

## **ABSTRACT**

### **PERFORMANCE ANALYSIS OF OSPF AND EIGRP ROUTING PROTOCOL ON FRRROUTING**

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*Routing protocol gets a very important role in the modern world of communication in sending data packets from a sending computer to a receiving computer. In the process of network routing determines whether or not the routing protocol is good, namely where data packets are sent or lost in the process of sending data packets, this is because each routing protocol has different characteristics. There are two kinds of routing, namely static routing and dynamic routing, where static routing does not use a routing protocol, while dynamic routing uses a routing protocol consisting of EIGRP, RIP, BGP, IS-IS, and OSPF, each of which has advantages in its implementation. EIGRP is a routing protocol that has distance vector characteristics. Meanwhile, OSPF is a routing protocol that has link state characteristics. In this study, performance testing was carried out on the OSPF and EIGRP routing protocols using FRRouting. FRRouting is open source which implements all dynamic routing protocols. In this research, it will be tested how well it sends data packets on the OSPF and EIGRP routing protocols using FRRouting and then analyzes the QoS (Quality of Service) parameters, namely throughput, delay and packet loss. This test uses five variations of data packet sizes, namely 10MB, 20MB, 30MB, 40MB, and 50MB which are tested on the TCP and UDP protocols. From the test results obtained parameter values, for the OSPF routing protocol to get better performance than the EIGRP routing protocol.*

**Keywords: Routing Protocol, OSPF, EIGRP, Free Range Routing, QoS**