

Bulgarian National Centre for High Performance and Distributed Computing - history and perspectives

Tuesday, 7 May 2019 14:42 (18 minutes)

The Bulgarian National Centre for High-performance and Distributed Computing (NCHDC) is part of the Bulgarian National Roadmap for Research Infrastructures since 2014. The Centre is the only electronic infrastructure supported by the Roadmap that is not domain specific and is open to research groups from all Bulgarian Universities and research institutes. Three leading partners (IICT-BAS, SU, TU-Sofia) provide resources, while the other partners participate in the development of services and applications. Historically, NCHDC integrates the consortia for supercomputing applications with the Bulgarian NGI.

The NCHDC infrastructure is built using modern technologies and strives to ensure access for Bulgarian researchers to computational and storage resources, services and development tools.

The main computational resource of the NCHDC is the supercomputer Avitohol, which entered the top500 list in 331st place during its introduction in 2015. The latest update of the National Roadmap for the period of 2018-2022 includes substantial funding for maintenance of the hardware and development and deployment of services for the infrastructure. Each of the resource providers carries out a medium-term program for substantial expansion of their computational and storage capacity, focusing on a different mix of applications. The heaviest use of the supercomputer comes from computational chemistry users and environmental modeling, while data-intensive applications come from the domains of Digital Cultural Heritage and Astronomy. The infrastructure is integrated with European and regional-level initiatives and strives to ensure compatibility and follow technological developments.

In this presentation, we discuss the current status of the NCDC, its structure and its future perspectives based on the national policies and provided (and planned) funding. The synergies with European initiatives and various national programmes and other funding sources are also presented.

Type of abstract

Presentation

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Session Classification: National initiatives and engagement