Performance Issues for Multicore Processor Operating Systems

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In the midst of the huge development in processors industry as a response to the increasing demand for high-speed processors manufacturers were able to achieve the goal of producing the required processors, but this industry disappointed hopes, because it faced problems not amenable to solution, such as complexity, hard management and large consumption of energy. These problems forced the manufacturers to stop the focus on increasing the speed of processors and go toward parallel processing to increase performance. This eventually produced multicore processors with high-performance, if used properly. Unfortunately, until now, these processors did not use as it should be used; because of lack support of operating system and software applications. The purpose of this research is to analyze and identify the challenges faced by multicore processors operating systems.

Key words: Uniprocessors, Multicore Processor, Shared-memory, Cache Coherence