Abstract

Virtualization provides several benefits to computing. However, applications have presented a low performance on traditional virtualized platforms. Unikernels are an alternative for cloud platforms application deployment in order to overcome such limitations. It comprises a small system for the cloud, providing deployment agility and portability among virtualization platforms. Moreover, Unikernels performance evaluation concerning other virtualization alternatives such as containers and traditional virtual machines is still lacking. This work evaluates Unikernels’ performance and scalability running HTTP services. The data was collected through a benchmark tool execution and modeled using a polynomial and a linear equation. The results illustrate that Unikernels is a promising alternative since it presents a 34.9% better performance than traditional virtual machines.


5. Antti Kantee. The rise and fall of the operating system, 2015.


Index Terms

Computer Science

Information Sciences

Keywords

Unikernels; Containers; Virtualization; HTTP; Web application; Cloud