



Enabling Grids for
E-science in Europe

www.eu-egee.org

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The VOCE Environment

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CESNET

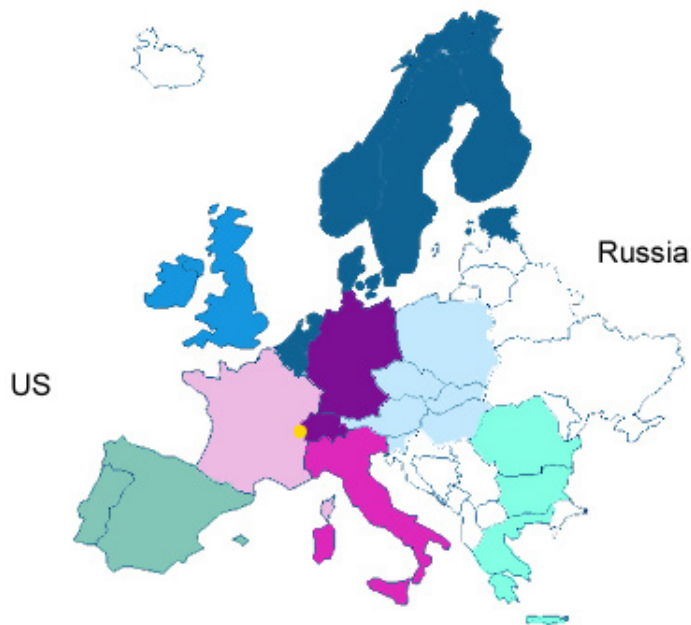


VOCE – easy access to the Grid for everyone

- Virtual Organization overview
- What VOCE is and what services it provides
- How to join and use VOCE

Central Europe Federation

- Several federations within EGEE
- Efficient grid operation, user support, etc.
- The Central European (CE) Federation is composed of institutions and users from: Austria, Czech Republic, Hungary, Poland, Slovakia, and Slovenia



- Virtual Organization (VO)
 - Basic entity in the Grid world
 - Generalization of traditional institution, community
 - A distributed set of users, computing resources, storage elements, and possibly specialized hardware devices established to use the resources efficiently
- Many VO's in many Grid projects all around the world
 - differentiating in number of users and/or resources, applications they support etc.
 - usually long-lived, once established they are used for years

- Initiated by a group of users requiring additional computing power, storage, etc.,
 - demand for stable, production environment
- An infrastructure must be available in order to support a new VO
 - Registration of new users
 - Authentication framework (PKI, trusted Certification Authorities)
 - Common middleware (SE, CE, WN, UI, WMS, VOMS etc.)
 - Resources willing to support the VO
 - Applications
 - Administrators (capable of keeping the infrastructure ready)
- VO can utilize an existing Grid environment
- Currently too complex for grid newcomers or small groups of users

VOCE – VO for the CE Federation

- A complete Grid infrastructure provided by the CE Federation
- The main goal is support of new users (Grid Plug & Play)
- Primarily support of new Grid users that do not have their own VO and want to gain experience with the production Grid
 - To allow testing and first touch with the Grid environment
 - Support of smaller application groups that do not have resources to build and maintain a separate VO
- Not tied with any particular application area
- Any user from the CE Federation can become a member of VOCE
 - Participation of users from other federations could be negotiated
- Resources are provided on the best effort basis (no dedicated resources for a particular group)

- Regional principle
 - VOCE spans the whole CE Federation
 - * The core services operated by CESNET
 - * Resources are provided by several institutions across the CE (these resources are available to all users registred in VOCE)
- Fully production environment
 - VOCE provides users with environment that allows to get quickly first experience with Grid computing
 - Also allows users to smoothly move to production use of the Grid in the same environment
- Independent infrastructure
 - Designed to use as much of its own services as possible
 - Currently bound to LCG, but utilization of gLite resources is under development

- VOCE is available in the official GridICE list with LCG/EGEE resources
- <http://gridice2.cnaf.infn.it:50080/gridice/>
- Resources from CESNET (CR), PSNC Poznań, Cyfronet (Poland), IISAS (Slovakia)
- Cca 200 CPUs, over 2TB, utilization cca 50%
- A cluster from ICM, Poland to join in a week or two (after finishing reconstruction of their facilities)
- Austrian resources ready and supporting VOCE but invisible for the VOCE RB (since they are not part of LCG, solution is being discussed)
- Hungarian participation under discussion (possible collaboration with HunGrid).
- The number of resources available should grow

VOCE – Curent Status

INFN - GridICE - Grid Monitoring Service - Mozilla

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop <http://gridice2.cnaf.infn.it:50080/gridice/vo/vo.php?orderby=Name&direction=descen> Search Print

Home Bookmarks Home Prohledavarka Projects

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GridICE the eyes of the Grid
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Site view VO view Job Monitoring Geo view Grid view Help About

VO view::ALL >> Summary

VO Name ▲	CENum	MinSlotFree	MaxSlotFree	RunJob	WaitJob	Storage Available	Storage Total	Storage Load
zeus	48	0	646	-	-	954.3 Tb	961.2 Tb	1%
webcomg	1	14	14	-	-	-	-	-
voce	4	9	187	-	-	938.6 Gb	2.1 Tb	57%
vlemed	3	40	45	-	-	1.3 Tb	2.5 Tb	4%
vledut	1	40	40	-	-	234.7 Gb	817.3 Gb	71%
vle	-	-	-	-	-	694 Gb	1.6 Tb	57%
virgo	45	0	128	-	-	17.5 Tb	20.3 Tb	14%
uscms	1	2	2	-	-	-	-	-
usatlas	1	2	2	-	-	-	-	-
twgrid	2	4	40	-	-	906.6 Gb	1.8 Tb	54%
tutor	1	40	40	-	-	1.2 Tb	2.6 Tb	5%
theophys	37	0	82	-	-	15.4 Tb	17.6 Tb	12%
testvo	1	2	2	-	-	-	-	-
testgrid	1	14	14	-	-	-	-	-
t2k	1	348	348	-	-	-	-	-
swetest	10	0	111	-	-	1863.4 Tb	2794.9 Tb	33%
solovo	1	14	14	-	-	-	-	-
skgrid	-	-	-	-	-	-	-	-
sixt	66	0	361	-	-	18.4 Tb	22 Tb	16%
seegrid	9	0	26	-	-	917.7 Gb	1 Tb	9%
see	11	0	53	2	30	7.2 Tb	7.6 Tb	5%

VOCE – Curent Status

INFN - GridICE - Grid Monitoring Service - Mozilla

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Back Forward Reload Stop http://gridice2.cnaf.infn.it:50080/gridice/vo/vo_details.php?voName=voce&visibility=C Search Print

Home Bookmarks Home Prohledavarka Projects

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GridICE the eyes of the Grid

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Site view VO view Job Monitoring Geo view Grid view Help About

VO view::voce >> Core Services >> Computing Resources

Computing Resources Storage Resources

Computing Element ID	Site ▼	Free Slots	Total Slots	Max Run	ERT
skurut17.cesnet.cz:2119/jobmanager-lcgpbs-voce	cesnet.cz	35	44	0	0-00:00
zeus02.cyf-kr.edu.pl:2119/jobmanager-lcgpbs-voce	cyf-kr.edu.pl	66	76	10	0-00:00
ce.egee.man.poznan.pl:2119/jobmanager-lcgpbs-voce	egee.man.poznan.pl	188	188	0	0-00:00
ce.grid.tuke.sk:2119/jobmanager-pbs-voce	grid.tuke.sk	9	9	21	0-00:00

Generated: Fri, 8 Jul 2005 14:34:46 +0200 [GridICE Homepage](#)

- Gilda provides the testing and demonstration environment for the EGEE users
- Similarly to VOCE provides an easy access to the Grid for unexperienced users
- VOCE provides higher level of security
 - all users must have a valid certificate issued by a trusted CA
 - contact information is checked during the registration process, and is available to the administrators
 - users are managed by “local” administrators who usually have detailed information about particular users
 - resource owners can check who uses their resources
- VOCE is a official activity of the CE federation
 - Minimal set of resources is always available
 - User support
- Experiences for the VO administrators
 - know-how to establish a new VO, connect a new resources, etc.

- Fast and easy access to the Grid
- Both testing and production environment
- Aiming at new users without Grid experience or small user groups not covered by any VO
- Open to all users from the CE federation

- How can I use VOCE?
- User Registration
 - By registering with VOCE the user gains access to the VOCE resources and account on the VOCE User Interface machine.
- Utilization of the VOCE services
- Basic services (RB, RLS), resources (CE's, SE's), registration service, VOMS and LDAP containing list of VOCE users
- VOCE web page (<http://egee.cesnet.cz/en/voce/>)

- User management system based on CESNET solution
- Complex SQL-based DB system with additional services for processing the user data
- Used in the CESNET Grid infrastructure for many years, very stable and tested
- Very flexible, allows almost arbitrarily modifications
- Implemented extensions realizing propagation of the user data to the VOCE VOMS service and LDAP service
 - Both used for controlling access to the VOCE resources
 - Basic services for each VO

- Users managed by VOCE administrators
- Usual operations:
 - approval of membership requests
 - suspension/restoring of membership
 - cancel membership
- Defined to be “close” to the users they manage (from the same country or institute)
- Strict access control for the admins – they are only allowed to see information about their users
- Joint administrators mailing list to communicate information about users in VOCE

- User is assigned an administrator according to the user's subject name
- Current mapping available at the VOCE web page
- Always one “catch-all” institution per country, which handles users that do not affiliate with any of the institutions listed.
- CESNET will handle users with certificates from non-CE CA's

Administrator User prefixes

UNIINNSBRUCK	/C=AT/O=AustrianGrid/OU=UIBK/
GUP	/C=AT/O=AustrianGrid
CESNET	/C=CZ/O=CESNET/ /O=CESNET/
MTA SZTAKI	/C=HU/O=KFKI RMKI CA/OU=SZTAKI / /C=HU/O=KFKI RMKI CA/O=SZTAKI / /C=HU/O=NIIF CA/OU=Certificate Authorities/CN=NIIF Root /C=HU/O=NIIF CA/OU=GRI D/
NIIF	/C=HU/O=KFKI RMKI CA/OU=NIIF/ /C=HU/O=KFKI RMKI CA/O=NIIF/
KFKI RMKI	/C=HU/O=KFKI RMKI CA/OU=KFKI RMKI / /C=HU/O=KFKI RMKI CA/O=KFKI RMKI /
ELUB	/C=HU/O=KFKI RMKI CA/OU=ELUB/
BUTE	/C=HU/O=KFKI RMKI CA/OU=BUTE/
ICM	/C=PL/O=GRI D/O=ICM/
PSNC	/C=PL/O=GRI D/O=PSNC/
CYFRONET	/C=PL/O=GRI D/O=Cyfronet /
II-SAS	/C=SK/O=SlovakGrid/
JSI	/C=SI /O=SiGNET/

User Registration - Requirements

- A valid personal certificate issued by a trusted CA
- An SSL-enabled web browser
- A working email address
- Agreement with the VOCE usage rules

- Document "Rules for Use of the VOCE Computing Resources"
 - Available from the VOCE web page
 - Defines basic terms for Grid and EGEE environment
 - Users' responsibilities
 - * Keep private keys secured properly, do not reveal passwords, do not share accounts with other users etc.
- Each user requesting VOCE membership must read and approve it and adhere to that during all her/his VOCE membership

- VOCE registrar at <http://voce-register.farm.particle.cz/>
- Procedure:
 1. The user applies for VOCE membership using the portal
 - Client authentication using an X.509 certificate in the browser is requested
 - The user must supply contact information
 2. A confirmation mail is sent to him/her (to verify the email address is correct)
 3. After receiving the confirmation mail, the user must access the URL provided in the mail and finish the registration process by filling in the login name and password, which will be used for the VOCE UI machine
 4. A notification about a new registration is sent to the admin mailing list. The mail contains the contact information from the certificate
 5. The admin responsible for the user has three days to reject the user
 - Should be sufficient to prevent well-known “bad guys” from entering VOCE
 6. Unless the admin cancels the registration, the user is automatically accepted after three days
 - The administrator can also approve the application manually earlier
 7. The user always receives a mail with the outcome of the registration process

User Registration

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

- Computing infrastructure ready (WMS, CE, WNs, SE) and configured to accept users from VOCE VO (i.e. users listed in the VOCE LDAP)
- UI: skurut4.cesnet.cz
MyProxy: skurut3.cesnet.cz
SE: skurut18.cesnet.cz, zeus03.cyf-kr.edu.pl, ce.grid.tuke.sk, se1.egee.man.poznan.pl
CE: skurut17.cesnet.cz, zeus02.cyf-kr.edu.pl, ce.egee.man.poznan.pl, ce.grid.tuke.sk
RB: skurut3.cesnet.cz
VOCE LDAP: meta-ldap.cesnet.cz
VOCE VOMS: odorn.ics.muni.cz (will change in the future)
- Genius portal ready

- Each user in VOCE has an account on the User Interface machine (skurut4.cesnet.cz)
- UI provides a complete set of commands needed to use the EGEE Grid environment
- Intended for users who do not have their own UI environment (provided by their institutions or another projects)
- Access using the SSH protocol
 - Password-based authentication (using the password entered during the registration process)
 - GSI authentication. Requires a GSI-enabled client but allows SSO
 - (Kerberos)
- Single VOCE password
 - Users' password are stored in a Kerberos server, UI verifies passwords against this server. Easy to support password-based authentication on other UIs, portals etc.

Using an Alternative UI

- Arbitrary UI used for EGEE/LCG can be used to access VOCE
- Private installation of UI – UIPnPcomb provided by GILDA
- UI must be configured to support VOCE. A basic config files available from the VOCE web page

- Obtain a certificate
- Register with the VOCE
- Log on the VOCE UI machine (or config and use another one)
- Submit a job, store files on the SE's etc.
- Resource monitoring (GridICE)

How to contribute resources?

- If the resources are part of LCG, it is sufficient to only extend the configuration.
 - Once the new information is propagated no other changes are needed
- Otherwise contact us directly

- VOCE portal ready (<http://egee.cesnet.cz/en/voce/>)
 - contains all documents mentioned earlier
- Request tracking system (RT) for VOCE in use by the administrators
 - Allows efficient way of solving users' problems
- Send any problems/questions to voce@cesnet.cz