Abstract

Traditional B2C Electronic Commerce architecture instigated using n-Tier Client/Server architecture has continually been sluggish, intricate, and costly. With the advent of Cloud computing environment, the amenities vital for the Electronic Commerce architecture are accomplished by proficient organization, which comprises servers, storage supervision, network skills, and virtualization technologies. The research recommends the Job Scheduling algorithm and its enactment on B2C Electronic Commerce architecture. The algorithm is implemented using GI/G/1 Queuing model, to assess the performance of the proposed algorithm using four queuing parameters, specifically, Average numbers of requests in an B2C E-Commerce architecture, Average numbers of requests in the queue, Average waiting time of requests in an B2C E-Commerce architecture, Average waiting time of requests in queue. Finally, the allied simulations and numeral results are provided, to relate the performance of the proposed algorithm.

References

Implementation of Job Scheduling Algorithms in a Cloud Computing Environment for B2C Electronic Commerce architecture using GI/G/1 queuing model

- Riktesh Srivastava et. al, "Design and Implementation of G/G/1 Queuing Model Algorithm w. r. t. its Applicability for Internet Gateway Server", International Arab Journal of Information Technology (IAJIT), Volume 5, Number 4, October 2008, ISSN: 1683-3198.

- Riktesh Srivastava, et. al, "Memory Estimation of Internet Server using Queuing Theory: Comparative Study between M/G/1, G/M/1 and G/G/1 Queuing Model", International Journal of Computer and Information Science and Engineering (IJCISE), Volume 1 Number 2, 2007 ISSN: 1307-4164.


Index Terms

Computer Science

Algorithms

Keywords

Cloud Computing  Gi/g/1 Queuing Theory  Job Scheduling Algorithm