Cooperation

EuroCC 2
National Competence Centers in the framework of EuroHPC

National Competence Center Bulgaria

Public Sector

Success story #Highlights

- Research area: Statistical and Data Analysis, Biological diversity, IT.
- Technology: HPDA

Industrial Users

Success story #Highlights

- Industry sector: Manifacturing & Engineering, Retail, Services, Automotive, Agriculture, Environment.
- Technology: Augmented Reality (AR) powered by AI and HPC, Marine learningBigQuery, MySQL, IoT.

Scientific Achievements

Success story #Highlights

- Research area: Astronomy, Physics, Mathematics, Agriculture, Forestry, Healthcare, Finance.
- Technology: HPC, MPI, OpenMPI, HPDI, AI.

The National Competence Centre Bulgaria has received funding from the European Union through the European High Performance Computing Joint Undertaking (JU) and the Ministry of Education and Science of the Republic of Bulgaria.

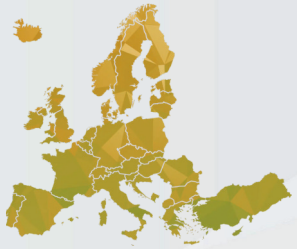
Funded by the European Union

EuroHPC Joint Undertaking

Ministry of Education and Science

Objectives

- Develop and display a comprehensive and transparent map of HPC competences and institutions in their country.
- Act as a gateway for industry and academia to providers with suitable expertise or relevant projects, may that be national or international.
- Collect HPC training offers in their country and display them in a central place together with international training offers collected by other NCCs.
- Foster the industrial uptake of HPC.



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EuroHPC Joint Undertaking

This project has received funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101101903. The JU receives support from the Digital Europe Programme and Germany, Bulgaria, Austria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Italy, Lithuania, Latvia, Poland, Portugal, Romania, Slovenia, Spain, Sweden, France, Netherlands, Belgium, Luxembourg, Slovakia, Norway, Türkiye, Republic of North Macedonia, Iceland, Montenegro, Serbia.

EURO² Bulgaria

THE POWER OF HPC FOR BETTER LIFE!

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Partners in NCC Bulgaria

Institute of Information and Communication Technologies - Bulgarian Academy of Sciences, coordinator

Sofia University "St. Kl. Ohridski "

University of National and World Economy

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NCC Bulgaria

OBJECTIVES

Creating and developing a National Competence Centre in the field of High Performance Computing (HPC) and its application in the field of artificial intelligence and big data analysis.

SERVICES

Providing services in the fields of high performance computing, artificial intelligence and data analysis and facilitating access to modern equipment, software codes and tools.

TRAINING

Organizing and delivering courses, webinars, seminars, and consultations for current and future users from academia, industry and public administration.

PUBLICITY

Raising awareness of the benefits of high performance technologies, disseminating results, success stories, and best practices.

COOPERATION

Exchanging knowledge, experience, expertise and best practices with other national centers and thematically related European and national initiatives and projects.

Systems

HEMUS

Manufacturer: HPE
Cores: 19,840
Processor: AMD EPYC 7742 64C 2.25GHz
Interconnect: Infiniband HDR
Installation Year: 2023

Performance:

Linpack Performance (Rmax): 2.53 PFlop/s
Theoretical Peak (Rpeak): 3.21 PFlop/s
Nmax: 786,432
HPCG [TFlop/s]: 36.4192
Software:
Operating System: SUSE Linux
Compiler: NVIDIA HPC-Benchmarks 23.5.0
Math Library: NVIDIA HPC-Benchmarks 23.5.0 container binary
MPI: NVIDIA HPC-Benchmarks 23.5.0 container binary

AVITOHOL

Manufacturer: Hewlett-Packard
Cores: 20700
Interconnection: FDR InfiniBand
Theoretical Peak Performance: 412.3 TFlop/s
RMAX Performance: 264.2 TFlop/s
Memory: 9600 GB
Operating System: Red Hat Enterprise Linux for HPC
Compiler: Intel Composer XE 2015
Lustre Storage systems: 96 TB storage