ABSTRACT

Software Defined Networking (SDN) and Named Data Networking (NDN) are new paradigms to improve content distribution for the future. NDN changes the network from retrieving packet data in IP to the content names. As for SDN, it has an advantage over the previous traditional networks in the network architecture section because it can separate the Data Plane from the Control Plane. The integration of SDN with NDN has the advantage of being able to save the time needed by consumers when receiving data. And the sender's data was the producer, which is not known by the consumer.

The integration of SDN and NDN can be developed to save resources in each company or in the field of education. In this study, the author performed a performance analysis using the SDN-NDN-based Best Route, Multicast, and Access Forwarding Strategy to measure Round Trip Time, Throughput, CPU Usage, and Memory Usage on the number of data packets sent.

Based on the results obtained in this study, SDN-NDN has good performance compared to NDN during round trip time and throughput. But SDN-NDN uses more CPU and memory usage than NDN. Based on the implementation of the forwarding strategy, the Access Router strategy has a higher throughput and more round trip time than the Best-Route and Multicast forwarding strategies.

Keywords: *Named Data Network, Software Defined Network, Forwarding Strategy, Content, Controller.*