Abstract

Mobile cloud computing is a new platform for the execution of mobile applications where cloud performs the stimulating computing-intensive tasks and storing data in place of the mobile devices and provides them an illusion of infinite computing resources. This research work considers a cloud based mobile computing system consisting of virtual machines (as resources), cloudlets (as requests) and broker, where the broker assigns user cloudlet requests to virtual machines to be processed by the servers. It has been a great challenge to design and build an effective load balancing algorithm for the broker which spreads the service request load on virtual machines while utilizing the resources to the maximum. In this paper, a scheduling model to optimize the load based on maximum resource utilization rate using genetic algorithm for scheduling requests is proposed where the computing capacity of a datacenter is divided into number of tiers. Simulation results shows that the proposed work can effectively cope with the load imbalance problem in mobile cloud computing.
Optimization of Tasks in Mobile Cloud Computing


Index Terms

Computer Science
Distributed System

Keywords

Load Balancing  Cloudlets  Virtual Machines  Response Time.