

## **ABSTRACT**

Routing is the process of selecting the best route for a packet of data in order to get to its destination. Routing process performed by devices that support the OSI layer 3 routers. One company that developed the Cisco routers, Cisco routers production known as routers that are reliable and have good performance. For that Cisco routers can be used on various network topologies to perform services that require good network performance such as video streaming.

To perform the routing process and find all the networks that exist in a dynamic network, routers need routing protocol in determining the best route to be selected. Routing protocol on the Interior Gateway Protocol (IGP) can be grouped into two types, distance vector and link state. Examples of the type of distance vector routing protocols are RIP, RIPv2, and EIGRP. While those who belong to the type of link state is OSPF and IS-IS.

In this final project is implemented performance EIGRP and OSPF routing protocols on 11 Cisco routers for streaming video services. Implementation is done to determine the Quality of Service (QoS) generated by the two routing protocols and also know the recovery time when there are changes to the network. Implementation will be done on the same network topology with respect to QoS parameters like delay, jitter, packet loss, and throughput on both the routing protocol used.

From the measurement results showed that the value of QoS EIGRP on the state with the link failure and also the addition of background traffic is better than OSPF. Judging from the results of throughput, delay, packet loss, and jitter obtained from the network using EIGRP protocol has a better value than a network that uses OSPF routing protocol.

**Keywords:** routing, routing protocol, EIGRP, OSPF, video streaming