

ABSTRACT

As the fast growing of telecommunication technology, prosecute the telecommunication service provider to increase the services. PT. Telkom, as one of the big telecommunication service provider in Indonesia, plays an important role in increasing the quality of telecommunication service. Next Generation Network becomes an interesting issue in the growing of telecommunication services. A migration from circuit switched into packet switched, motivates the service provider to using IP-based equipment. Softswitch is one of the equipment that supports this development, and it already used by PT. Telkom since 2004.

Telecommunication network performance cannot be separated from the network performance parameters, such as Answer Seizure Ratio, Mean Holding Time Seizure, and Occupancy. One of the performance indicators is call handling capability during busy hour. Busy Hour Call Attempts is call processing parameter from a switching system that generally used in Time Division Multiplex network. Call processing softswitch measurement using BHCA, is still relevant because it provide the same service, voice service.

This research conducted softswitch performance analysis in PT. Telkom, which serves four kinds of connection, Local Exchange (PSTN), Trunk Exchange (SLJJ), Fix Wireless Access (Flexi), dan Other License Operator (Cellular). Performance measurement will analyze level of Answer Seizure Ratio (network density level), Mean Holding Time Seizure (holding time level), and also Occupancy (circuit load traffic level). From the measurement result, ASR level revolve around 60% for Local Exchange, 63% for Trunk Exchange, 40% for Fix Wireless Access, and 30% for Other License Operator. For MHTS level, Local Exchange revolve around 1,3 minutes/call, Trunk Exchange 1,2 minutes/call, Fix Wireless Access 0,85 minutes/call, and Other License Operator 0,5 minutes/call. Based on those parameters, can be measured Quality of Service from softswitch usage, with Busy Hour Call Attempts approach. From the result, it shows that the Quality of Service from softswitch usage is still need to improve.

Key word: Next Generaion Network, Softswitch, Quality of Service