



Enabling Grids for E-science

# Networking support (SA2) tasks for EGI

*Xavier Jeannin (CNRS/UREC Paris, FR)*

*28 January 2009*

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- **Envisioned network activity in EGI-NGI**
- **Network task in EGI\_DS blueprint**
- **Conclusions**

- **The EGI should keep a small independent and competent network team**
- **An interface between European Grid infrastructure and network providers**
  - Relational interface
    - Ensure the “higher level” of interactions with the network providers.
    - Be sure that network providers know how and what is needed for the Grid applications in terms of network.
  - Operational interface
    - Ensure the daily relations with the network infrastructures: ENOC, SLA.
  - Assess and check the end-to-end quality of the network used by the Grid projects: **end-to-end network monitoring.**
  - Foster the deployment of new advanced network services (Lightpath on demand, etc.) necessary for Grid projects.
- **A set of tools centralized within the ENOC should be maintained in order to allow this team to assess the quality of the network used by the Grid projects.**

- **EGI tasks of network activity**
  - **Coordination of the network support**
  - **Monitor end-to-end (site-to-site) quality of the network used by Grid projects**
  - **ENOC running / EGI Network Support Centre running**

- **Responsible EGI Entity: EGI.org-COO operations (O-E-12)**
  - Interface between European Grid infrastructure and network providers.
- **Task Interfaces**
  - EGI projects, network providers, EGI management, network monitoring O-E-3, ENOC
- **Task Rights**
  - Collaboration with UCS to ensure that needs of Grid application are fulfilled.
- **Task Responsibilities**
  - Carry out the liaison between EGI, grid projects and network providers.
  - Network operation design, improvement.
  - Ensure network infrastructures behave and are shared as expected between all projects especially those using LHCOPN.
  - Be sure that network providers know how and what is needed for the Grid applications in terms of network.
  - Ensure the projects know the state of the network used and that problems raised by the Grid are managed.

- **Resource Allocation**
  - The resource allocation (0.5 FTE) is too few. A rational approach would be that the person in charge of this task has a full time job dedicated to network activity of the EGI.
- **Assumptions**
  - We hope that NGIs can contribute to this task and this manpower could enlarge the manpower for this task.
- **Unknowns**
  - Need an answer on the manpower.

# Monitor end-to-end quality of the network

- **Responsible EGI and NGI Entity (EGI.ORG + NGI)**
  - This task will be handled by “Operation of the Grid repositories for SLA compliance and performance monitoring” O-E-3, O-N-3.
- **Task Interfaces**
  - network providers (NRENs), ENOC, Sites, network coordination.
- **Task Rights**
  - Use ENOC.
- **Task Responsibilities**
  - Network quality assurance and reporting, metrics follow up.
  - Check the underlying network infrastructure is working properly.
  - Check every clause of the contract (SLA) with network providers is fully respected.
- **Resource Allocation**
  - 2.5 FTE in Operation of tools and services, shared with the Operation of the grid repositories storing monitoring data: **0.5 FTE could be dedicated to end-to-end network monitoring.**
- **Assumptions**
- **Unknowns**
  - The network monitoring is different from Grid services monitoring, we have to be sure that this team is well trained

- **Responsible EGI Entity: Done by an NGI on behalf of all of them**
  - Ensure the daily relations with the network infrastructures: trouble, ticket, impact of trouble on Grid project.
  - The ENOC should probably be renamed to “Network Support Center” which seems more appropriate.
- **Task Interfaces**
  - The network monitoring, Grid operation monitoring, network providers (NRENs), ticketing system and Users (O-E-6, O-E-7, O-N-6, O-N-7).
- **Task Rights**
  - NREN collaboration, ticketing system access.
- **Task Responsibilities**
  - Run network operational tools, gather network metrics, monitor Grid networks of the project.
  - Assess the impact of trouble on Grid projects (ticket trouble).
  - Troubleshoot problem (kept especially for big issues), ensure the end 2 end connectivity is achieved.
- **Resource Allocation**
  - 0.5 FTE?
- **Assumptions**
- **Unknowns**
  - Be sure that the NGI assumption will be confirmed and that the NGI in charge will be identified quickly.



- **ENOC support (Maintenance of ENOC tools)**
  - Responsible NGI in charge of ENOC or “Operations Development and Tool maintenance” task
- **Monitoring deployment**
  - should be handled with the support of NREN
  - No manpower
- **Advanced network services (PIP, Bandwidth on demand, ...)**
  - should be handled with the support of NREN
  - No manpower

Task	Task Title	change	EGI.org	SSC	NGI
<b>TSA2.1</b>	<b>ENOC running</b>	should include the daily network monitoring of the Grid project			X
<b>TSA2.2</b>	<b>Support for the ENOC</b>				
TSA2.2.1	Operational procedures and follow-up	should be finished by the end of EGEE-III			
TSA2.2.2	LCG support	Support to Grid projects should be included into management	X		
TSA2.2.3	Operational tools maintenance and development	tools need to be maintained	O-E-18		NGI host ENOC
TSA2.2.4	Network monitoring tools	setting-up the monitoring solution is not handled now and should be done in collaboration NRENs?	X		X
<b>TSA2.3</b>	<b>Overall Networking Coordination</b>				
TSA2.3.1	Relations with NRENs: TNLC, etc.	Relation with NRENs should be maintained and specific working group should be set up when necessary.	X		
TSA2.3.2	Advanced network services	Not handled?			
TSA2.3.3	IPv6 follow-up	deployment, moved to operation activity			
TSA2.3.4	Trouble Ticket exchange standardisation	should be finished by the end of EGEE-III			
<b>TSA2.A</b>	<b>Management and general project tasks</b>	Should be renamed in network coordination	X		

- **The EGI should have a small independent, competent network team and the persons should be dedicated to the network task.**
  - An interface between European Grid infrastructure and network providers: Relational interface and Operational interface
  - Assess and check the end-to-end quality of the network used by the Grid projects: **end-to-end network monitoring.**
- **The man power dedicated to the network activity is ambiguous and too short. A manpower effort should be done in order to achieve a critical mass.**
  - Only 0.5 FTE surely dedicated to the network: Coordination of the network support.
  - ~ 6.5 FTE per 1 year in EGEE-III
- **How to manage network monitoring and advanced network services ?**
  - Risk that Grid projects of EGI do not benefit of network progress
- **A collaboration with NREN should be established in order to cope with heavy tasks but how?**