ABSTRACT

ANALISIS PERFORMANSI OSPF dan IS-IS PADA JARINGAN IPv4 MENGGUNAKAN FREE RANGE ROUTING

By

Frantino Senegal

21102225

In the current era of globalization, computer networks are increasingly influential, and almost everyone uses computers to communicate, resulting in chaotic traffic. Routing protocols can organize traffic so that it is more directed. OSPF and IS-IS protocols are included in the dynamic routing type, and GNS3 (Graphical Network Simulator 3) is used to create and configure this routing using IPv4. This research analyzes the performance of two main routing protocols in an IPv4 network environment using the FreeRange Routing platform. These protocols are OSPF (Open Shortest Path First) and IS-IS (Intermediate System - Intermediate System). Quality of Service (QoS) is a method for measuring the quality of network services. In this study, six Free Range Routing routers were connected to each other. Alpine Linux is used as a server and client, and iPerf3 is installed. iPerf3 is used to test data packet delivery; The data sent is in the form of TCP and UDP packets with sizes of 512Mb, 1024Mb, and 1536Mb, and data is sent ten times for each data load. The test results show that OSPF routing has an overall good QoS value compared to IS-IS routing.

Keywords: *IPv4, IS-IS, OSPF, Routing, Qos*