



**Vertical Workshop  
on  
NETWORKING  
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## **SEE INITIATIVES – PAST AND FUTURE**

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# TABLE OF CONTENTS

- SEE initiatives
- SEEREN
- SEE-GRID
- SEE-GRID2
- SEE-GRID-SCI
- Emerging of EGI
- High Performance Computing
- Infrastructure versus applications
- What next ???

- Follow-up of European initiatives
  - Networking – GEANT
  - Grids – EGEE
- Long story with human networking
  - Round table in Ohrid (CEENet)
  - MoU in Thessaloniki (GRNET)
  - Action of UNESCO etc.
- Three lines of action
  - Networking
  - Middleware
  - Software
    - Tools
    - Applications

- A regional network connected to GEANT
- Interconnection of National Research and Education Networks
  - Prerequisite – existence of NREN
  - Regional Virtual Operation Center
    - Functions distributed between partners
    - Specific operational tools
      - Configuration
      - Routing
      - Monitoring
      - Displaying
- The result
  - Technical and collaborative experience
  - Conditions for local and regional development
  - SEELIGHT

- The **beginning** with grid technologies in regional scale
  - Implementation of middleware
    - Servers
    - Scientific Linux
    - gLite
  - Regional integration
    - Distribution of centralized functions
      - Job management
      - User communities
      - Regional security
- Why?
  - Looking for applications

- The **consolidation** objectives
  - Multiplication of middleware platforms
  - Improvement of management tools
  - Focus on users and applications
    - Local applications
    - Different areas of science
  - National organization
    - Emerging of NGI
- Results
  - Convergence towards EGEE
  - Conditions for regional collaboration
  - SEE-GRID-SCI

- Grids for regional science
  - Regional grid infrastructure
  - Regional management functions
  - **Regional applications**
    - Environment
    - Meteorology
    - Seismology
  - New managerial tools
  - Intense exchanges with other projects
  - Virtual organizations
- Results
  - Conditions for integration in European infrastructure
  - New ideas and new perspectives – HPC

- European Grid Initiative
  - Association of NGIs from European countries
  - Registered in Netherlands
- European grid infrastructure
  - InSPIRE
    - 48 partners worldwide
    - Sustainable pan-European e-Infrastructure
    - Integration of grids, clouds, super-computing
    - Support of users, regional federations
    - 40 months, 9248 PMs, 70.6 M€, 25 M€ from EU
- Why ?
  - Scientific applications from different areas
  - Support virtual organizations
  - International collaboration

- High Performance Computing in SEE
  - Regional exploitation of HPC resources in region
  - Follow-up the experience of SEE-GRID
  - Focus on applications
    - Computational physics
    - Chemistry
    - Life sciences
  - Initiate national HPC initiatives
  - Collaborate with
    - European HPC projects
    - Caucasus
- Space for collaboration
  - Multi-disciplinary dimension
  - International dimension

- Important investments for e-Infrastructure
  - European scale
  - Regional scale
  - WBC are involved
  
- Infrastructure is not a “standalone goal” by itself
  - International collaboration
  - Scientific applications

## What Next ???

- Ask yourself please :-)
  - Networking humans
  - Networking equipment
  - Networking applications
  - All this leads to *THE CHALLENGE ONE*
- FP7 Challenge 1
  - Pervasive trusted infrastructure & services
  - Services architectures & engineering
  - ICT for networking enterprises
  - ICT for networking media
  - Infrastructure protect
  - Networks of future

## This is All

- Thank You !
- Questions ?