

Parallelizing a Computationally Intensive Financial R Application with Zircon Technology

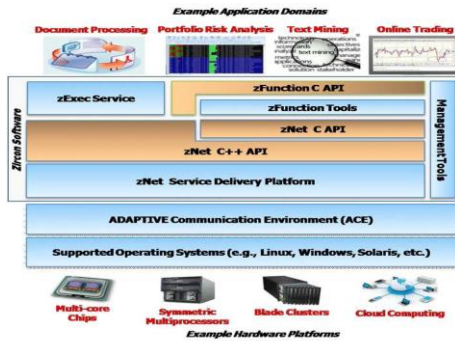
By: Ron Guida, Director, Zircon Computing, LLC

Abstract

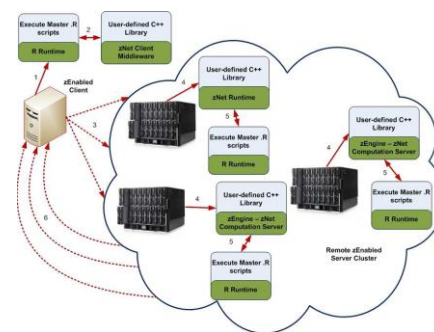
Statisticians, analysts, scientists, and engineers require massive processing power to conduct data analysis, predictive modeling, visualization, and other complex tasks. This poster describes how Zircon substantially improved the performance of a representative complex computational finance application by integrating the Zircon adaptive ultra high performance computing software platform and tools with the R programming language and environment. This integrated solution uses distribution and parallelization to reduce the total computation time of the R-based application from 3,093 minutes to 40 minutes on an off-the-shelf, commodity multiprocessing platform.

The poster presentation shall describe the case study in which computationally intensive financial models built by Garrett Asset Management (GAM), written in the R programming language, were optimized using the Zircon ultra high performance software and UltraCloud™ enabled in the IBM CoD resource center, to gather linear performance results, while also providing ease-of-use and ease-of-deployment functionality to the GAM user. Solution topology and performance results are shown in detail.

Zircon Software Topology



UltraCloud™ Solution



Performance Results

