

13th VI-HPS Tuning Workshop

Objectives

Description: Large-scale HPC applications and computer systems often fail to deliver their full potential performance and are inhibited by a variety of scalability bottlenecks. The series of Tuning Workshops organised by the Virtual Institute for High Productivity Supercomputing (VI-HPS) provide training in the use of a range of tools that are widely available on PRACE and other HPC computer systems. Following introductory hands-on exercises with each of the tools, course participants receive expert coaching applying the tools to their own application codes and suggestions for improvements.

Learning outcomes: Ability to analyse and optimise large-scale HPC applications with tools that are widely available on a range of HPC computer systems.

Requirements

Good knowledge of parallel programming with MPI and/or OpenMP.

Participants are expected to bring and use their own notebook computers with SSH and X11 software configured to connect to the HPC systems and run interactive graphical tools.

Subjects covered: Performance analysis & optimisation

Tools covered:

- [Paraver](#) trace analysis tool
- [Dimemas](#) performance prediction tool
- [Score-P](#) instrumentation and measurement infrastructure
- [Scalasca](#) automated trace analysis toolset
- [Vampir](#) interactive trace analysis toolset
- [Periscope](#) automated performance analysis tool
- [MAQAO](#) binary analysis & optimization tool
- [MUST](#) runtime error detection tool for MPI

Comments:

The workshop will be held in English and run from 09:00 to not later than 18:00 each day, with breaks for lunch and refreshments. On the first day the course starts at 14:00 and on the last finishes at 16:30.

There is no fee for participation, however, participants are responsible for their own travel and accommodation.

Classroom capacity is limited, therefore priority will be given to applicants with parallel codes already running on the workshop computer system ([MareNostrum III](#)), and those bringing codes from similar systems to work on. Participants are therefore encouraged to prepare their own MPI, OpenMP and hybrid OpenMP+MPI parallel application codes for analysis.

Recommended Accomodation:

Please follow [the link](#) for map of some local hotels.

Contact Us:

education [at] bsc [dot] es (CONTACT US) for further details about MSc, PhD, Post Doc studies, exchanges and collaboration in education and training with BSC.

For further details about Postgraduate Studies in UPC - Barcelona School of Informatics (FiB), visit the [website](#).

For further details about the Virtual Institute – High Productivity Supercomputing, visit the [website](#).

Sponsors:

BSC and PRACE 3IP project are funding the PATC @ BSC training events.

If you want to learn more about PRACE Project, visit the [website](#).

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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