

Abstract

As technology, telecommunication and information development of advanced to increase service real-time and package data multimedia delivery namely IMS or Internet Protocol Multimedia Subsystem. One of the IMS's service can send sound package in real-time through IP network known as Voice over Internet Protocol or VoIP. To support the service, network needed rapid, reliable, and can handle failure network, if this failure not corrected then VoIP quality will decrease and the service will disconnected. On the network often found problem that causes network failure and failed to delivery data. So, network require a protocol that can solve the problem, then service VoIP can be transmitted without disturbing the services VoIP as stipulated by ITU-T, namely Gateway Load Balancing Protocol or GLBP.

GLBP have *active* and *standby* router. Router active becomes AVG (*Active Virtual Gateway*) as a gateway of delivery package from client and responsible for dividing the number of client with load balancing principle to standby router as AVF (*Active Virtual Forwarder*) which is responsible for sending package to client. Load Balancing is principle of balancing the load or loads a package that is sent through active routers.

From the testing can be known that failure AVG recovered faster than on failure AVF because AVG is network between switches and router with 3 seconds hello time and 10 second hold time of GLBP, but AVF is in the network between router and router so that recovery depend on routing protocol OSPF with hello time 10 seconds and death time interval 40 seconds.

Kata Kunci: Routing Protocol, GLBP, IMS, VoIP, Delay, Jitter, Packet Loss.