



Séminaire Informatique Haute Performance @ Campus Teratec

**Séminaire n°49 du Jeudi 07 Juillet 2016, 10h, Ter@tec.  
WI4MPI: Wrapper Interface for MPI**

Jeudi 07 Juillet 2016, Julien Jaeger, Ingénieur-Chercheur au CEA, présentera WI4MPI, un logiciel permettant d'exécuter un programme MPI sur différents runtime MPI sans recompilation.

Voici le résumé de cette présentation qui aura lieu dans la salle Berthe Morisot à Ter@tec, à 10h.

**WI4MPI: Wrapper Interface for MPI**

In the High Performance Computing context, most applications rely on third part libraries. These dependencies (ABI or API) often require to recompile the application itself to be adapted to the software stack installed on the target cluster. If application recompilation is not possible (closed sources . . . ), we have to recompile/install the third part libraries required.

With WI4MPI, we introduce a methodology and describe a framework to avoid these recompilation phases. Our first target is MPI. For HPC applications, MPI is probably the most important dependency and, dues to the lack of interoperability of MPI implementation, it is not easy to move application binaries from one cluster to another one.

Our framework WI4MPI is able to translate the MPI application binary interface from the MPI implementation used to compile the application to another MPI implementation available on the target cluster.

WI4MPI has been validated on a large spectrum of application (micro-benchmarks, mini-applications and production application) to ensure robustness. Regarding performances, WI4MPI maximum overhead is less than 8% on micro-benchmarks and around to 2% on a real application.

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