

ABSTRACT

Voice communication facility that usually given by circuit network or PSTN, in this time start to shift at IP network as media of data delivery.

Voice communication on packet data network called by VoIP (Voice over Internet Protocol). VoIP and all future multimedia communication will be transport into an IP network that usually called by NGN (Next Generation Network). NGN is a data network which can accommodate service of data communications and also communications voice. For that, NGN requiring a device which one of them is softswitch. This softswitch concept is including on IP-PBX telephone exchange.

PBX (Private branch Exchange) is a telephone exchange that serves analog communication for business office, while IP-PBX is a PBX that serves a voice communication based on circuit and data network. IP-PBX able to handle switching process of voice communication with circuit network and IP network, and also able to interconnect both of that network.

In final assignment that entitling “VoIP Development on IT Telkom Existing Network Using IT Telkom IP PBX And Asterisk Server” build a VoIP communication that integrate with analog networks in IT Telkom using an IP PBX and Asterisk Server. On the build the system get the result that Asterisk server use 3 % of load processor and 1% add of memory used when handle 9 simultaneous call from SIP asterisk to analog IP-PBX. Asterisk used 1% of load processor and 1 % add of memory usage when handle 9 simultaneous call From SIP to SIP. The result of Mean Opinion Service (MOS) is a 4.0 until 4.1 for all calls

Keyword : *VoIP, Asterisk, IP-PBX, Integration.*