to CDMA. This research focus of SIP protocol and then is tested comprehensively use of PDD parameter and also of each type ENUM Server like response time and troughput performance

Analyzing has been done to know call flow with ENUM implementation and then to know lookup time from SIP proxi to ENUM server. From measurement result obtained that for call between IP Phone lookup time of ENUM number still below the mark lookup specified By IETF that is under 0.02 second And while for call IP Phone to other network like PSTN and CDMA lookup time of ENUM number still below the mark lookup specified By IETF that is under 0.32 second. For ENUM server performance based on trial result is can handle more than 7400 query / second with response time 0.0002 second / query.

Key words : ENUM, VoIP, PDD, Response Time, Troughput