Abstract

Cloud computing relates to the bunch of services that are provided to the customers on lease, by the servers located at different sites over the internet. The servers have pool of resources that can be scaled up and down on the basis of requirement. This results into communication and computation over the network. Divisible load theory has become popular during the past two decades. Based on divisible load theory the computations and communications can be divided into some arbitrarily independent parts and each part can be processed independently by a processor. The fraction of load must be allocated the processors based on some priorities. Analytical Hierarchy Process (AHP) is a multi-criteria based technique used for assigning priorities to the processors. Existing approach can handle the priority of processors using Eigen Value method of Analytical Hierarchy Process. The proposed model works on Geometric mean method of Analytical Hierarchy Process in order to improve parameters such as makespan, average response time and average waiting time.

References

- Shamsollah Ghanbari, Mohamed Othman, Wah June Leong, and Mohd Rizam Abu
Bakar "Multi-Criteria Based Algorithm for Scheduling Divisible Load" Springer Science+Business Media Singapore 2014
- Li, Ping, Bharadwaj Veeravalli, and Ashraf A. Kassim. Design and implementation of parallel video encoding strategies using divisible load analysis.
- The Analytic Hierarchy Process and its Generalizations Thesis by Edit Adamcsek
- Natalia V. Shakhlevich Scheduling Divisible Loads to Optimize the Computation Time and Cost; School of Computing, University of Leeds, Leeds LS2 9JT, U. K.
- Natalia V. Shakhlevich Scheduling Divisible Loads to Optimize the Computation Time and Cost; School of Computing, University of Leeds, Leeds LS2 9JT, U. K.
- Analytic Hierarchy Process Dr. Rainer Haas Dr. Oliver Meixner Institute of Marketing & Innovation University of Natural Resources and Applied Life Sciences, Vienna

Index Terms

Computer Science Distributed Systems
Keywords

Cloud Computing  Divisible load theory  Analytical Hierarchy process  Geometric Mean.