

### Three large research infrastructures unite under the project e-INFRA CZ

**Prague (2 July 2019)** The CESNET Association, Masaryk University and VŠB – Technical University of Ostrava have applied for a joint project for establishing an upgraded national research e-infrastructure e-INFRA CZ. The project application was preceded by signing a partnership agreement, which commits all three institutions to mutual cooperate on operating, developing and providing a comprehensive portfolio of services under the infrastructure.

The project call was announced by the Ministry of Education, Youth and Sports in accordance with the Road Map of the Czech Republic for Large Infrastructures for Research, Experimental Development and Innovations. Its updated version was acknowledged by the Government of the Czech Republic on 10th June this year **in a follow-up on its previous decision to fund research infrastructures in period until 2022.**

e-INFRA CZ connects all three existing national e-infrastructure:

- CESNET
- CERIT-SC hosted by Masaryk University
- IT4Innovations National Supercomputing Centre hosted by the VSB – Technical University of Ostrava

All infrastructures were included in the Road Map in 2010; the project e-INFRA CZ is an evolutionary step towards their deeper integration.

The essential basis element of the new e-infrastructure will be upgraded national research and education communication network CESNET3. *“We are glad that we can invest the more than twenty years of experience of building top-class e-infrastructure and provision of advanced ICT services in this strategic project, which will have a fundamental impact on further development of the information society in the country,”* says Jan Gruntorád, Director of CESNET Association.

*“Uniting the three existing e-infrastructures in a joint consortium will make it possible to integrate services provided separately thus far, thus providing the Czech academic and scientific community with a comprehensive and world-class IT background,”* says Luděk Matyska, Director of CERIT-SC.

*“I see the benefit of our involvement in the joint project e-INFRA CZ primarily in improving availability of our supercomputing technology and services to the broader scientific community in the Czech Republic,”* says Vít Vondrák, Director of IT4Innovations National Supercomputing Centre.

e-INFRA CZ is a fully transparent environment offering comprehensive capacity and resources for transmission, storage and processing of scientific data to all entities active in research, development and innovations across industries. It establishes a communication, information, storage and computing platform for research, development and innovations at the national and international levels and provides an extensive and comprehensive portfolio of ICT services, without which modern research, development and innovations cannot be realized.

The main components of e-INFRA CZ include:

- high-performance national communications infrastructure
- national grid and cloud infrastructure
- most powerful and cutting-edge supercomputing systems in the Czech Republic

- high-capacity data storages

As an integral part of the infrastructure will be tools and services, such as control of access to ICT resources, tools supporting remote collaboration and tools for secure communication and data protection.

The infrastructure makes a significant contribution to areas such as development of new medicaments, personalized medicine, material research and development of nanotechnologies, prediction of natural disaster, research into security, environmental management, development of new energy sources and smart transport systems as well implementation of the Smart City and Industry 4.0 concepts.

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*IT4Innovations national supercomputing centre provides both Czech and international research teams in both academia and industry with latest technologies and services in the area of high-performance computations, data analysis and artificial intelligence. At present, IT4Innovations runs three supercomputers: Anselm (installed in the summer of 2013), Salomon (installed in the summer of 2015) and a special system for artificial intelligence computation, DGX-2, installed in 2019. The smaller Anselm cluster will be renovated and expanded this year. A petascale system will be installed at the centre in 2020 as part of the EuroHPC project. IT4Innovations is also a research centre with strong international connections. The crucial topics of research at IT4Innovations are processing and analysis of large data, machine learning, development of parallel scalable algorithms, solution of demanding engineering tasks and modelling for nanotechnologies. IT4Innovations is part of the VSB – Technical University of Ostrava. For more details visit: [www.it4i.cz](http://www.it4i.cz).*

*The CESNET Association was founded by Czech universities and the Czech Academy of Sciences in 1996. It has built and developed the national CESNET e-infrastructure, which is designated to support science, research, and education. The CESNET e-infrastructure includes a computer network, computing grids, data storages, and an environment for collaboration, and it offers a wide range of services to universities, scientific research facilities, and other institutions. The Association also does its own research and development of information and communications technology and represents the Czech Republic in major international projects, particularly those related to building the pan-European GÉANT network. CESNET places great emphasis on the security of network operations, services, and user data. For more details visit: [www.cesnet.cz](http://www.cesnet.cz).*

*CERIT-SC combines elastic computing and data storage capacity with corresponding services and expertise, thus uniquely complementing the production-oriented resources of the other components of the Czech Republics national e-infrastructure. CERIT-SC is unique in its experimental approach and expecting its users to require unconventional configurations and methods of ICT resource utilization; it minimises impacts on other users by consistent virtualization. At the same time, CERIT-SC is constantly involved in its users' research activities and brings its ICT expertise to the collaboration, which is necessary for implementation of excellent research and development in all scientific disciplines. For more details visit: [www.cerit-sc.cz](http://www.cerit-sc.cz).*