ABSTRACT

Internet is one of the technologies that humans need in almost every activity. The increase in internet users causes an increase in the number of devices needed and an increase in the number of devices that need to be managed. The application of the Software Defined Network architecture is considered to be a solution to the problems faced by conventional networks.

Concept applied by the Software Defined Network is the separation of the Control Plane and the Data Plane. The separation of Control Plane and Data Plane aims to centralize network control. Centralized control is considered to be able to facilitate the management of increasing network devices. The controller used in this research is Floodlight. It is expected that the network architecture using the Floodlight SDN controller can produce better QoS than conventional network architectures.

The research carried out resulted in a good QoS value on the network architecture using SDN Controller Floodlight and conventional network architecture. The QoS parameters tested are Throughput, Delay, and Jitter. When compared, the network architecture using SDN Controller Floodlight produces better value than conventional network architectures.

Keyword: SDN Controller, Floodlight, Spine and Leaf, QoS