Abstract

The efficiency and performance of multitasking operating systems essentially depends on the nature of CPU scheduling algorithm. There are many algorithms available for CPU scheduling. Each having its own deficiency and limitations. One of the most well-known approaches for scheduling is the Multi-level Feedback Queue (MLFQ). The MLFQ tries to work in a two-fold manner. First, it tries to optimize turnaround time as it is done by running shorter jobs first. Unfortunately, the OS doesn’t generally have the knowledge that how long a job will run for, exactly the knowledge that algorithms like SJF (or SRTF) require. Second, MLFQ attempts to make a system feel responsive to interactive users (i.e., users sitting and staring at the screen, waiting for a process to finish), and thus minimize response time. Well-known algorithms like Round Robin also reduce response time but are less suitable for turnaround time. In this paper, we proposed a new approach for feedback scheduling algorithm which helps to improve the efficiency of CPU. The paper presents an approach called dynamic-time-quantum 2LFQ (Two-level Feedback Queue) scheduling. The idea is to make the operating systems adjusts the time quantum according to the burst time of set of waiting processes in the ready queue.
A 2LFQ Scheduling with Dynamic Time Quantum using Mean Average

References


Index Terms

Computer Science
Operating System
Keywords
Cpu Scheduling  Dynamic-time-quantum  Scheduling Algorithm