

## **ABSTRACT**

*File availability is a requirement that must be fulfilled. Users always want to access their files whenever they want. Although there are problems occur, for an example, server down, so the files cannot be accessed. Thus, data replication is needed to solve the problem. So whenever the server is down, users still can access their files. Those files are replicated to other servers. All these servers are connected each other, create a new system called computer Cluster. One of the file system that support file replication in computer Cluster is GlusterFS.*

*GlusterFS has some file replication methods, such as Distributed Replicated and Striped Replicated. In the Distributed Replicated algorithm, the files are distributed to other servers that connected to a Cluster, on the other hand, Striped Replicated has further step before distribute the files to another servers, each file is splitted at first. In this research, the performance values that being analyzed are effectivity and efficiency rate from those two algorithms when doing file replication with GlusterFS.*

*And the result of this research, these two algorithms both are effective to replicate the files. Based on the efficiency rate, the result shows that Distributed Replicated has more efficient than Striped Replicated.*

**Keywords:** *GlusterFS, replication, Distributed Replicated, Striped Replicated, Cluster*