Abstract

This paper focuses on providing a solution for online real time services using non-preemptive scheduling algorithm in order to minimize the execution time of the migrated tasks. Earlier, a non-preemptive scheduling with task migration algorithm is used to minimize the penalty. Whenever a task misses its deadline, it will migrate the task to another virtual machine and starts its execution from the beginning. Therefore it increases the execution time of the migrated task. In order to overcome this problem, a non-preemptive real time scheduling using checkpointing algorithm is proposed to minimize the execution time of the migrated tasks and minimizes the penalty even better by earlier completion of migrated tasks. This improves the overall system performance. Our simulation results outperform the older approaches based on the similar model.

References

Non-Preemptive Real Time Scheduling using Checkpointing Algorithm for Cloud Computing


- ShouLiu, Gang Quan, ShangpingRen (2010)., On-line Scheduling of real time services for cloud computing, In IEEE World congress on services.
- Y. Yu, S. Ren, N. Chen, and X. Wang (2010)., Profit and penalty aware (pp-aware) scheduling for tasks with variable task execution time., In SAC2010 - Track on Real-Time System (RTS'2010).

Index Terms

Computer Science Networks

Keywords

Non-preemptive Migration checkpoint Potential profit Potential loss Deadline Virtual machine

Vital point.