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Green Cloud Computing: A Review on Adoption of Green-Computing attributes and Vendor Specific Implementations

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Abstract

With cloud computing emerging as a trending topic, it has been a major point of discussion for the last few years. In regards to technological advancements, the associated shortcomings like environmental footprint caused by them also become an affair of high significance. Cloud computing itself is a much greener alternative to individual data centers with lesser number of servers being used and cloud data centers being far more efficient than those of traditional thereby reducing the carbon impact. Nonetheless, it cannot be neglected the fact that the data centers utilized by the cloud vendors are still a major source of carbon emissions due to the dirty energy usage. Therefore, the discussion of the paper is based on how green the foremost cloud providers are and the implementations of green IT attributes in the cloud infrastructure.

Keywords: Cloud Computing, Green Cloud Computing, SaaS, PaaS, IaaS, Energy Efficiency, Power Management, Virtualization, Data Centre, Resource Management, Virtual Machine(VM)