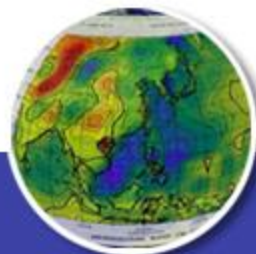


# Catch-All Virtual Organizations

## Solution for Heterogeneous and Disperse Grid Users Communities

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- **Catch-all virtual organizations**
  - generic description
  - advantages and drawbacks
- **VOCE use case**
  - VOCE status and management
  - lessons learnt
- **Applicability in Asia-Pacific region**
  - EUAsiaGrid VO

# Catch-all virtual organizations



- **Virtual organization (VO)**
  - key concept for utilization of grid environments
  - usually spans multiple administrative domains and even countries providing an abstraction of the user community
  - set of users and resources with a common goal
- **VO administration**
  - running of basic (gLite) services (WMS, VOMS, ...)
  - end users management
  - provision of user interfaces/high-level middlewares

# Catch-all virtual organizations



- **Advantages**

- open grid environment (users, applications, tools)
- routine VO management performed by dedicated administrators
- for new user communities
  - freedom from establishing their own VO before trying a Grid
  - initial outsourcing of critical VO services

# Catch-all virtual organizations



- **Drawbacks**
  - utilization rules have to be set up properly
    - to prevent unwanted usage or security breaches
    - prevention of anything@home exploitation
  - partners RAs/CAs readiness, resources certification
  - difficult activity monitoring
    - not one central application
    - no definition of typical behavior
  - non-existence of software administrator
    - collision of SGM account idea
    - users take care of their software
    - VO manager does not have corresponding information

# Catch-all virtual organizations



- **Grid newbie incubator**
  - assistance in adapting a software for use on the Grid
    - even for applications that do not have any Grid / cluster / remote computing experience
  - smooth transition to production use
  - support for preparation of specific VOs
    - when users get more organized and experienced

# Catch-all virtual organizations



- **Fully production environment**
  - allowing Grid newcomers to get quickly first experience with Grid computing
  - provide application neutral environment
    - not bound to any particular application
    - interested in broad scale of application areas
    - even small groups can access production Grid
  - no need to invest in specific VO setup & operation

# Catch-all virtual organizations



- **Training facility**
  - as technically independent “sub-VO”
  - reasonably secured environment
    - no anonymous users
    - short-term certificates (days) for t-purpose only
  - resources are allocated, fully guaranteed
  - sharing of the infrastructure with the production services guarantees high level of availability
  - same environment for end users when training activities are finished



- **Virtual Organization for Central Europe**
  - provides complete grid infrastructure under EGEE project
  - VOCE officially registered as EGEE VO
    - the first regional VO in EGEE
  - VOCE spans the whole Central Europe federation
    - core services operated by CESNET
    - resources are provided by many institutions across CE region



# VOCE use case



- **Heterogeneity (in both partners & organizations)**



Austria



Croatia



Czech Republic



Hungary



Poland



Slovakia



Slovenia



ISGC 2009, Taipei, Taiwan

- **Current VOCE status**

- end users stats

- registered so far **619**
    - active accounts (2009) **151**
    - new accounts (2009) 92
    - extended accounts 59

- CPUs stats

**8404 cores**

- storage stats

**18 SE / 128 TB avail**



- **Utilization report**

- testing jobs (collections, parametric or DAG jobs)
- free energy calculations, docking, MD/QC studies
- development of job submission portlets
- numerical astrophysics simulations
- phylogeny studies, plasma analysis
- porting applications to EGEE infrastructure

=>        distinct application domains  
            both type of usage (production & testing)

- **Lessons learnt**
  - VO administration burden out of end users
    - obtain UI account, start to work
  - maximal simplification of registration procedure
    - uniform pointer
    - semi-automatic application form acceptance
  - dedicated helpdesk needed
    - run of specific request tracking system

# Applicability in AP region



- **Adoption of catch-all approach in Asia-Pacific**
  - establishment of EUAsiaGrid VO
- **EUAsiaGrid VO setup**
  - own registration procedure (two steps)
  - institutes/sites involvement gradually increases
  - currently 57 end users and the number is growing
  - deployment of tools and high-level frameworks on-going