

ABSTRACT

Progress in developing the provision of information technology in line with an increasingly diverse user needs, which is why the internet became very popular. Wireless technologies are required to be able to provide good quality for the user in a static condition in a user's location or when the user moves across the range of one access point to another access point. Meanwhile, to maintain the data connection without being terminated, must be created good handover system, this can be resolved by applying Mobile IP technology.

In the implementation of Mobile IP with other innate abilities such as simplifying the header and support QoS guarantees owned IPv6 can provide the highest quality multimedia services for each user.

The security to be something else that should be considered in the transmission of data, this involves the confidentiality, authenticity and validity of user data For that IPSec is emerging as one solution to support the security side.

In this final project of Mobile IPv6 in the IPSec system with services such as video on demand to determine system performance with IPSec feature activation.. Analysis was performed on network performance regarding handover delay, throughput, packet retransmission, and round trip time.. From the data obtained average handover delay decrease 72%, average throughput decreasing 3.65%, average packet retransmission 0.049973% from situations without applying IPSec feature. In addition, from data obtained a conclusion that the movement toward mobile node home agent will give the better handover delay and packet retransmission than the movement out of the home agent and between foreign agent.

Keywords: MIPv6, video on demand, IPSec , handover delay