Honey Bee Behavior Load Balancing of Tasks in Cloud Computing

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 139
Number 1

Year of Publication: 2016

Authors:
Khushbu Zalavadiya, Dinesh Vaghela

10.5120/ijca2016909080

Abstract

Cloud Computing is usage of computing resources that provided services over the Internet. In cloud computing several resources are available which process incoming request. Because of random appearance of requests for task execution several virtual machines are overloaded and several virtual machines are under loaded or idle for task processing. Therefore, an Enhanced honey bee algorithm for load balancing in cloud computing is proposed.

In proposed Technique priority tasks are removed from overloaded virtual machine and they are allocated to under loaded virtual machine by considering least numbers of same priorities to those tasks, cost effective virtual machine and, least expected completion time of those tasks on that virtual machine also balance the loads of dependent tasks in pre-emptive manner. By considering least expected completion time, cost and priority at submission time of that task, it helps to produce minimum completion time, amount of waiting time of the tasks in the queue is minimal and achieve better resource utilization.
References


5. Sen Su, Jian Li,Kai Shuang,Jie WangFröhlich, B.“Cost-efficient task scheduling for executing large programs in the cloud”.Parallel Computing, Volume 39, March 2013, pages 177-188


7. Shridhar G.Domanal, G.Ram Mohana Reddy “Load Balancing in Cloud Computing using Modified Throttled Algorithm” : Department of Information Technology National Institute of Technology Karnataka Surathkal, Mangalore, India


10. Rodrigo N. Calheiros, Rajiv Ranjan, Anton Beloglazov, C´esar A. F. De Rose and Rajkumar Buuya1, "CloudSim: a toolkit for modeling and simulation of cloud computing environments and evaluation of resource provisioning algorithms", Published online in Wiley Online Library (wileyonlinelibrary.com), 24 August 2010, DOI: 10.1002/spe.995.


Index Terms

Computer Science  Distributed Systems
Keywords

Cloud Computing, honey bee behaviour, Load balancing, virtual machine, CloudAnalyst.