



Enabling Grids for E-scienceE

VOCE

Grid Environment for Central Europe

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www.eu-egee.org



- **Generic description**
- **VOCE aims**
- **Provided services**
- **Current VOCE status**
- **Utilization statistics**
- **VOCE summary**

- **VOCE - Virtual Organization for Central Europe**

VO is dynamic pool of resources & users from different domains grouped together for a particular purpose

- provides **complete grid infrastructure** under EGEE wings
- officially registered as currently the one and only “Regional VO” for Central European (CE) region
- based on **regional principle**
 - § VOCE spans the whole CE Federation
 - § core services operated by CESNET
 - § resources are provided by several institutions across the CE (these resources are available to all users registered in VOCE)

- **VOCE - Virtual Organization for Central Europe**
 - **fully production environment**
 - § VOCE environment allows Grid newcomers to get quickly first experience with Grid computing
 - § simultaneously allows users to smoothly move to production use of the Grid in the same environment
 - **self-contained infrastructure**
 - § designed not to rely on external services
 - § currently on LCG middleware but move to gLite under way

- **VOCE - Virtual Organization for Central Europe**
 - **incubator for new applications** and application areas
 - § assistance in adapting a software for use on the Grid
 - § even for applications that do not have any computing experience
 - § outsourcing the burden of running an grid infrastructure to VOCE
 - **generic VO**
 - § not bound to any particular application
 - § interested in broad scale of application areas
 - § can also mediate a collaboration with other similar project we are aware of (being deeply involved in many Grid projects/activites in Europe)

- **VOCE - Virtual Organization for Central Europe**
 - **allocated resources** (guaranteed)
 - basic level of security retained
 - § no anonymous users
 - § based on accredited CA's approved by the EuGridPMA body
 - **primary audience**
 - § grid newcomers with no experience with Grid
 - § small application groups that do not have resources and/or skills to build and operate their own infrastructure
 - easy registration
 - § fully electronical using a web form
 - § the applicant needs a certificate issued by a trusted CA

- **VOCE & EGEE specific activities**
 - NA3 & NA4 Training and Networking
 - § VOCE is an **application neutral** virtual organization
 - § suitable for training purposes (in cooperation with P-GRADE)

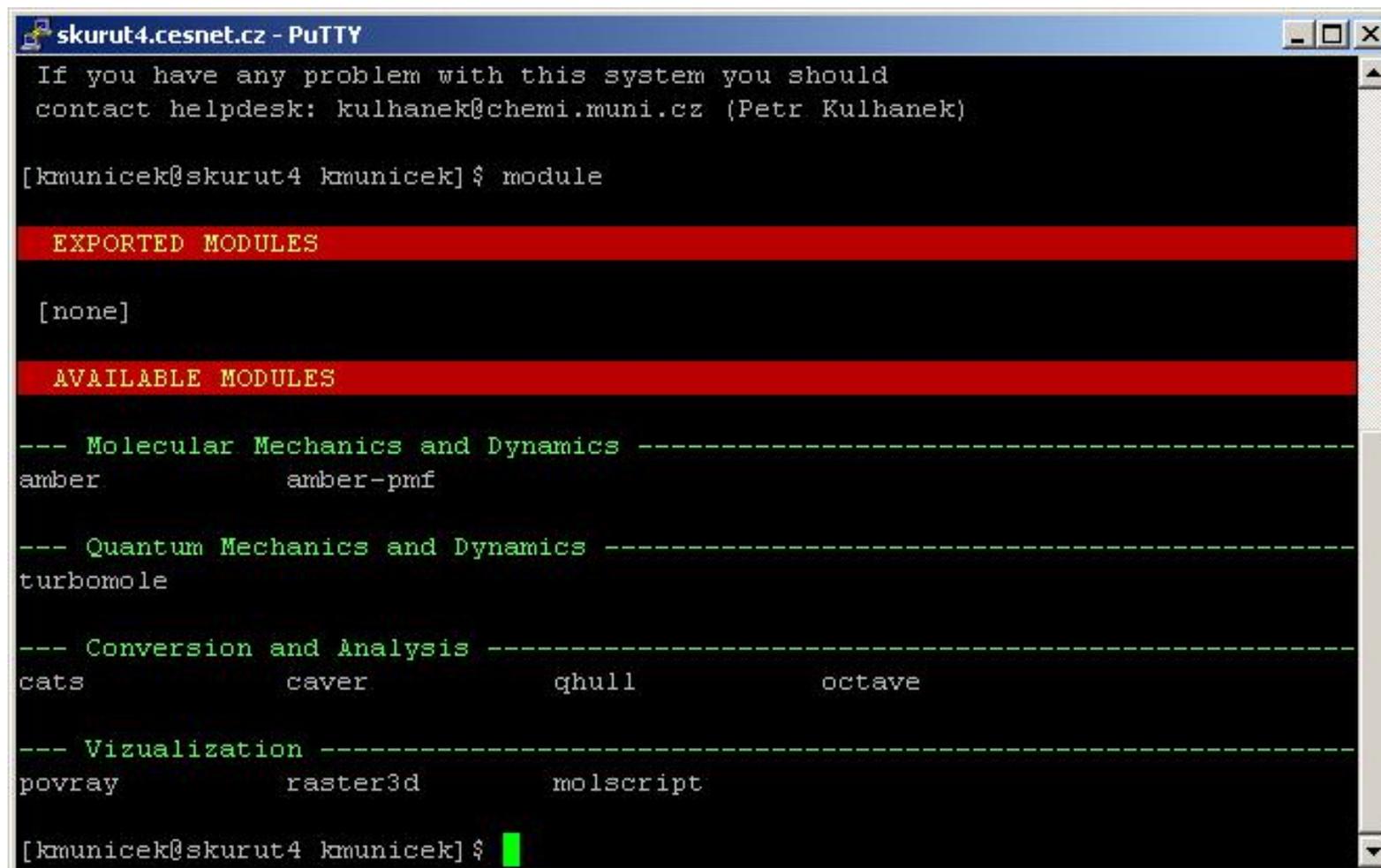
 - SA1 Operations
 - § test case for lightweight way of setting and running essential grid services in reasonable time
 - § a template for **setting new small scale VOs** including **application centric** (not necessarily in CE region only)

- **VOCE - Virtual Organization for Central Europe**
 - “non-standard” solutions provided
 - § generic flexible framework - **CHARON system** - that is available for application programs & jobs management
 - § access to VOCE trough **P-GRADE portal**
 - § **AFS installation** available for easy integration with local national Grid projects (currently used on Czech farms & UI)
 - § **parallel execution support** (MPI)

- **CHARON System**

- § uniform, and modular approach for (complex) comfortable computational jobs control (submission, monitoring, output retrieval)
- § generic system for use of application programs in the Grid environment (LCG/gLite middleware, ...)
- § currently supports programs from computational chemistry and molecular modelling, numerical computations, vizualizations

- **Application areas**



```

skurut4.cesnet.cz - PuTTY
If you have any problem with this system you should
contact helpdesk: kulhanek@chemi.muni.cz (Petr Kulhanek)

[kmunicek@skurut4 kmunicek]$ module

EXPORTED MODULES

[none]

AVAILABLE MODULES

--- Molecular Mechanics and Dynamics -----
amber                amber-pmf

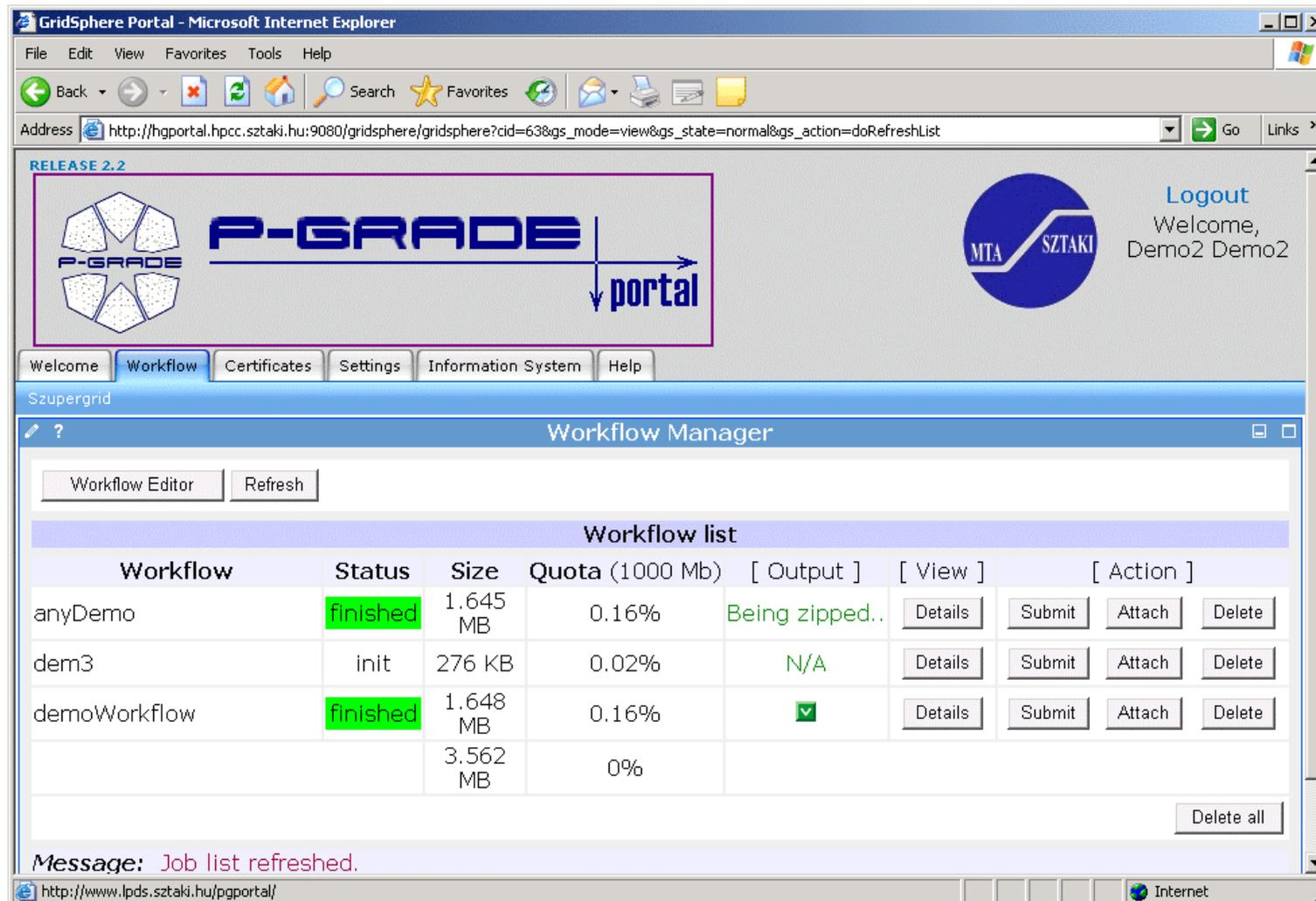
--- Quantum Mechanics and Dynamics -----
turbomole

--- Conversion and Analysis -----
cats                 caver                ghull                octave

--- Vizualization -----
povray               raster3d             molscript

[kmunicek@skurut4 kmunicek]$ █
  
```

- **P-GRADE – GUI to access VOCE**



Workflow Manager

Workflow list

Workflow	Status	Size	Quota (1000 Mb)	[Output]	[View]	[Action]
anyDemo	finished	1,645 MB	0.16%	Being zipped..	Details	Submit Attach Delete
dem3	init	276 KB	0.02%	N/A	Details	Submit Attach Delete
demoWorkflow	finished	1,648 MB	0.16%	✓	Details	Submit Attach Delete
		3,562 MB	0%			

Delete all

Message: Job list refreshed.

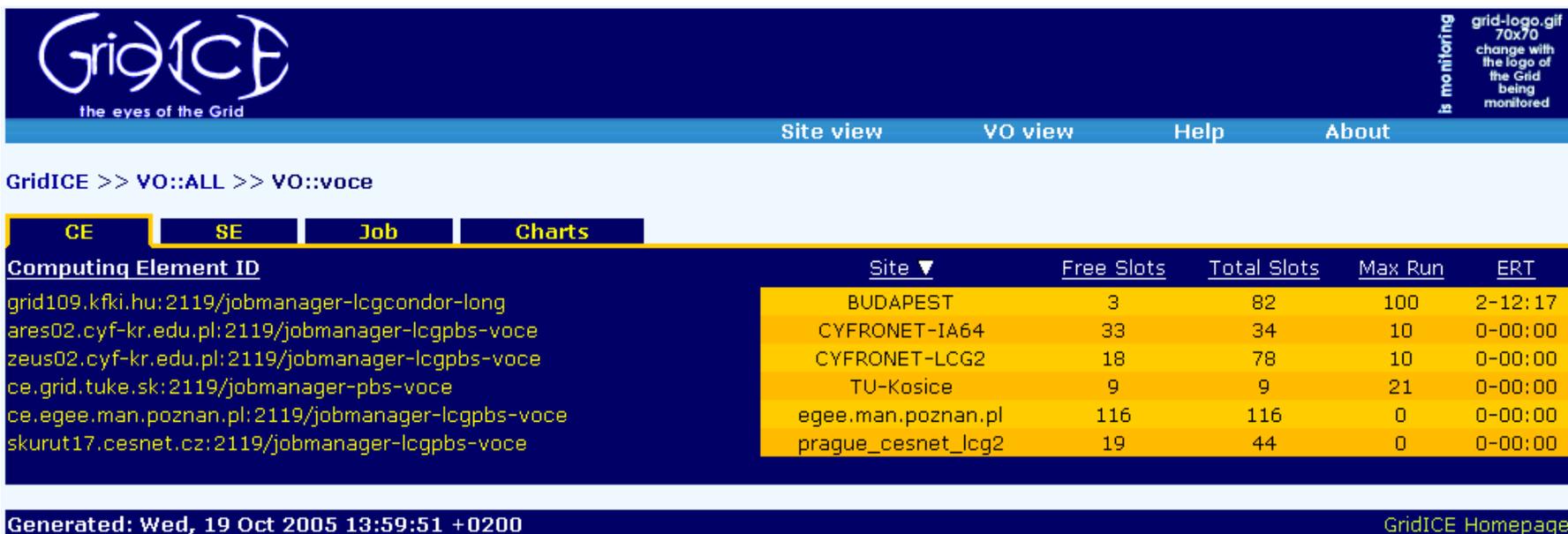
- **Infrastructure elements overview**

- § elementary infrastructure (WMS, CE, WNs, SE) fully functional and configured to accept users from CE

UI	skurut4.cesnet.cz
MyProxy	skurut3.cesnet.cz
RB	skurut3.cesnet.cz
VOCE LDAP	meta-ldap.cesnet.cz
VOCE VOMS	odorn.ics.muni.cz (temporary solution for tests)
GENIUS portal	https://skurut4.cesnet.cz/ (uses GILDA MyProxy server)

- § access to UI using GSISSH, UI account is created automatically after registration to VOCE

- Summary of resources



The screenshot shows the GridICE interface for the VOCE status. It includes a navigation menu with 'Site view', 'VO view', 'Help', and 'About'. The main content area displays a table of resources with columns for 'CE', 'SE', 'Job', and 'Charts'. Below this, a table lists 'Computing Element ID', 'Site', 'Free Slots', 'Total Slots', 'Max Run', and 'ERT' for various sites.

CE	SE	Job	Charts
<u>Computing Element ID</u>			
grid109.kfki.hu:2119/jobmanager-lcgcondor-long			
ares02.cyf-kr.edu.pl:2119/jobmanager-lcgpbs-voce			
zeus02.cyf-kr.edu.pl:2119/jobmanager-lcgpbs-voce			
ce.grid.tuke.sk:2119/jobmanager-pbs-voce			
ce.egee.man.poznan.pl:2119/jobmanager-lcgpbs-voce			
skurut17.cesnet.cz:2119/jobmanager-lcgpbs-voce			

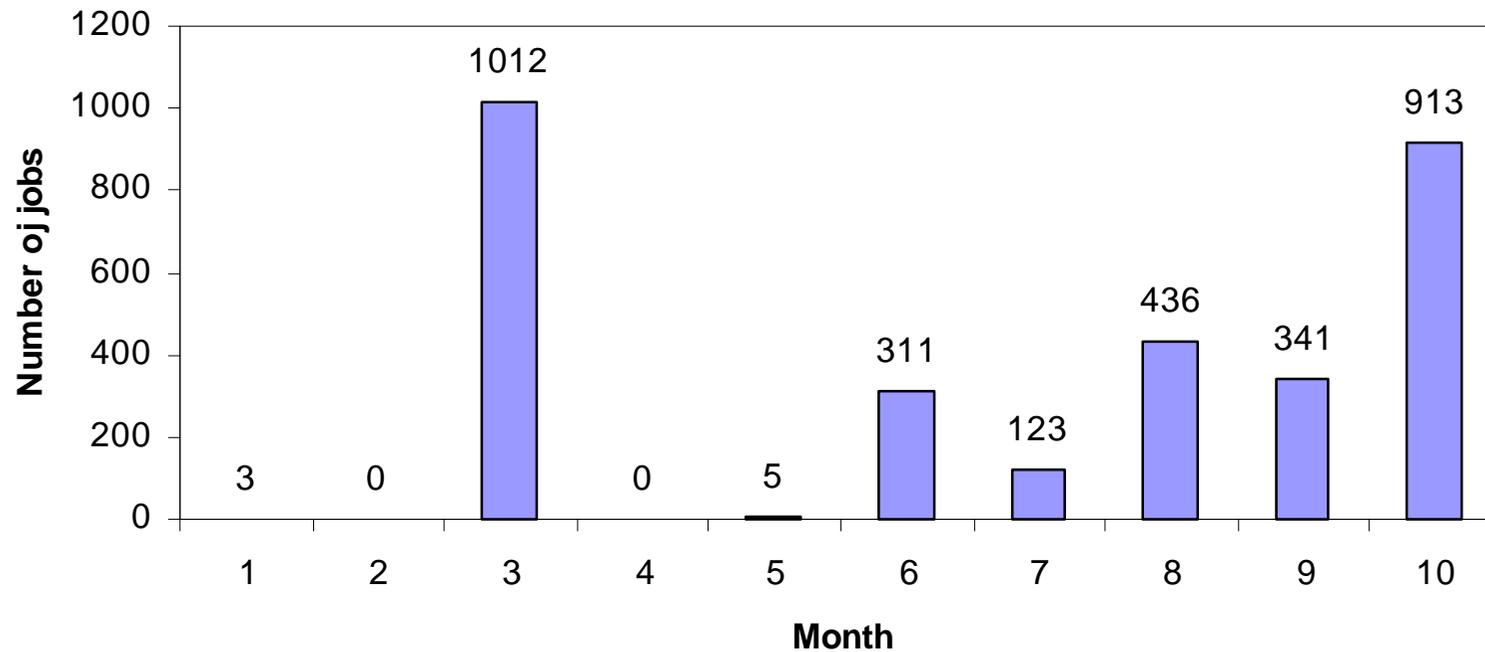
Site ▼	Free Slots	Total Slots	Max Run	ERT
BUDAPEST	3	82	100	2-12:17
CYFRONET-IA64	33	34	10	0-00:00
CYFRONET-LCG2	18	78	10	0-00:00
TU-Kosice	9	9	21	0-00:00
egee.man.poznan.pl	116	116	0	0-00:00
prague_cesnet_lcg2	19	44	0	0-00:00

Generated: Wed, 19 Oct 2005 13:59:51 +0200 GridICE Homepage

- resources from
 - CESNET (Czech Republic)
 - PSNC, CYFRONET, ICM (Poland)
 - II-SAS (Slovakia)
 - KFKI (Hungary)
- almost 40 registered users from 10 institutes and 4 countries
- in total **539 CPUs, about 5.9 TB disk space**

How many jobs were running at VOCE?

VOCE utilization in 2005



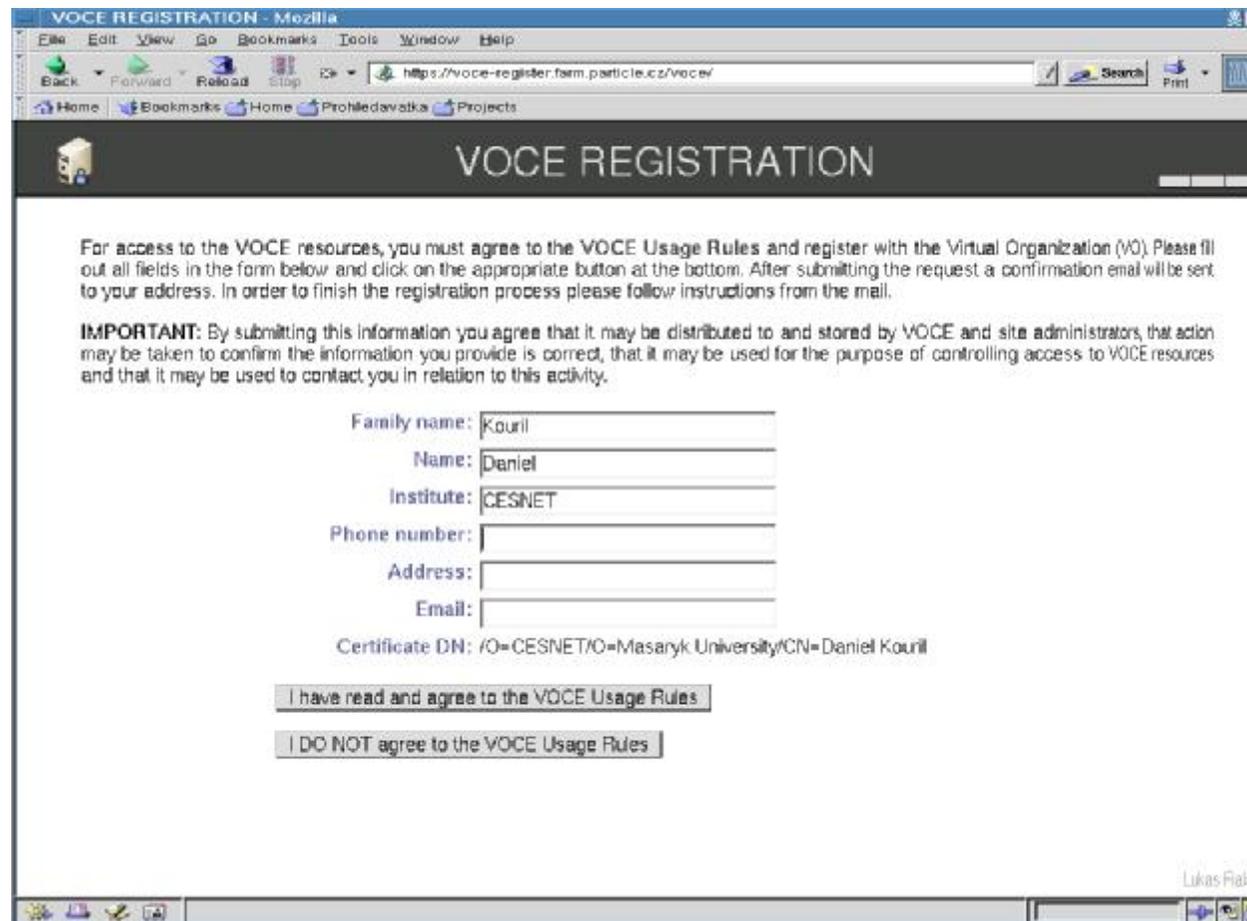
How were CPUs utilized by the jobs?

- number of jobs sent through RB skurut3.cesnet.cz
- other jobs were sent directly to CE using globus-job-run



- **User registration**

§ VOCE registration at <http://voce-register.farm.particle.cz/>



VOCE REGISTRATION - Mozilla

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop <https://voce-register.farm.particle.cz/voce/> Search Print

Home Bookmarks Home Prohledavka Projects

VOCE REGISTRATION

For access to the VOCE resources, you must agree to the VOCE Usage Rules and register with the Virtual Organization (VO). Please fill out all fields in the form below and click on the appropriate button at the bottom. After submitting the request a confirmation email will be sent to your address. In order to finish the registration process please follow instructions from the mail.

IMPORTANT: By submitting this information you agree that it may be distributed to and stored by VOCE and site administrators, that action may be taken to confirm the information you provide is correct, that it may be used for the purpose of controlling access to VOCE resources and that it may be used to contact you in relation to this activity.

Family name:

Name:

Institute:

Phone number:

Address:

Email:

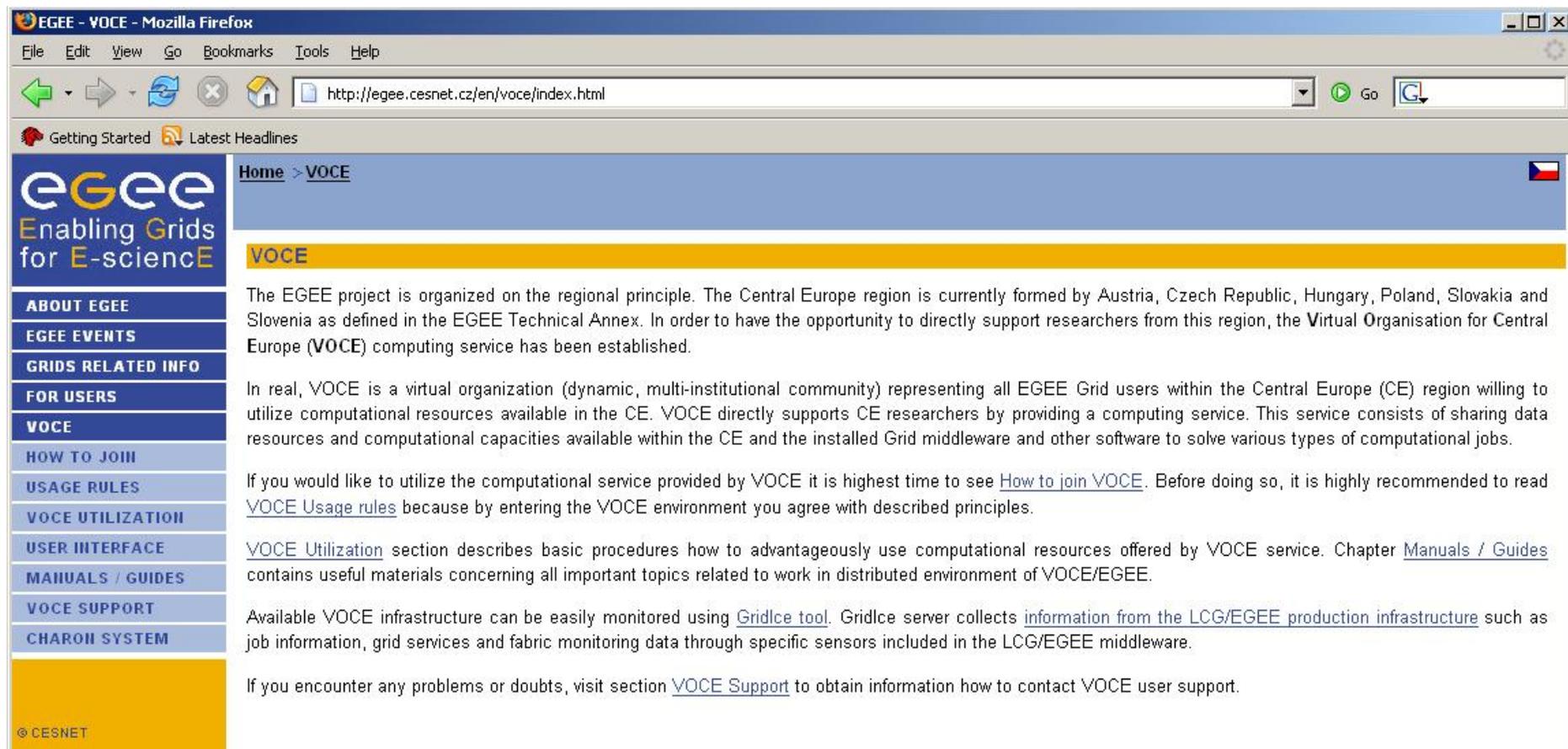
Certificate DN: /O=CESNET/O=Masaryk University/CN=Daniel Kouril

Lukas Pala

- **Documentation**

§ VOCE portal at

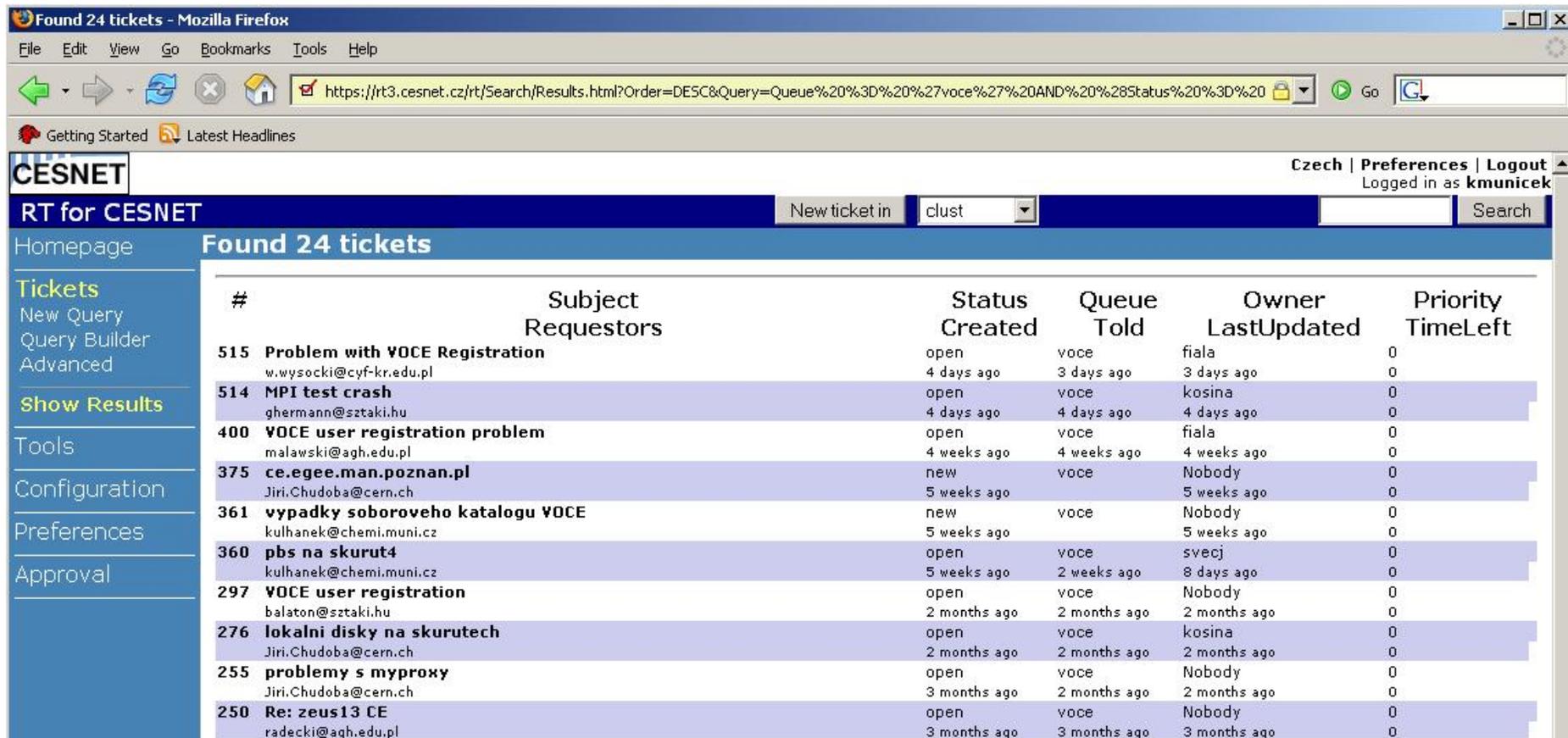
<http://egee.cesnet.cz/en/voce/>



The screenshot shows a Mozilla Firefox browser window displaying the VOCE portal. The address bar shows the URL <http://egee.cesnet.cz/en/voce/index.html>. The page content includes the EGEE logo and a navigation menu on the left with the following items: ABOUT EGEE, EGEE EVENTS, GRIDS RELATED INFO, FOR USERS, VOCE (highlighted), HOW TO JOIN, USAGE RULES, VOCE UTILIZATION, USER INTERFACE, MANUALS / GUIDES, VOCE SUPPORT, and CHARON SYSTEM. The main content area features a yellow header for 'VOCE' and several paragraphs of text describing the project's regional organization, the virtual organization's purpose, and how to utilize the service. A footer at the bottom left of the page reads '© CESNET'.

- Request tracking

§ Send requests to voce@cesnet.cz



#	Subject	Requestors	Status	Queue	Owner	Priority
			Created	Told	LastUpdated	TimeLeft
515	Problem with VOCE Registration	w.wysocki@cyf-kr.edu.pl	open 4 days ago	voce 3 days ago	fiala 3 days ago	0
514	MPI test crash	ghermann@sztaki.hu	open 4 days ago	voce 4 days ago	kosina 4 days ago	0
400	VOCE user registration problem	malawski@agh.edu.pl	open 4 weeks ago	voce 4 weeks ago	fiala 4 weeks ago	0
375	ce.egee.man.poznan.pl	Jiri.Chudoba@cern.ch	new 5 weeks ago	voce	Nobody 5 weeks ago	0
361	vypadky soboroveho katalogu VOCE	kulhanek@chemi.muni.cz	new 5 weeks ago	voce	Nobody 5 weeks ago	0
360	pbs na skurut4	kulhanek@chemi.muni.cz	open 5 weeks ago	voce 2 weeks ago	svecj 8 days ago	0
297	VOCE user registration	balaton@sztaki.hu	open 2 months ago	voce 2 months ago	Nobody 2 months ago	0
276	lokálni disky na skurutech	Jiri.Chudoba@cern.ch	open 2 months ago	voce 2 months ago	kosina 2 months ago	0
255	problemy s myproxy	Jiri.Chudoba@cern.ch	open 3 months ago	voce 2 months ago	Nobody 2 months ago	0
250	Re: zeus13 CE	radecki@agh.edu.pl	open 3 months ago	voce 3 months ago	Nobody 3 months ago	0

- **VOCE - Virtual Organization for Central Europe**
 - is ready to serve
 - § for fast and easy access to the Grid
 - § as both testing and production environment
 - and provides
 - § smooth way of Grid utilization for Grid newcomers and/or small for user groups not covered by any of currently existing VOs
 - § service for all users from the CE federation