



Enabling Grids for E-science

EGEE-II SA2 Networking Support

*All Activity Meeting 05/07/2005
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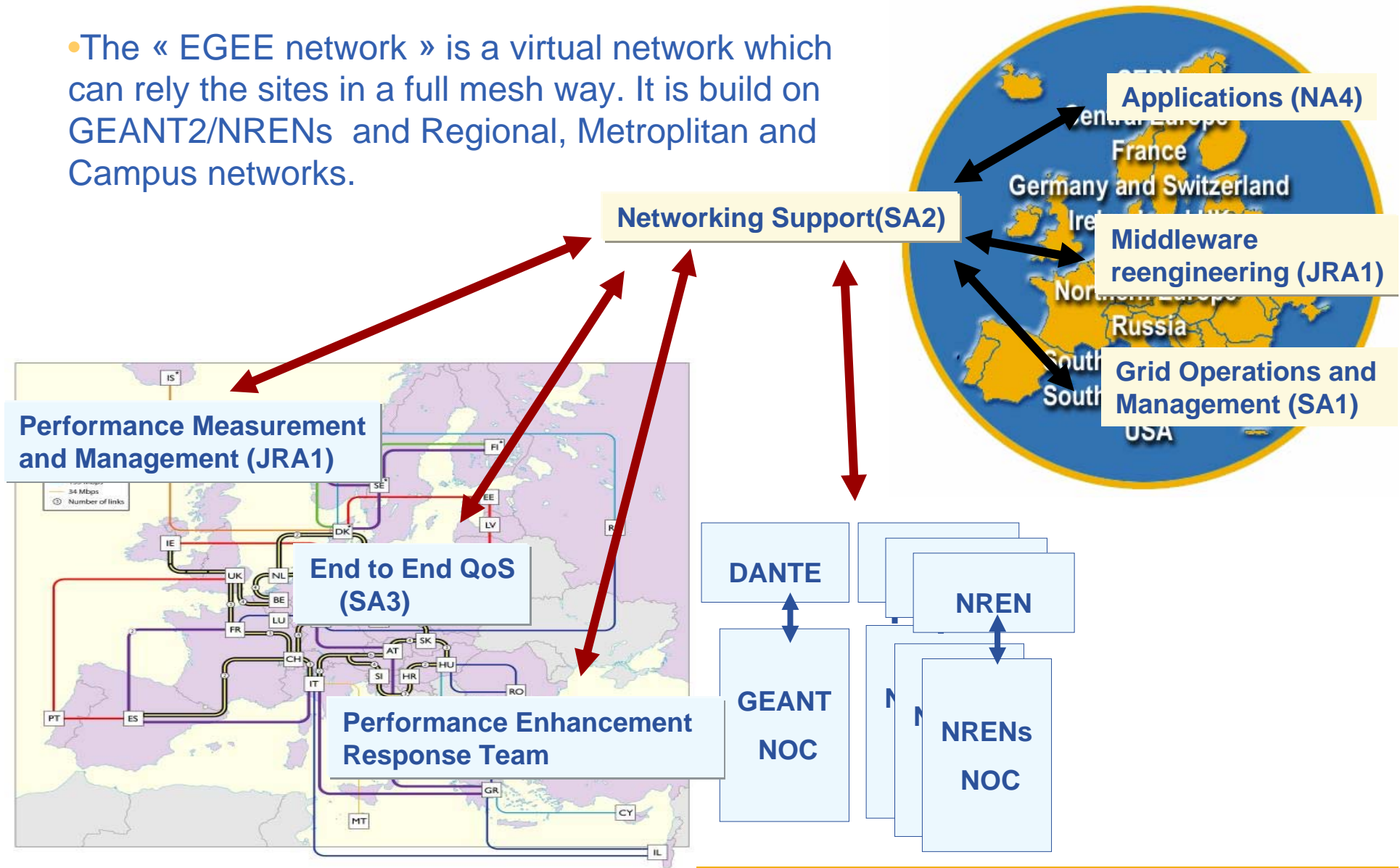
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- **A new name**
- **Purpose of the activity**
- **Major tasks**
- **Collaboration**

- **The work done under « Network Resource Provision » has reached the TA's objectives:**
 - Technical Network Liaison Committee (MSA2.1) which gathers EGEE and GEANT/NRENs
 - SA2, JRA4, DANTE, NRENs (DFN, GARR, GRNET), CERN.
 - End-to-end SLA model defined for a Premium IP service (DSA2.2).
 - Improvement with QoS experiment (DSA2.3).
 - Operational interface between EGEE and GEANT/NRENs has been defined (MSA2.3).
 - Trial during Summer 2005.
 - Deployment Q7-Q8.
- **In EGEE-II only one activity dedicated to the network**
 - « Tasks and resources of JRA4 are encompassed within SA1 and JRA1 ».
- **In the EGEE-II environment a network unit is essential:**
 - To keep a network expertise within the project;
 - To get the mastery of the « EGEE network » based on the GEANT/NRENs/Regionals networks.
- **In EGEE-II SA2 will be a support activity specialized in the network operations for the whole project.**

- The « EGEE network » is a virtual network which can rely the sites in a full mesh way. It is build on GEANT2/NRENs and Regional, Metropolitan and Campus networks.



- **A major role in:**
 - The networking related tasks in collaboration with JRA1, SA1, NA4;
 - The network operation support;
 - The management of the relationship between GEANT2/NRENs;
 - The introduction of new services provided by the European network community to EGEE;
 - The automation of the process for network services provisioning to EGEE;
 - The collaboration on network related subjects with other projects.
- **Two classes for the major tasks:**
 - Operational services.
 - Organisational services.

- **Overall networking coordination**
 - To get coherence in the networking activities:
 - Network monitoring;
 - Bandwidth allocation & reservation;
 - Network resource provisioning architecture;
 - Network requirements from applications;
 - To evaluate the new network architectures and services.
 - To investigate specific services through testbeds.
 - ...

**SA2 will act as a coordinator to ensure unity of the
« EGEE network » and the network services.**

- **EGEE Network Operation Centre (ENOC)**
 - The network support unit in the global user support of EGEE
 - Defined in EGEE-I,
 - Procedures are under validation today.
 - Main activities:
 - Manage the Network Trouble Tickets from NRENs and EGEE Users.
 - *Development of tools like TT filtering ...*
 - Involved in the network problem troubleshooting.
 - Network monitoring.
 - Process the SLAs.
 - Periodic reporting on network usage.
 - Involved in testbeds.
 - Must be operational in EGEE-II with a team hosted at a single location

- **End-to-End SLA**

- EGEE-I :

- Definition for an IP Premium service;
 - Will not be an operational reality in March 2006.

- EGEE-II:

- The work must be continued in collaboration with GEANT2/NRENs and RCs to get an operational Premium IP service cross over all the networks involved in RCs connectivity.
 - New services imply that new SLAs template should be defined.
 - *Today GEANT2 most of the NRENs are building networks not only based on IP connectivity but on dark fiber, lambdas ... It allows communities to build « hybrid networks » over GEANT2/NRENs.*

- **Network relationship between EGEE and other projects**
 - EGEE-LCG
 - Each has established links with NRENs.
 - *EGEE: SLAs, ENOC, BAR, NPM*
 - *LCG: Design of the LCG network*
 - Common need for network services and network operation
 - *Example: a network operational interface => ENOC could be a common structure.*
- **Technical Network Liaison Committee (TNLC)**
 - EGEE-I: more a place to exchange than to decide.
 - To strengthen its role:
 - Terms of reference
 - *Process for decision making*
 - *« Obligations » about dissemination in the network providers community*
 - Representatives
 - *For EGEE (JRA4 disappear)?*
 - *Who can represent the network providers: Dante, which NRENs or NREN instance.*
 - Thinking to its place in a future European Grid Organisation.

- **With most of the EGEE activities:**
 - JRA1: how the middleware take into account the « Network resource »
 - EGEE1: resource provisioning architecture
 - EGEE2: « network accounting »?, IPv6 ?
 - SA1: operational activities
 - ENOC acts as a support unit of the global EGEE user support
 - Contacts with the ROCs and the RCs
 - NA4: the end user needs an operational network with QoS
 - JRA2: provide network metrics
 - EGEE1: not a reality due to the lack of SLAs
- **With the network providers**
 - GEANT2: JRA1, SA3 activities.
 - NRENs: information, dissemination, service implementation.
- **With other projects**

To develop interaction, collaboration is a key action for SA2.

- **Networking Support in EGEE-II:**
 - A network expertise for the whole project;
 - More operational oriented than in EGEE-I;
 - With an important relationship aspect.