

ABSTRACT

VPN (virtual private network) is private network connection through public network (internet). VPN building is a solution to provide a secure private network and cost less than leased line. The selecting of VPN protocol will influence the level performance and security of the network. SSL is one of internet communication protocols which provide security facilities, such as secrecy, totality, and validity (cryptosystem) in transport layer. SSL is suitable for VPN network which has many user lines, but tunneling bandwidth of SSL is wide enough. The other cryptosystem protocol is IPSec. Different with SSL, IPSec works in network layer. IPSec is more suitable for static access network which has fewer user lines.

This final project implement VPN network with SSL protocol and IPSec, using similar operating system. From the implementation, some trials will be done to find the quality of performance of each VPN network.

The result of this final project prove that the used of VPN SSL give the better QOS than IPSec for delay, throughput, and jitter. But for the packet loss SSL and IPSec give the same result for QOS.

Keywords: Virtual Private Network, Secure Socket Layer, Internet Protocol Security.