

Research Proposal

Virtualisation Performance-Implementation versus Hardware Capabilities

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Research Design

Research Objective

This research proposal is looking to identify a relevant influence over virtualisation performance during implementation process, comparing with random hardware utilisation.

Seeking to understand more this technological issue a survey will provide consistent data to be analysed and compared with existing literature, technical reports and other recognised publications.

Motivation

Computers today present a great capacity to host virtualization solutions and to deliver to users a virtual experience.

These new divided virtual machines (VM) are running in parallel individual operating systems enabling a wide scale of operability. Virtual machines are defined in literature as software systems, completely independents and able to run different applications. (Plessl C., Platzner M., 2004, pp. 63–69)

Literature

Literature contain a significant number of experiments made to observe the overhead of the virtualization for hypervisor such as KVM, Xen and VMware ESX. (Pelletegeas, C., (2010), MSc Advanced Networking; Menon et Al, (2005); Jianhua et Al, (2008); Shan et Al, (2009); VMware (2007)).



Research Plan

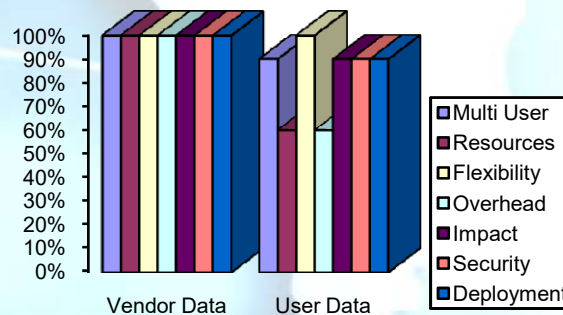


Survey

Methodology of survey was designed as support solution “to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyze trends across time, and generally, to describe what exists, in what amount, and in what context.” (Isaac, S., Michael, W. B., 1997, p. 136)

Purpose

Survey is identified in academic literature as efficient research method when relevant data reflects direct experience with available resources at the moment (Salant, P., Dillman, D. A., 1994).



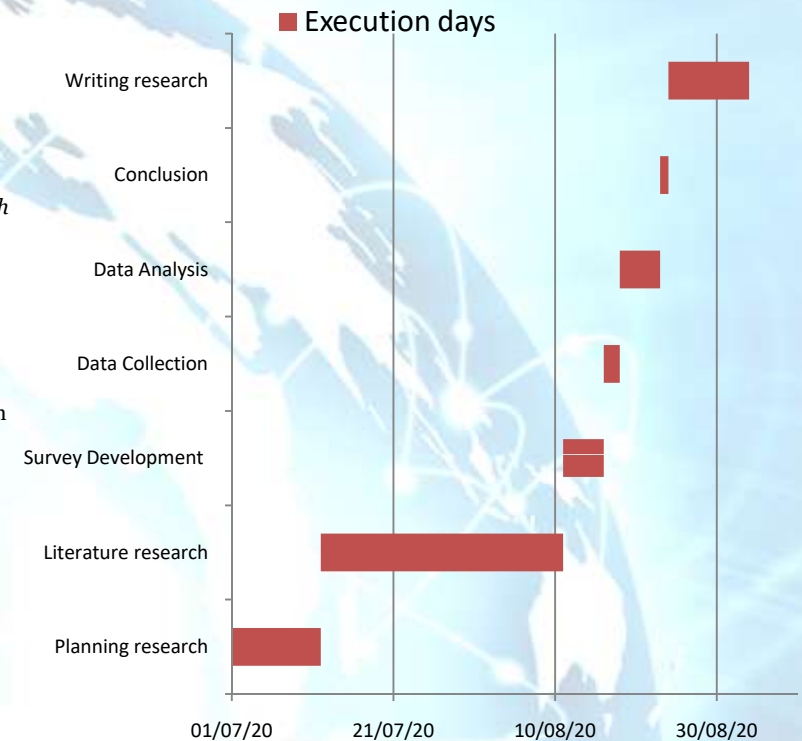
Bibliography

Jianhua et Al used also the tool IOzone for deployment on system files benchmark and looking to compare native efficiency versus the virtualisation implementation.

Plessl C., Platzner M. (2004). Virtualization of Hardware – Introduction and Survey. In *Proc. Int. Conf. on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, p 63–69, CSREA Press.

Isaac S., Michael, W. B. (1997). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioural sciences.*, 3rd Ed., EITS, San Diego.

Salant P., Dillman, D. A. (1994), *How to conduct your own survey*, John Wiley and Sons, New York



Survey activities are visually presented on the Gantt chart with the intention to transparently present the effort and work distribution during the research.

