



Enabling Grids for
E-science in Europe

*SA1 operational policy training,
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User support and new VO induction

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Objectives of this session

- Define and agree on user support and new VO induction

Types of users

- 3 types envisaged in the region:
- **New experimental users;** and users interested in gridifying their existing application.
- **New production users:** those ready to run their application in the production mode.
- **Experienced production users** (High Energy Physics, Bio-Medical) that want to use the regional Grid.

New experimental users

- *Interest in trying the Grid hands-on*
- GILDA testbed <https://gilda.ct.infn.it/>
- Accessible via GENIUS portal <https://grid-tutor.ct.infn.it/>
- Possibility to submit test-jobs, monitoring, get results, etc.
- A number of applications catered for
- Supports MPI

New experimental users

- *Interest in application adaptation and development*
- GILDA/GENIUS the default portal for generic applications
 - 1. Can develop your applications on GILDA
 - 2. Can add your machines to GILDA and experiment there
 - 3. A development cluster will be provided by UoCrete
- Support provided by UoCrete, Demokritos and EGEE-SEE support team
- Presentation of GILDA by Christos Aposkitis in the training session

New production users: target

- *Already successfully gridified application*
- Options:
- 1. Through the EGEE Applications Advisory Panel (recommended) [<http://egee-na4.ct.infn.it/egaap/>]. Here you can present your application, and either:
 - join an existing VO or
 - qualify as a new VO, and CICs provide operational support (VO and core services)
- 2. Deploy your application through the SEE-VO
 - Active by March 2005.
 - SEE ROC operational team [grid-support@egee-see.org] will provide services necessary to run your applications on the local cluster

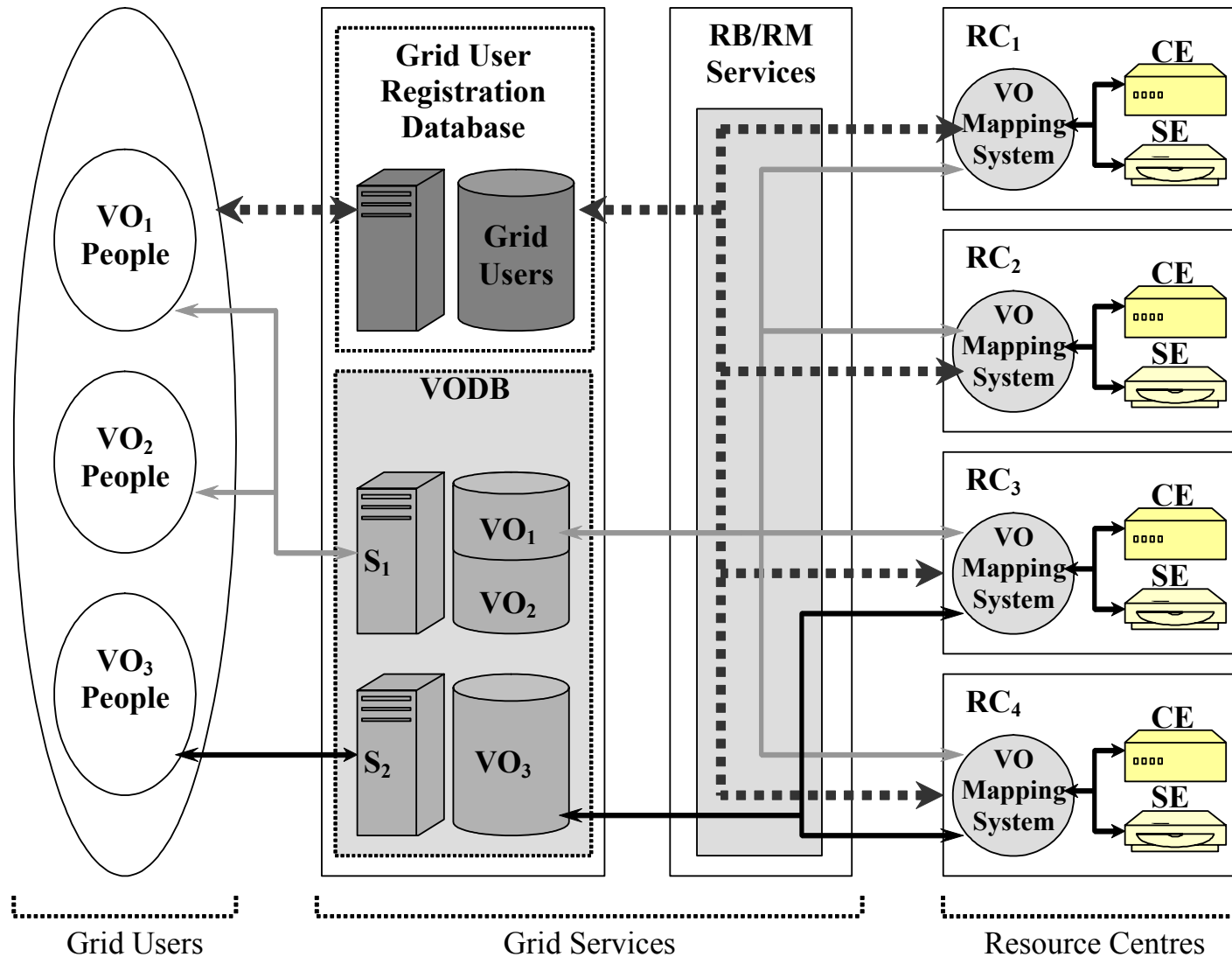
New production users: existing VOs

<u>VO</u>	<u>LHC Affiliation</u>
ALICE	ALICE experiment
ATLAS	ATLAS experiment
CMS	CMS experiment
DTEAM	Grid (LCG) Deployment Group
LHCB	LHCb experiment
SixTrack	Single Particle Tracking Code
<u>VO</u>	<u>non-LHC Affiliation</u>
BaBar	BaBar experiment
D0	D0 experiment
H1	H1 experiment
Zeus	Zeus experiment
Biomed	EGEE Biomedical activity
ESR	Earth Science Research (Earth Observation, Climate, Hydrology, Solid Earth Physics, Geosciences)
EGEODE	Expanding GEOsciences on DEMand

New production users: SEE VO

- VO server / VOMS Auth: Jan 05
- MyProxy: Auth: running
- VO manager: administration: Aegean
- RLS (optional) [HG01]: March 05
- RB (+LBS)+BDII [UCY]: Feb 05
- UI (for Greece only): ICCS currently, Demokritos - Feb 05

VO services



Application info needed

- General application description
- The minimum required estimations:
 - Minimal data storage size (SE) in GB
 - Minimal VO software storage size in GB
 - Minimal RAM size required to run job (WN)
 - Minimal disk space size required to run job (WN)
 - Estimated job execution times (possibly expressed as a range)
 - Minimal number of simultaneous jobs in execution
- Specific security constraints
- Particular network requirements
- Particular platform
- Information on commitment and Grid awareness, Grid readiness

Experienced production users

- Users who have been previously involved in the existing experiments (such as CMS, ATLAS, etc)
- Want to run the certified and tested applications within the existing EGEE VOs

Experienced production users

- **Step 1: UI**
 - Get an account on one of the existing South-East Europe UIs and run from that UI. Follow procedures described in www.hellasgrid.gr/users
 - Establish an own UI, which is an easy process
- **Step 2: Get a certificate**
 - See CK presentation
- **Step 3: Register with a VO**
 - Register: <http://lcg-registrar.cern.ch/>

Responsibilities

- **Demokritos**: leading user and application specific support
- **UoC**: provide application integration environment (GILDA) and support
- All node teams responsible for supporting their local users

“MPI problem” on LCG2

- MPI: Message Passing Interface
 - Same executable on all nodes doing computation
 - SSL to start the executable on all nodes and exchange messages
- Using PBS as LRM, all nodes involved in a parallel computation are listed in the file **\$PBS_NODEFILE**
 - with shared homes there is no problem but this is NOT the default LCG2 configuration of a site
 - with non-shared homes, all MPI jobs fail because the InputSandbox is copied on one node only

Solution for MPI jobs on LCG2

- Configure SSH **HostbasedAuthentication** among all WN's
- Submit a script which:
 - reads \$PBS_NODEFILE
 - copies (with rsync/scp) all needed file(s) on all WN's allocated by PBS for the parallel computation
 - starts **mpirun** with all the relevant information
- No change in the mw and its configuration needed !
- Preliminary [help document](#) ready and available
- JDL+script successfully tested both on Grid.it and GILDA

Resource allocation per domain

- Based on HG questionnaire
- HEP: 25%
- BioMed: 10%
- Earth Sciences: 15%
- Computational Chemistry: 10%
- Astrophysics: 10%
- Others (new domains): 30%