Abstract

Virtual Router Redundancy Protocol (VRRP) is a protocol that has responsibility to takeover process in a Local Area Network. With VRRP , if router act as master router and it has link failure then VRRP has capability to manage mechanism of data packets routing so the data packets can be routed to back up router that has been prepared before.

Open Shortest Path First (OSPF) is a standard routing protocol that has a high convergence rate and use the metric as its cost calculations. In the OSPF, there are designed router (DR) and backup designed router (BDR) which have a function when link failure occured on the DR, packets delivery will be transferred to BDR to be forwarded to the destination.

In this Final Project were conducted to determine the routing protocol which has better ability in handling the failure of the primary router based on the parameters tested, namely recovery time, average delay, throughput, protocol overhead, and use of resources (cpu and memory) on the router and to find out optimal configuration for each routing protocol that has been tested in order to have better capability in handling the primary router failure.

Based on the analysis results obtained, modification of VRRP can handle primary router failure better. In the experiment results obtained modification of VRRP has a good value for recovery time, average delay, and throughput.

Key words*: Open Shortest Path First, Virtual Router Redundancy Protocol, the primary router failure, link failure.*