ABSTRACT

Software-Defined Network (SDN) is an architecture for modern networks that is essential in meeting needed to manage an increasingly and complex device. SDN can design, manage and implement a concept of data flows from a control system separated from hardware [1]. With a controller that controls all data streams in a network, it can make traffic data more efficient. However, all services controlled by a controller have a big disadvantage if the controller dies. The High Availability (HA) is the solution. The High Availability controller is divided into two namely master and slave, when master controller is down then slave controller will respond to replace the function of master controller.

High Availability System can be made in various ways but in this research the system will be made by using two methods namely OSCP clustering and Heartbeat-DRBD.OSCP clustering is a feature on OpenDaylight controller that is ready to be used and only need to be configured, with OSCP the main and backup controller clustering will be on connected cluster.Heartbeat-DRBD is an application commonly used to create High Availability systems on a server, but in this study will be used for the controller, Heartbeat will be monitoring the main controller and if indicated to be down it will move the resources to the backup controller with the DRBD application.

From the results of testing and analysis, it can be concluded that the High Availability system with OSCP Clustering method is more stable and good rather tah Heartbeat-DRBD methdod to apply in a network. This because the failover and failback time required is more stable, and also QoS parameters have a good index

Keywords: *Software-Defined Network (SDN),OSCP,Heartbeat,DRBD,High Availability,QoS*