NCC Luxembourg Overview

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OVERVIEW

Luxinnovation, the University of Luxembourg and LuxProvide are jointly managing the Luxembourg National Competence Centre in High-Performance Computing (HPC). Its mission is to promote the use of HPC linked to computing, data analytics and artificial intelligence and to support stakeholders such as industry – including SMEs and startups – academia and public administration to navigate the national and european HPC ecosystem.

Promote the use of HPC:

HPC/AI/HPDA
SMEs and startups
National level public and private
Support European HPC Ecosystem
HPC in Start-up Acceleration Program Fit4Start
Collaboration with other NCCs

PRICING POLICY / BUSINESS MODEL

We provide technical and R&D, research development consultations and partnerships. Pricing will be decided upon the mutual agreement.

BUSINESS SUPPORT / SERVICES

Production Industries:

(numerical analysis, linear solvers, etc)

- Larger simulation (for example, CFD and FEM)
- Large scale physics simulation in material science and engineering

Al/HPDA industries:

- Multimedia
- Space industries
- Optimization and statistical based companies

Education and Training:

(efficient usage of the HPC and teaching parallel programming)

- Training to SMEs and large-scale companies
- Academic entities as well as public sectors

TRAINING ACTIVITIES

Seasonal HPC school

- Parallel programming:OpenMP, MPI, GPU, etc.Castiel workshop/traning

- Introduction to CUDA programming, etc.
Nvidia and OpenACC

- Bootcamps and Hackathons, etc.

HPC Traning for Industry

- OpenFOAM CFD simulations, etc.

DESCRIPTION OF INFRASTRUCTURE

Meluxina: 573 nodes 2x AMD EPYC Rome@2.6GHz with 512GB (RAM); 200 nodes 2x AMD EPYC Rome@2.35GHz with 4x Nvidia A100 40GB and few FPGA and large memory nodes. University of Luxembourg HPC (UPHPC) has two supercomputers: Iris and Aion

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