

ABSTRACT

The development of cloud computing is now growing exponentially. The provided services allows the user as if has greater memory capacity or greater computing capacity than the capacity of the device itself. With the no exception of mobile devices development such as smartphones that have limited storage capacity. Cloud computing services typically process a variety of unstructured data. Hadoop as a framework that can process these type, is suitable to be implemented for cloud computing services with the ability to Map Reduce and Hadoop Distributed File System (HDFS).

In this final project, is designed an Apache Hadoop cluster that is used for storage of data on server of cloud computing sharing data service. Users with Android operating system smartphone connect to server via wifi connection. Users can store data in the cloud server via an application on the Android smartphone. So the user can keep the files when the phone memory is full. Users can access it any time like the files are stored in its device while connected to server. In addition, the files are also accessible to other users and can be downloaded to the sd card.

This cloud computing system is tested with the parameters block size and dfs replication in HDFS. Based on the test results, it was concluded that a large block size and dfs replication greatly affect the throughput and the execution time for write or upload data. Whereas in the read or download process is more affected by network performance. In the main, system can work well with the probability of success for read and write process reaches 98.33%. The probability of success from the user is also affected by wifi signal stability and the capacity of internal memory of the phone for temporary data storage.

Keywords: *HDFS, data sharing, Android, cloud.*