ABSTRACT

Video streaming is a type of streaming media where data from a video file is continuously transmitted over the internet to remote users. This technology has become a human need, as we know it is used in the world of entertainment, communication, monitoring and security. To run a video streaming service requires a sustainable network capability and keep running when a failure occurs. The use of network redundancy can solve the problem if one of the paths is down by using a backup path that will automatically back up. Protocols that can overcome network failures are Gateway Load Balancing Protocol (GLBP) and Hot Standby Router Protocol (HSRP). In this study, a comparison between the two protocols was carried out by testing based on the quality of files with the types 360p, 480p, 720p and 1080p which were run in both normal and redundancy network scenarios. The network implementation is using a server, a client, a switch and four routers designed to use IPv6. Testing parameters using QoS parameters, namely, delay, packet loss, throughput and jitter. From the results obtained, the QoS value when running video streaming services using both the GLBP and HSPR protocols got good results according to the ITU-T G.1010 standard. However, the overall value obtained in GLBP shows better results than HSRP. Judging from the downtime value in both protocols, the downtime value in GLBP shows better results, which is 6.139 seconds than the value generated by HSRP, which is 8.441 seconds.

Keywords: Video streaming, redundancy, GLBP, HSRP, QoS, IPv6