Dynamic Scheduling without Real-Time Requirements in Operating System

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Abstract*—Real-time information from industrial automation computers and other surveillance systems may be collected in many manufacturing processes. Still, most existing scheduling models cannot successfully leverage this information to affect scheduling choices in real-time. In today's computer era, multiprocessor systems outperform single integrated circuit systems while running real-time applications since task scheduling algorithms are insufficient to execute all activities while also fulfilling their temporal requirements. However, delayed needs or scheduling problems have become a critical impediment because of the rising popularity of real-time services and complex commercial tactics. Numerous procedures are accessible in dynamic scheduling systems that allow all tasks to be completed without missing deadlines. Allocating the unpaid work in a multiprocessor system is substantially more complex than in a single processor system since establishing the ideal solution has an exponential complexity and falls under a complicated issue. As a result, the scheduling algorithm for the overdue system should assure a workable schedule for the set of non-real-time needs. The dynamic scheduling strategy is appropriate for Aperiodic activities with unknown parameters. When new tasks occur in dynamic scheduling, the scheduler analyzes the feasibility of scheduling these new activities without compromising the guarantees that have been offered for previously scheduled activities. It is a web-based method in which the timetable is produced automatically. The system can change it during runtime, and it should not cause the threads to miss their deadlines (in most situations). Because the schedule is produced automatically, it is simple to generate a new one whenever the system changes. There is uncertainty that the system will reach all of its deadlines. This study is focused on the dynamic scheduling of overdue tasks in operating systems to describe all dynamic scheduling algorithms in terms that do not need real-time execution.

REFERENCES

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