

## Operating System Based Virtualization Models in Cloud Computing

**Authors :** Dev Ras Pandey, Bharat Mishra, S. K. Tripathi

**Abstract :** Cloud computing is ready to transform the structure of businesses and learning through supplying the real-time applications and provide an immediate help for small to medium sized businesses. The ability to run a hypervisor inside a virtual machine is important feature of virtualization and it is called nested virtualization. In today's growing field of information technology, many of the virtualization models are available, that provide a convenient approach to implement, but decision for a single model selection is difficult. This paper explains the applications of operating system based virtualization in cloud computing with an appropriate/suitable model with their different specifications and user's requirements. In the present paper, most popular models are selected, and the selection was based on container and hypervisor based virtualization. Selected models were compared with a wide range of user's requirements as number of CPUs, memory size, nested virtualization supports, live migration and commercial supports, etc. and we identified a most suitable model of virtualization.

**Keywords :** virtualization, OS based virtualization, container based virtualization, hypervisor based virtualization

**Conference Title :** ICCCSS 2017 : International Conference on Cloud Computing and Services Science

**Conference Location :** Prague, Czechia

**Conference Dates :** March 23-24, 2017