

Quantum time task scheduling technique in novel hybrid shortest job first and round robin

ABSTRACT

In a cloud computing environment, there are huge number of tasks with different computing requirements need to be scheduled and provisioned to the various resources within different capabilities. Thus, the mapping between users and resources is crucial so that the performance could be improved. The hybrid algorithm Shortest-Job-First (SJF) and Round Robin (RR) are expected to address all the concerns in scheduling task namely response time, waiting time and turnaround time simultaneously. Existing schedulers has been focused on those parameters but starvation problems are mostly not their major concern. Therefore, this study attempts to produce a better performance of hybrid algorithm through the integration of two traditional algorithms namely SJF and RR with dynamic quantum (SRDQ). Our proposed SRDQ with the best quantum time approach apparently reduces the longer waiting time when involves with a large cloudlet. Thus, it is suitable for the cloud computing environments where the resource hunger applications are normally provisioned.

Keyword: Dynamic variable quantum time; Round robin; Scheduling; Shortest job fir