**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:

*6 in EGI, 11 other sites with minimal resources in NGI* (including 2 sites in other territories)

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

*SLA is been TCD OpsCentre that manages all the sites and Grid-Ireland National Grid Initiative Ltd.*

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

*All sites are centrally deployed by, and managed by, the Grid-Ireland NGI Operations Team (OpsCentre) based in Trinity College Dublin. Site “Gateways” - (CE, BDII, SE, Monbox, Test WN) are provided by and maintained by the OpsCentre. the end-site provides additional WN resources in some cases. The SLA defined between the OpsCentre and the NGI (Grid-Ireland) is intended to specify the constraints and obligations imposed on Grid-Ireland and the OpsCentre in order to achieve the aims of Grid-Ireland and to ensure an available and reliable computational grid-infrastructure for Ireland.*

*The Grid-Ireland SLA does not specify minimum limits on resources such as Worker Nodes.*

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

*None*

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

*No objections. However, many aspects of operations cannot be easily measured using simple metrics (e.g effort required to debug a problem due to the middleware or middleware configuration etc). There is a danger that the OLA metrics may be seen as the sole well defined measure on the effort and effectiveness of the people/teams involved in running a complex distributed infrastructure.*

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

*None yet.*

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

*It needs to be very transparent, standardised and well documented what exactly is being measured, and how.*

## ****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)

*a) It is not clear what checks are in place to establish the “goodness” of the measured data. For instance, in the case of one of our sites, one Nagios instance reported a site as “failing”, whereas another Nagios instance consistently reported it the same site as operating “OK”. The “goodness” of the metric data should also be measured.*

*b) The current A/R measure is flawed. The measure is only good if considered over a full calendar month. If a site becomes a certified production site at noon on the last day of the month, the measurement of A/R will be greatly skewed. A temporary 4 hour failure in the last 12 hours of the month has a greater impact on that sites A/R measure than the same failure occurring in the first 4 hours of the following month. The A/R statistics will report the site as having a 66% reliability in the former case, and a negligible 0.5% failure rate in the latter case (assuming no further errors).*

*c) Not clear how the metrics clearly compensate for sites taking part in early adaption of services.*

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

*Suspension from production is OK, but may have the drawback that a site may contain required data. This should also be done in consultation with the VOs affected by the move. The timeframe for suspending a site should be similar to that of removing a site completely. It may allow VOs who may have data on the site to move it elsewhere (if possible). Sites that have a very low A/R rating (less than 30% over the course of a* ***full*** *month) should be seen to address the problem by giving it their full attention.*

*A list of “Best Sites” should be published.*

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 OK.*

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

*No Comment.*

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

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

*Some monitoring tools do not render well when using mobile devices (ipad/mobile phones) etc.*

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

GridMap view may need to be redesigned. As more NGI’s become operational, significant areas of screen space are now taken up with the name of each individual NGI.

## ****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. It works OK, but flaws in metrics should be addressed. The OLA at least stipulates that the site is committed to playing its’ part in the overall reliable operation of a grid-infrastructure.*

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

*SLA conformance and measurement statistics are part of the reporting procedure from the OpsCentre to the NGI. A report is produced every quarter, and its production is aligned with EGI reporting periods.*

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

*Yes. The middleware has not yet proven itself to be 80% reliable.*

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?

*Yes.*

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

*Ideally, core services should have 95% availability and reliability. This should take into account that such services have resilient redundant failovers etc*. *One should not loose sight that one of the original motivations for grid was that by providing the services in a distributed manner, the end-user is offered some resilience in (and therefore better) access to said services.*

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

Remark on survey. There is a sudden jump from question 11 to question 14. Is this a Word list itemisation issue?