**EGI-InSPIRE**

NGI OLA QUESTIONNAIRE

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EGI-InSPIRE (“European Grid Initiative: Integrated Sustainable Pan-European Infrastructure for Researchers in Europe”) is a project co-funded by the European Commission as an Integrated Infrastructure Initiative within the 7th Framework Programme. EGI-InSPIRE began in May 2010 and will run for 4 years.

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**PROJECT SUMMARY**

To support science and innovation, a lasting operational model for e-Science is needed − both for coordinating the infrastructure and for delivering integrated services that cross national borders.

The EGI-InSPIRE project will support the transition from a project-based system to a sustainable pan-European e-Infrastructure, by supporting ‘grids’ of high-performance computing (HPC) and high-throughput computing (HTC) resources. EGI-InSPIRE will also be ideally placed to integrate new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids, to benefit the user communities within the European Research Area.

EGI-InSPIRE will collect user requirements and provide support for the current and potential new user communities, for example the ESFRI projects. Support will also be given to the current heavy users of the infrastructure, such as high energy physics, computational chemistry and life sciences, as they move their critical services and tools from a centralised support model to one driven by their own individual communities.

The objectives of the project are:

1. The continued operation and expansion of today’s production infrastructure by transitioning to a governance model and operational infrastructure that can be increasingly sustained outside of specific project funding.
2. The continued support of researchers within Europe and their international collaborators that are using the current production infrastructure.
3. The support for current heavy users of the infrastructure in earth science, astronomy and astrophysics, fusion, computational chemistry and materials science technology, life sciences and high energy physics as they move to sustainable support models for their own communities.
4. Interfaces that expand access to new user communities including new potential heavy users of the infrastructure from the ESFRI projects.
5. Mechanisms to integrate existing infrastructure providers in Europe and around the world into the production infrastructure, so as to provide transparent access to all authorised users.
6. Establish processes and procedures to allow the integration of new DCI technologies (e.g. clouds, volunteer desktop grids) and heterogeneous resources (e.g. HTC and HPC) into a seamless production infrastructure as they mature and demonstrate value to the EGI community.

The EGI community is a federation of independent national and community resource providers, whose resources support specific research communities and international collaborators both within Europe and worldwide. EGI.eu, coordinator of EGI-InSPIRE, brings together partner institutions established within the community to provide a set of essential human and technical services that enable secure integrated access to distributed resources on behalf of the community.

The production infrastructure supports Virtual Research Communities − structured international user communities − that are grouped into specific research domains. VRCs are formally represented within EGI at both a technical and strategic level.

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# OLA NGI questionnaire

## ****OLA status****

1. Number of certified sites in the NGI

*Currently there are 5 certified NGI\_AEGIS sites (AEGIS01-IPB-SCL, AEGIS03-ELEF-LEDA, AEGIS04-KG, AEGIS07-IPB-ATLAS, and AEGIS11-MISANU), and three more in the certification phase.*

2. Number of sites that have already signed an OLA or comparable document

*SLA document has been signed between NGI\_AEGIS and all its sites (including those in certification phase).*

3. In case of a comparable document being used, describe deviations from the metrics used in the original EGI OLA document.

*SLA document signed between NGI\_AEGIS and sites within the AEGIS infrastructure is in fact EGEE SLA document (level of availability/reliability is 70%/75%).*

4. What is the main obstacle to the adoption of the OLA by all sites?

*No obstacles identified.*

5. Which are the main considerations / objections of sites to the OLA?

*No objections so far.*

6. Describe any modifications that you would consider to the OLA metrics definitions?

*No.*

7. Are there any metrics that should be added/removed from the OLA? Include a brief justification for your answer.

*The availability/reliability of core services (BDII, WMS, LB, VOMS, LFC) is the essential metric for use of the Grid from user's point of view. The OLAs related to such metrics should probably be signed between VOs and sites that host core services for VO in question, although they can be also signed between the VOs and supporting NGIs. However, for this to be implemented, a proper monitoring framework for core services has to be developed.*

*Another metric that could be considered is related to the dynamics of installation of latest middleware updates/upgrades and deployment of new versions of Grid services by sites. For example, installation of updates could be required within a specified timeframe, as well as a deployment of new services. However, for this to work, updates and new services rolled out have to be of sufficient quality as not to disrupt the production (e.g. as was the case with the recently released gLite-3.2 VOMS service, which cannot be used with gLite-3.1 WMS service).*

## ****Enforcement methodology****

8. Are there any improvements you would propose to apply in your NGI to the current enforcement methodology of the OLA? (Monthly League Table, justifications for breach of A/R metrics)

*Until now we did not encounter any problems of this type, since all of our sites were conforming to the signed SLA/OLA since EGEE times. However, we regularly discuss all encountered operational issues, and find that this might be highly instrumental in resolving all availability issues we might encounter in the future.*

9. What kind of rewards/penalties for sites would you consider for over/underachieving sites?

*Formally, we don't have any rewards for overachieving sites. However, good performance of responsible institutions and personnel is motivated by promoting them to preferential partners for further collaboration, participation in further projects with increased funding, increased involvement in research and development activities, and higher visibility on the national level.*

*For underachieving sites we would consider a series of actions to improve their performance (discussion with site managers, support by the NGI operations team) before resorting to any type of penalties. Fortunately, until now we did not have such problems with our sites.*

10. Do you find the current system for providing justifications for A/R failures adequate? If not why? What else would you use?

*It is acceptable.*

11. Do the justifications in general adequately describe the incident, main cause and the recovery strategy used?

*We did not have such problems with our sites until now.*

## ****Monitoring Tools****

14. Describe any defects that you’ve encountered with the OLA monitoring tools currently used (e.g. Nagios, GridView)?

*We have observed some issues with GStat. First issue is related to the reported number of running/waiting jobs, which is fairly often incorrect (i.e. zero is reported by GStat), probably due to network connectivity issues. Another problem is related to sites that are sharing the same TORQUE server between more lcg-CEs and/or CREAMs. Even if a procedure for proper publication of data to the information system for this situation is followed, it only ensures that a total number of CPUs is correctly published, but numbers of running/waiting are incorrect (multiplied by number of CE/CREAMs).*

15. Describe any improvements that you would consider to the OLA monitoring tools currently used (e.g. NAgios, GridView)?

*Central services (BDII, WMS, LB, VOMS, LFC) have to be fully monitored so as to test their correct operation from user's point of view. For example, WMS and LB should be tested by performing proxy delegation and job submission (various types of jobs), VOMS should be tested by performing proxy initialisation, and LFC by registering, replicating, and deleting files.*

## ****Future developments****

16. Do you think that the OLA should remain part of site certificate process or there is a different procedure you would like to use?

*Yes, the OLA should remain part of site certification process. In addition to a general NGI-site OLA, other OLA documents can be also signed in later stages. For example, OLA document could be signed between VO and site providing core service or certain amount of computing or storage resources to that VO. It would be useful to provide templates for such documents.*

17. How do you (or would you) manage OLAs in your NGI?

*New AEGIS site becomes part of production infrastructure when it demonstrates that it can conform to OLA requirements. Afterwards, performance of sites is regularly assessed on a monthly basis.*

18. Would you object to an increase of the minimum Availability/Reliability thresholds to 80% and 85% and respectively?

*No objections.*

19. Would you object to permitting a grace period of 6 month for new sites were availability and reliability thresholds are 70% and 75% respectively?

*No, a grace period is a reasonable idea, since new sites need some time to gain operational experience, which can be done only during real production service. However, we would support a shorter grace period of up to 3 months, in order to avoid disruption of production.*

20. What thresholds would you like to see for EGI core servicers? Do you agree with 80%/85% as in sites?

*Yes, perhaps even higher.*

21. Please provide any additional comments that were not covered with the previous questions

*N/A*