## ABSTRACT

In the IT world, something very valuable is data. Data can usually be stored in a very long time, and can be used again as long as the storage media used is not damaged. Large companies and organizations generally use servers as a place to store data. If the data is not accessible, it will disrupt the performance of the company itself. Therefore data storage is an important problem to note. Data on server computers really need to be safeguarded, so you need to backup data to other computers to avoid losing data when there is sudden damage such as hardware or software. In the development of technology today many new methods can be used by administrators to back up servers, but in this study will use two methods to compare, namely rsync and bacula.

Rsync and Bacula are two methods that come from Linux-based operating systems. So it does not require additional costs in doing a backup server. Because both of these methods are open source tools from Linux, these two methods are not limited to one operating system. In this study, it will prove which method is much better at backing up the server, and to find out the most suitable and easy method to be applied for many users in doing a backup server.

In the results of this study, Bacula is one of the backup server options that prioritizes data transfer speeds, displays detailed information after performing a backup server process, and has a throughput with 25 GB size value of 2 MBps for simulating bandwidth of 2 MBps and 4.8 MBps with simulations with a bandwidth of 5 MBps. However, if the backup server option prioritizes data security during the backup server process, with low CPU and memory usage specifications, rsync is the right choice for backing up the server. With the results of a comparison of 3% lower for CPU Usage and 20MB lower for Memory Usage.

Keywords : Backup, rsync, bacula, server, linux