Abstract

In computer network the selection of the best path from source address to destination address is very important. The protocol used to do this is routing protocol with support by a device called router. In IPv6 there are some of routing protocol supported and among of them are Enhanced Interior Gateway Routing Protocol (EIGRP) by distance vector approaching and Intermediate System to Intermediate System (IS-IS) by link-state approaching.

In this Final Project analysis and testing were conducted to determine the routing protocol which has better performances on a network that use IPv6 addressing. Five parameters were used to measure the performances are convergence time, overhead protocol, throughput, packet loss, and delay.

Based on results obtained for every routing protocol, scheme, and scenario, EIGRP has better performances in every parameters used rather than IS-IS in IPv6 network. To reach convergence state EIGRP is faster than IS-IS. Overhead given by EIGRP is less than IS-IS. EIGRP has higher throughput than IS-IS. Also EIGRP has lower packet loss and delay than IS-IS.

***Keyword**: Routing, EIGRP, IS-IS, IPv6*