Dynamic Load Balancing Model Based on Server Status (DLBS) for Green Computing

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ABSTRACT

There could be problems with server quality when resources are limited and this could lead to poor service delivery to the clients. Therefore, a strong load balancing technique is required that helps in the optimization of resource utilization. Cloud servers with correlated load balancer can assist in optimizing the load balancing practicability in cloud computing. In this paper, a load balancing model (DLBS) is proposed for effective load balancing and resource optimization in public cloud. A load balancing model was designed and implemented using Amazon EC2. Each server was equipped with a load balancer which monitors the load and sends status information to the controller. The servers with fewer loads were given more requests while the overloaded ones were not given further requests. The Amazon Web Services (AWS) was used to demonstrate the proof of concept. The results revealed that the proposed solution improved performance, throughput, and utilization of cloud resources.

Keywords: Amazon Web Services (AWS); Computational Intelligence; DBLS; Green Computing; Load Balancing