High Performance Computing Service Center

Main aim:

Improve the research capacity and reinforce the scientific and technological potential of the Research Centre in Computer Science of the West University of Timisoara in order to unlock its capacity and make it accessible for European Research Area.

Partners involved in the project activities:

- EPCC – Edinburgh Parallel Computing Center, Edinburgh, UK

- PSNC – Poznan Supercomputing and Networking Center, Poznan, Poland

- UEX – University of Extremadura, Spain

- INRIA – LaBRI Lab, Bordeaux, France

- CINECA – Bologna, Italy

HOST at a glance

Title:
High Performance Computing Service Center

Project number:
FP7-REGPOT-CT-2011-284595-HOST

Funding scheme:
Coordination and support action

Project coordinator:
West University of Timisoara (RO)

Duration:
1 January 2012 – 31 December 2014

Total cost:
€ 2 496 268

Further information:
http://host.hpc.uvt.ro
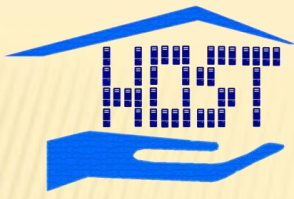
Objectives:

- Augment the R&D experience and knowledge of the HOSTing team by secondment and training activities to reach the level of an European excellence centre

- Exchange of know-how and experience with the partner teams and other specialists in the field of HPC services

- Attract foreign specialists to work with and in the centre through a collaborative open access programme

- Establish new collaborative R&D relationships and improve the existing ones in order to increase the participation of the HOSTing team in collaborative projects and exploit the knowledge acquired during the project

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Universitatea de Vest din Timişoara

High Performance Computing Service Center

West University of Timisoara, Romania

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HOST research topics:

- Cloud computing technologies for HPC service exposure.
- Scheduling algorithms and techniques
- Parallel computing in remote data processing
- Large scale numerical computations
- HPC-based intelligent services

Infrastructure:

- InfraGrid cluster:
  - 400 cores, Infiniband
- BlueGene/P :
  - 11.7 Tflops /4096 cores
- GPU Cluster:
  - 4.5TFlops
  - 7 GPU Cards NVidia M2070Q
  - Infiniband inter-connect
  - 18TB RAW Storage

Results until date:

- Infrastructure improvement with the GPU cluster
- Increase of the processing capacity from 14.5 to 18 TFlops, and storage capacity from 46TB to 62.8 TB
- Increase of the local research team with 20% and 4 new research directions
- Increased visibility of HPC activities in Romania through 2 international workshops and 2 national workshops
- Increase of European activities through more than 20 new contacts and project proposals, followed by 3 new contracts for collaborative projects
- Availability on-line of HPC training materials
- Support activities for the national community working in HPC

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