Abstract

Cloud Computing provides various services to its users just over an internet connection. For this the Cloud providers have to set up large datacenters which consist of a number of computing nodes. These datacenters consume a huge amount of energy. This not only leads to higher expenses but it also causes harmful effects on our environments. Thus, the attention is shifting towards energy efficiency in Clouds. This is done by optimizing VM allocation and migrating them to some other hosts. For VM migration various utilization thresholds are required. In this paper, we have done a comparative study of some of these utilization thresholds. The simulation is done on CloudSim toolkit. It has been concluded that for the same configurations of datacenter and for the same workload IQR utilization thresholds give the best results for energy efficiency as well as lowest SLA violations.

References

- Amritpal Singh, Supriya Kinger, Virtual Machine Migration Policies in Cloud, International
Comparative Analysis of Host Utilization Thresholds in Cloud Datacenters

Journal of Science and Research (IJSR), India Online ISSN: 2319-7064 Volume 2 Issue 5, May 2013

- Nguyen Quang Hung, Nam Thoai, Nguyen Thanh Son, PERFORMANCE CONSTRAINT AND POWER-AWARE ALLOCATION FOR USER REQUESTS IN VIRTUAL COMPUTING LAB,
- Peter Mell, Timothy Grance, &quot;The NIST Definition of Cloud Computing (Draft),&quot; Computer Security Division, Information Technology Laboratory, National Institute of Standards and Technology, Gaithersburg, January 2011.
- Rodrigo N. Calheiros, Rajiv Ranjan, Anton Beloglazov, C’esar A. F. De Rose and
Comparative Analysis of Host Utilization Thresholds in Cloud Datacenters

Rajkumar Buyya "CloudSim: a toolkit for modeling and simulation of cloud computing environments and evaluation of resource provisioning algorithms", CLOUDS Laboratory, Department of Computer Science and Software Engineering, The University of Melbourne, Australia, DOI: 10.1002/spe.995.
- Sukhvir Kaur, Supriya Kinger, Review on Load Balancing Techniques in Cloud Computing Environment. IJSR, ISSN: 2319-7064

Index Terms
Computer Science
Distributed Systems

Keywords
Cloud computing Datacenters Virtual Machines VM migrations