A Secure Fuzzy based Enhanced Multi-Queue Job Scheduling Algorithm (EMQJSA) for Load Balancing in Cloud Computing

Abstract

The reduction of cost and global utilization of resources shows less wastage of computing power in the era of cloud computing. This field of cloud computing is more preferable now a days because of having most unique and distinct advantages viz. 24*7 on availability mode, no any extra hardware & software requirement and provides eco-friendly environment. In this research paper, authors proposed a new designed methodology “EMQJSA” which is termed as an Enhanced Multi-Queue Job Scheduling Algorithm whose main purpose is to balance the load among cloud nodes on cloud server by utilizing the concept of cloud job scheduling. The working of this new designed methodology is totally based on Fuzzy logic. The main reason to combine fuzzy logic with newly designed methodology is to achieve high rate of accuracy in terms of results when run cloud jobs on cloud servers. The different parameter considerations viz. waiting time, response time, execution time, trust, throughput and performance plays a vital role in this paper when implemented on newly designed methodology. The main motive of this new designed methodology is to improve the overall performance of the cloud server while performing a managed load balancing. In addition, the other benefit to design this enhanced
multi-queue job scheduling algorithm is to provide a safe or secure communication between the cloud user and cloud server. By utilizing this new designed methodology load (cloud heavy jobs) can be easily managed and correspondingly cloud user saves time and the responsibility of cloud resource manager is also reduced or eliminated up to some extent which will ultimately improves the overall performance of the cloud server. Hence, this newly designed proposed methodology named enhanced multi-queue job scheduling algorithm in future will be helpful for producing more accurate and more efficient results.

References

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Index Terms

Computer Science Fuzzy Systems

Keywords

Cloud User, Cloud Server, Cloud Load Balancing Techniques, Cloud Job Scheduling, Multi-Queue Job Scheduling Algorithm, Resource Manager, Cloud Jobs and Time.
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