

Abstract

Software-Defined Networking (SDN), is a network architecture that separates the control plane and data plane of a network, thus enabling network control of an SDN Controller. SDN allows changing the shape of the network with minimal configuration by the network administrator. With the development of technology today, a network that has high performance is needed. One of the important ones is the network routing. This task uses the IS-IS (Intermediate System - Intermediate System) routing protocol. The method used in this final project research is a literature study of SDN and IS-IS, Development of IS-IS routing protocols on SDN. Performance testing and analysis. The parameters used as performance testing and analysis are packet loss, jitter, delay, throughput, and network Convergence Time. From the test results, it can be concluded that the IS-IS routing protocol in conventional network architectures gets better parameter values compared to SDN network architectures in throughput parameters, packet loss, and network convergence time. However, in terms of jitter, it can be concluded that the IS-IS routing protocol using the SDN network architecture gets better scores than conventional networks.

Keywords: routing, SDN, IS-IS, controller, performance, networking