egee

CharonGUI
A Graphical Frontend on top of gLite middleware for Utilization of Grid

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CESNET, NA4 activity

www.eu-egee.org

e-infrastructure
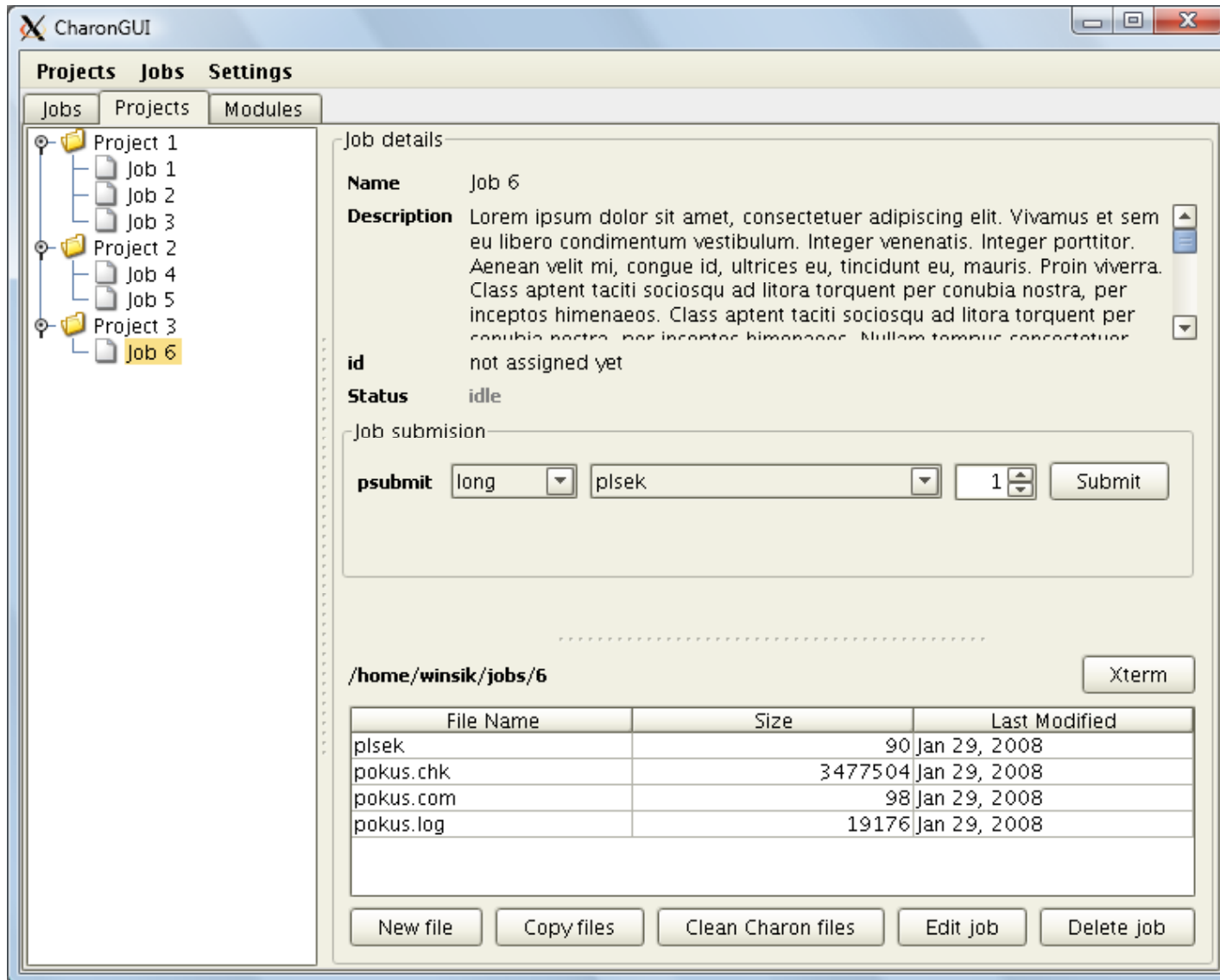
Enabling Grids for E-sciencE

- **Vision of Future**
  - Grids and clouds
- **Charon System Evolution**
- **CharonGUI Use Case**
  - Design
  - Architecture
  - Features
- **Conclusions / Future Work**
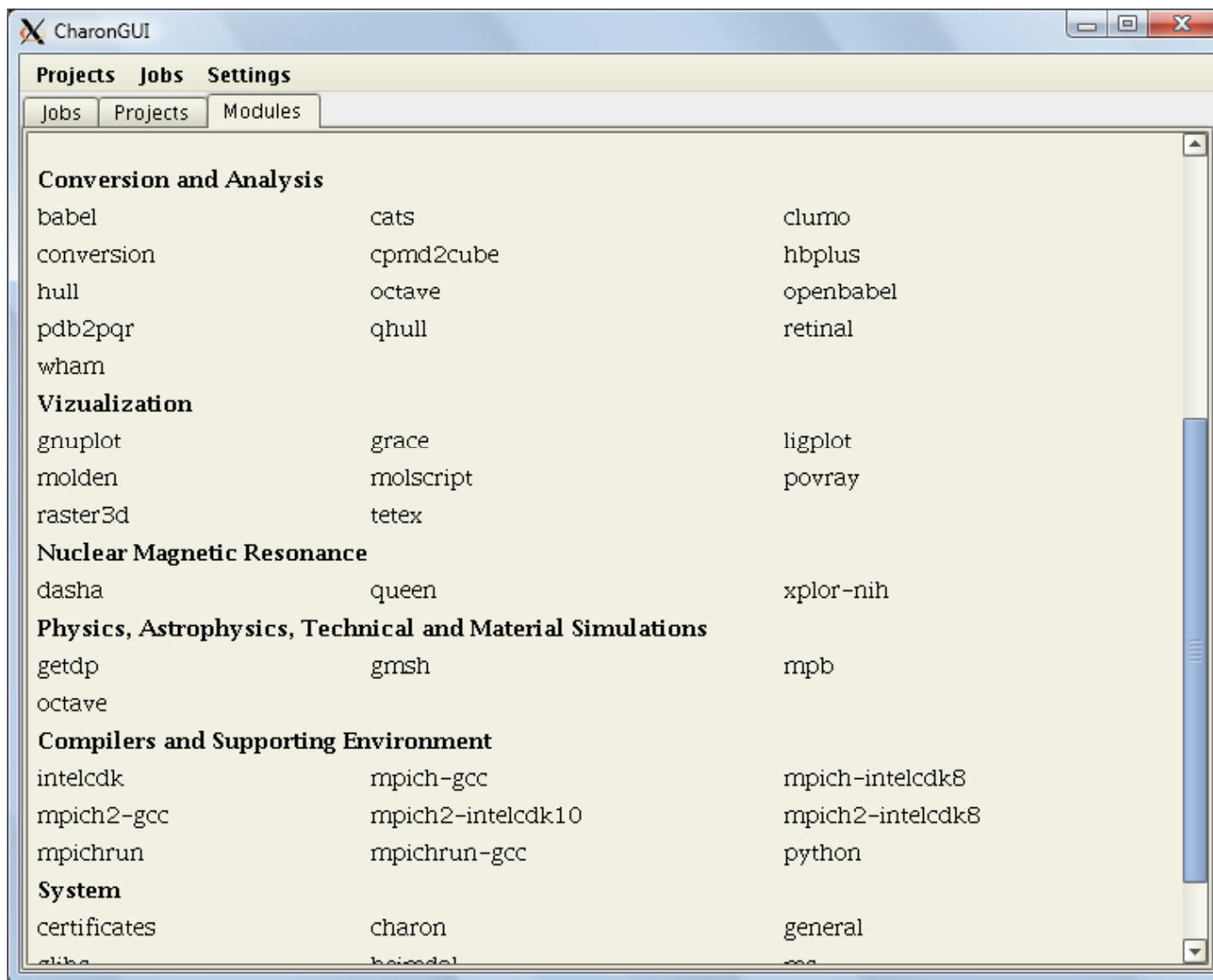
Enabling Grids for E-sciencE

- **Approaches to increasing IT demands [OGF24]**
    - grids as general purpose environment
    - clouds as specialised narrow cases of grids

- **In reality**
    - grids as underlying layer
    - clouds as generalized / ad-hoc parts of grid environments

- **The distinction is hidden in**
    - hardware virtualization and utilization of

    high level tools / frameworks / dashboards

Enabling Grids for E-sciencE

- **Charon**
  - first attempt to ease daily Grid utilization
  - developed computational chemistry user group

- **Charon Extension Layer (CEL)**
  - further generalization of the concept
  - modified to support underlying middlewares
  - extensive expansion of supported/ported applications

- **CharonGUI**
  - next logical steps in the development
  - expected to attract "GUI-addicted" end users
  - maintain previous functionality
  - add new functions and useful services

Enabling Grids for E-sciencE

- **Multiplatform concept**

- **Support for distinct grids**

- **Preservation of job life cycle characteristics**

- **Intuitive and user-friendly interface**

- **Multilingual support**

Enabling Grids for E-sciencE
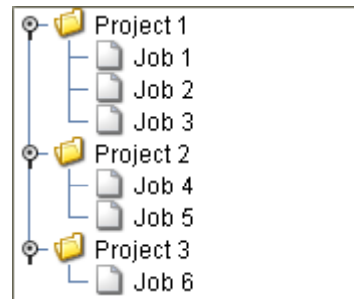
Enabling Grids for E-sciencE

- **Job files management**
- **Categorization of computational projects/jobs**
- **Checking status of multiple jobs**
- **Comfortable jobs submission**

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Projekt	Job	Id	Status	Age
Project 1	Job 1	470609.skirit-f.ics.m...	finished	May 16, 2008
Project 1	Job 2		idle	May 16, 2008
Project 1	Job 3	470669.skirit-f.ics.m...	error	May 16, 2008
Project 2	Job 4	470601.skirit-f.ics.m...	finished	May 19, 2008
Project 2	Job 5		waiting	May 19, 2008
Project 3	Job 6		waiting	May 19, 2008

Project [All projects ▼] Timing [all ▼] [Apply filter]

All projects
Project 1
Project 2
Project 3

all
today
week ago
month ago
three months ago
six months ago
year ago

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Enabling Grids for E-sciencE

- **CharonGUI is Java-based application**

- **Current version runs at specific server**
  - dedicated frontend/user interface to individual VOs
  - JRE-1.6.0 is the only prerequisite on server side

- **Display on remote X-server**
  - Linux, MS Windows with X-Window emulator

- **Implemented functions**
  - available in graphical interface itself and in dropdown menu
  - personalization of user settings (last project, …)

Enabling Grids for E-sciencE

- **Management of laboratory projects**
  - allowing complete projects and jobs manipulation

- **Exhaustive jobs overview and jobs filtering**
  - based on job state, time period, project assignment, job IDs

- **Invocation of Xterm for further analysis**

- **Advanced features**
  - internationalization (languages)
  - support for visual skins

Enabling Grids for E-sciencE

- **Drawbacks and issues**
  - latency
  - reading the console output (discovered issues to be fixed)

- **Deployment**
  - METACentrum (Czech NGI - National Grid Initiative)
  - VOCE (Virtual Organization for Central Europe)

- **Promotion outside Europe**
  - EUAsiaGRID project

Future Work

Enabling Grids for E-sciencE

- **Remote client version**

- **Extension of supported virtual organizations**

- **Multiple project hierarchy**

- **Configuration and installation tool**

- **Interactive list of application modules including links to on-line documentation**