



SISMA

Séminaire Informatique Scientifique & Mathématiques Appliquées

Pallas: performance analysis at scale

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The Benagil group at Inria Saclay develops several performance analysis tools for parallel applications, including NumaMMA (memory profiler), and EZTrace (tracing tool). This seminar will give an overview of these tools. In particular, we will present Pallas, a trace format developed as part of the NumPex project.

Pallas is a generic trace format tailored for conducting various post-mortem performance analysis of traces describing large executions of HPC applications. During the execution of the application, Pallas collects events and detects their repetitions on-the-fly. When storing the trace to disk, Pallas groups the data from similar events or groups of events together in order to later speed up trace reading. We demonstrate that the Pallas online detection of the program structure does not significantly degrade the performance of the applications. Moreover, the Pallas format allows faster trace analysis compared to other evaluated trace formats. Overall, the Pallas trace format allows an interactive analysis of a trace that is required when a user investigates a performance problem.