UNIVERSITI TEKNOLOGI MARA

ANALYSIS OF TIME PERFORMANCE ON HETEREGENOUS CLUSTER

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ABSTRACT

Sequential computing concept will always give time constraint problem to who are involve in complex computation like calculate and estimating weather forecast, rendering animation computation and many more in almost their daily works. Sequential computing also will lead to many others problem like high cost maintenance if system crash, performance problem and many more. Therefore, there are many parallel computing solution concept being introduced by developers and inventors. There are many real time simulation and advanced modeling concept being introduced for our benefit. However, there is less user can afford to have parallel supercomputers. So, low cost parallel computing solution that consists of few computer or PC being connected in one network can substitute supercomputers. In this research, there are few testing had been conducted to analyze the time performance in this heterogeneous cluster. 10 equations running being conducted in matrix multiplication calculation programming and 15 running for CPI calculation programming. In CPI calculation programming, it will compute the value of Pi by numerical integration in both parallel and sequential computing concept. Then, in matrix multiplication programming, it will compute the matrix calculation by 10 different 2x2 matrix size. It is expected that time of processing the calculation program in parallel will be much more less than sequential which means processing calculation or computation in parallel computing concept is faster that sequential computing concept.

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