

Abstract

Virtualization is the process of making a simulation of storing various physical data such as an operating system, data center, or network resources into a virtual machine. But in its implementation, it takes a lot of storage when storing virtual machine data to disk. The main problem in storage media is the larger file size will affect disk usage. To overcome this problem, it is proposed to use data compression at the file system layer using Zettabyte File System (ZFS). In this final project, we make a quantitative comparison of the ZFS data compression algorithm in a virtualization scenario with the parameters compared are read performance, write performance, CPU usage, and compression ratio. The LZ4 algorithm is the best algorithm by getting the best test scores for almost all the parameters tested.

Keywords: Virtualization, Compression, ZFS