

ABSTRACT

PERFORMANCE ANALYSIS OF EIGRP AND RIPv2 ROUTING PROTOCOL ON FRROUTING

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The development of computer networks in the era of globalization is currently progressing rapidly. Computer networks are becoming increasingly influential, with almost everyone using computers for data transfers, resulting in chaotic traffic. Routing protocols can manage this traffic to make it more organized. The routing protocols used are RIPv2 and EIGRP, which fall under the category of dynamic routing. GNS3 serves as a platform used to design and configure RIPv2 and EIGRP routing protocols using IPv4, with the router being FRrouting. Wireshark is employed to measure the performance results of quality of service, including packet loss, delay, throughput, and jitter. EIGRP outperforms RIPv2 by 2.187% in the TCP packet loss parameter. EIGRP outperforms RIPv2 by 18.186 ms in the TCP delay parameter. EIGRP outperforms RIPv2 by 133,876.167 Kbps in the TCP throughput parameter. EIGRP performs equally with RIPv2 in the UDP packet loss parameter. EIGRP outperforms RIPv2 by 0.899 ms in the UDP delay parameter. EIGRP outperforms RIPv2 by 0.009 Kbps in the UDP throughput parameter. EIGRP outperforms RIPv2 by 0.075 ms in the UDP jitter parameter. In conclusion, EIGRP is superior to RIPv2.

Keywords : Routing protocol, RIPv2, EIGRP, FRrouting, GNS3