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Training Grid Environment in VOCE

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VCE
Virtual Organization
for Central Europe

Information Society

Enabling Grids for E-sciencE

- **Virtual Organization for Central Europe**

- **Requirements on t-Infrastructure**

- **VOCEt – pilot implementation**

- **Conclusions and final remarks**

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- **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

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- **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)

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- ## 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

- **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**

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- **Generic t-Infrastucture demands**

    - stable environment, preferably close to production

    - available on-demand

    - flexible user management

    - reasonably secure environment

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- **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
    ▪ maintaing the trainees' accounts
    ▪ available to the event organizators only

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- **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

- **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