**ABSTRACT**

**VIRTUALIZATION**

Virtualization is a technology that is applied for sharing the capabilities of physical computers by splitting the resources among Operating Systems. The concept of Virtual Machines (VMs) started back in 1964 with a IBM project called CP/CMS system. This virtualization platform is the basis for cloud computing. It has expanded into areas of server and storage virtualization. Currently, there are several virtualization techniques that can be used for supporting the execution of entire operating systems.  The usual goal of virtualization is to centralize administrative tasks while improving [scalability](https://en.wikipedia.org/wiki/Scalability) and overall hardware-resource utilization. With virtualization, several operating systems can be run in parallel on a single [central processing unit](https://en.wikipedia.org/wiki/Central_processing_unit) (CPU). This parallelism tends to reduce overhead costs and differs from multitasking, which involves running several programs on the same OS. The key characteristics of virtual machines are partitioning, isolation, encapsulation and hardware independence.

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