Training Grid Environment in VOCE


CESNET
• Virtual Organization for Central Europe
• Requirements on t-Infrastructure
• VOCEt – pilot implementation
• Conclusions and final remarks
• Virtual Organization for Central Europe (VOCE)
  – open Grid environment
  – VOCE removes necessity of VO building from scratch
  – outsourcing of VO-related services
  – routine VO management & administration performed by dedicated administrators
  – maximal simplification of research day-to-day work through utilization of high-level middleware tools
    ▪ CHARON Extension Layer, GUI portals
• Virtual Organization for Central Europe (VOCE)
  
  – provides **complete grid infrastructure** under EGEE wings
    
    - VOCE officially registered in the list of EGEE VOs
    - the first regional VO in EGEE
    - currently this model accepted for all regions
  
  – based on **regional principle**
    
    - VOCE spans the whole Central European (CE) Federation
    - core services operated by CESNET
    - resources are provided by several institutions across the CE
      (these resources are available to all / experienced users registered in VOCE)
**VOCE status**

**Virtual Organization for Central Europe (VOCE)**

- resources from CESNET (Czech Republic), PSNC, CYFRONET, ICM (Poland), II-SAS (Slovakia), KFKI, ELTE (Hungary), GUP, HEPHY (Austria), SRCE (Croatia)

- more than **135 registered users** from 10 institutes and 6 countries

- in total **729 CPUs, about 19.6 TB disk space**

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**GridICE status**

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• **Obstacles concerning grid new users**

  - Grid environment utilization barriers
    - slow and long learning curve due to **high complexity**
    - extreme barrier for new grid end users
    - many things to learn – routine utilization hindrance
  
  - need for **effective training**
    - courses organization
    - mapping of users domains & new potential users
    
    environment for Grid functionalities demonstration is missing (GILDA can not be used for massive utilization)

  
  ==> necessity to have **training infrastructure available**
Requirements on t-Infrastructure

• **Generic t-Infrastructure demands**
  
  – stable environment, preferably close to production
  
  – available on-demand
  
  – flexible user management
  
  – reasonably secure environment
• VOCEt VO basic features
  – VOCEt as VOCE sub-VO
  – technically independent
  – VOCEt core services shared with VOCE
  – end-services provided by CESNET
  – other institutions promised to join later
• **Users identity management**
  - **system Perun** used for VOCE user management
  - proven in production

• **PKI credentials issued by a on-line CA**
  - based on MyProxy, formal policy in preparation (follows the IGTF recommendations)
  - users are provided by random passwords, their email address is used as the corresponding login name
    - limits the possibility of a login/password combination being lost/stolen and misused
  - **web interface to MyProxy and Perun** under construction
    - maintaining the trainees‘ accounts
    - available to the event organizers only
Comparison of VOCEt to GILDA t-infrastructure

- VOCEt security
  - no anonymous users (importance for resource owners)
  - based on accredited CA's approved by the IGTF body

- VOCEt CA
  - short-term certificates (days) dedicated for training
  - users can access only limited group of available resources

- VOCE resources
  - allocated guaranteed resources, not best effort approach
Conclusions

• **VOCEt - Fast and flexible user management**
  - makes it possible to organize accounts for an event in minutes
  - basic level of security retained
    - the certificates are unique, can be traced to the event or even particular trainee

• **VOCEt - Infrastructure shared with production services**
  - high level of availability
  - still secure, users can not influence much the production environment

• **VOCEt - Dedicated resources**
  - owned by CE partners