Despite IPv4's acknowledged scalability constraints and IPv6's intended role as its replacement, the limitations of real-world performance data for both protocols hinder network professionals from confidently strategising and executing the transition (Suryaningrat et al., 2016; Narayan et al., 2016).

Dr. Raymond Lutui has requested an evaluation of the network performance of three Linux-based operating systems configured as software routers to determine which has the best performance across both IPv4 and IPv6, and to compare the data with his previous evaluations.