15th JLESC Workshop



Contribution ID: 7

Type: Short talk

Towards an application-driven dynamic resource approach for HPC

Wednesday 22 March 2023 14:00 (10 minutes)

This short talk provides an introduction to the ongoing research at UGA /TUM (EuroHPC Time-X) on an application-driven dynamic resource approach for HPC. Time-X targets the area of parallel-in-time (PinT) integration, where resource dynamic strategies have been shown to improve the performance and efficiency of PinT algorithms.

However, current approaches to enable dynamic resources for HPC applications are often application, programming model or process manager specific or lack integration with the system-wide resource management.

To this end, UGA/TUM (Time-X) collaborates with the PMIx and MPI communities as well as other EuroHPC projects on a standardized, agnostic approach for dynamic resources. This talk discusses some of the basic considerations and challenges of this work.

JLESC topic

Novel programming models and runtime systems, which allow scientific applications to be updated or reimagined to take full advantage of extreme-scale supercomputers

Primary authors: HUBER, Dominik (Technical University of Munich (TUM)); SCHREIBER, Martin (Université Grenoble Alpes)

Presenter: HUBER, Dominik (Technical University of Munich (TUM))

Session Classification: Short Talks on Distributed Resources

Track Classification: Programming languages and runtimes