

ABSTRACT

The development of network world to NGN (Next Generation Network) that base on IP (Internet Protocol network) having difference with existing telephony network that base on circuit switch. Therefore needed a migration step by step so that IP network which be established have compatibilities with circuit switch network which there have. The mentioned intended in order to service at telephony network remain to be used and connected to the IP network. One of its solution that is softswitch. Softswitch is technology which have capabilities to bridge between data packet network with telephony network. One of software having ability from softswitch that is Asterisk.

The Service at telephone network which often used not only voice service but also fax delivery. In order to support NGN being based on IP it's there are afforded of delivery fax through IP network to telephony network and its integrated with VoIP service. Therefore at this final project will be implemented sending fax over IP network to telephony network using Asterisk Softswitch. This final project is built by Asterisk Softswitch including hylafax as IP-PBX and Fax server, Avantfax as fax client, Cisco Router 1750 series as gateway to telephone network, ANS central as central of telephony network and Panasonic KX-FT 931 as machine of receiver fax.

After the examination of delivery fax from IP network to phone network, it's got by a the following result: pursuant to responder assessment, at first and second scenario that is examination of LAN private with/without background traffic and Third scenario that is examination where client-server differ subnet and server-gateway in one subnet, obtained a quality above 3 so that its categorized medium. At scenario 4 where client, server and gateway differ subnet, obtained value below 3 so that its categorized bad quality. Pursuant to average measurement got biggest jitter 0,14 ms and biggest packet loss 4,56% while smallest jitter equal to 0,08 ms and smallest packet loss 0%. There are correlation result of responder assessment and measurement with packet loss and jitter which there are gateway and server that ever greater of jitter and packet loss that happened moment of packet delivery from server to gateway hence bad progressively quality of printed fax.

Keyword : Asterisk, Hylafax, jitter , packet loss, quality of printed fax.