

ABSTRACT

Computer network has become a very important need for the live of bussiness in many company. In the old days, a lot of company built their own backbone network between their branch offices that required a very high cost. Internal data security of a company, reability and network availability becomes a reason why did they build a closed internal network.

Internet is a public network that has been develops very fast. Right now POP (point of present) is all over the city. But from the very beginning the internet protocol was design without concerning deeper security aspect. Virtual Private Network is developed to answer the requirement. By using tunneling, VPN make possible to build communication between computers through the public network just like communicating in a private network. With the use of encryption and autentification the security data is guaranteed.

There are several methods to build VPN network, some of them are IPsec and SSL based. The goals of this Final Project are to test the network performance from both methods. The level of security differs with the result of the network performance.

The result of this research concluded that VPN implementation using IPsec has better network performance compare to VPN implementation using SSL in the aspects of troughput and delay. But has no effect to packet loss.