

ABSTRACT

SMK Prakarya Internasional Bandung have an ordinary library, a library that place its book collection into a shelf. But, by this time, a reference for education unlimited on just text book, but also on soft file reference. Until now, to distribute the soft reference to the student, are using a flashdisk. Of course, this is very uncomfortable because of the large amount of student. Because of that, came an idea to build a NAS for virtual storage devices that accessible over internet.

The NAS then combined with a digital library website. This final project purpose is to build the NAS. NAS build with FreeNAS OS that installed on one of libraries computer. That computer server then attached on SMK PI local network, so FreeNAS not only accessible on the library but also throughout every building.

The NAS performance are seen as bandwidth, CPU usage, system load, and the amount of maximum user that can handled on a time. The measurement result are bandwidth that have speed number from 1 until 12 MBit/sec, CPU Usage with 1% average, System Load with 0,06 average, and max user simulation that can handled by server with jmeter, that giving a result 400 user on a time.

Keyword : Digital Library, FreeNAS, Bandwidth, CPU Usage, System Load