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

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

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**Index Terms**

Computer Science    Algorithms

**Keywords**

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