Czech National Grid Initiative (NGI)

Czech National Grid Initiative (NGI) is currently being formed through a transformation of the current Czech national grid environment. Nowadays, the Czech NGI (CESNET in the MetaCentrum project) has two natural roles:

- coordinator of resource owners, national level services and activities,
- resource provider, resources are fully incorporated into the national grid.

NGI provides and unifies access to hardware, software, and services.

NGI User and Resource Owner Membership

- membership is free, available for researchers and students of academic institutions
- scientific results → better access to resources
- resource owners are welcome to join the infrastructure

NGI Hardware Resources

- about 3000 CPU cores (x86, AMD64, …)
- 200 TB disk storage
- more than 400 TB of tape space for archiving and backups
- up to 2 Gbit/s Infiniband network on selected clusters
- major sites connected with 10GE network

Resources are owned by Masaryk University (Brno), Charles University (Prague), University of West Bohemia (Pilsen), University of South Bohemia (České Budějovice), CESNET, and other organisations.

NGI Software Installed

- preinstalled packages for biology and chemistry, physics, technical computations, mathematics, statistics, …
- Amber, Gaussian, Gromacs, Fluent, Matlab, Maple, …
- development tools → user-developed software
- generally used packages supplied by MetaCentrum, more specific packages often obtained in cooperation with the user

European Grid Initiative

The European Grid Initiative (EGI) is a partnership between National Grid Initiatives (NGIs) and a coordinating body, the EGI Organisation (EGI.eu, http://www.egi.eu). Within the EGI partnership, NGIs and EGI.eu will work together to operate and further develop a sustainable pan-European grid infrastructure, enabling optimal sharing of computing and data resources.

Top Users: CPU Years Consumed in 2009

National Grid Initiatives are the main actors within EGI. NGIs are autonomous, officially-recognised bodies that ensure the operation of the grid infrastructures in the country, and an effective and transparent representation of the needs and wishes of their scientific communities (research teams), resource providers (resource centres) and e-Infrastructure-related institutions.