

Adaptive Middleware and High Performance Software For Multi-core Deployments Across Cloud Configurations

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Statisticians, analysts, scientists, and engineers require massive processing power to conduct data analysis, predictive modeling, visualization, and other complex tasks. Although these groups could use specialized super computers, the custom development time and the hardware costs are prohibitive. This paper describes how Ziron applied the Ziron adaptive ultra high-performance computing software platform and tools with the R programming language and environment for cloud enablement to substantially improve the performance of a representative complex computational finance application via distribution and parallelization, thereby reducing the total computation time from 3093.1 minutes to 40.8 minutes (*) on an off-the-shelf commodity multi-processing platform.