## ABSTRACT

As the growth of telecommunications world, the use of Internet Protocol (IP) as a method of network addressing is very extensive. Presence of Internet Protocol version 6 (IPv6) are more numerous than the Internet Protocol version 4 (IPv4) as the number of IP-based addresses the need is increasing. In the turn of the IP version used in addressing the transition process requires a method, because in real networks would be very difficult to replace the old IP addressing simultaneously. Tunneling become one of the methods to make the process of transition.

This final task is to perform the testing and analysis of the tunneling method used on a web server that has redundant systems. The selection of a redundant web server as the current testing because web server reliability demanded will handle requests to the server. Client will access services from the HTTP server. It will then testing the throughput, loss request, and response time

From the test results obtained by the Performance of load balancing is better than the single server that works. The effect of tunneling on the network configuration makes the results with a lower value when compared to pure IPv4 configuration.

Keywords: IPv4, IPv6, HTTP, Tunneling, Web Server, Redundant, Request Loss, Time Response