Performance Analysis of a Parallel Application in the GRID

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Abstract

Performance analysis of real applications in clusters and GRID like environments is essential to fully exploit the performance of new architectures. The key problem is the deepening hierarchy of latencies and bandwidths and the growing heterogeneity of systems. This paper discusses the basic problems of performance analysis in such clustered and heterogeneous environments. It further presents a software environment that supports the user in running codes and getting more insight into the performance of the application. In order to give a proof of the concept a code for direct numerical simulation of reactive flowsisru n in a GRID like hardware environment, and the performance analysis is presented.