



# EGI-InSPIRE

## Operational Tools Regionalisation Work Plan

### EU MILESTONE: MS703

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#### Abstract

This document assesses the work plan on the regionalisation of the operational tools, identifying the upcoming releases and associated functionality.



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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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## 1. INTRODUCTION

### 1.1. PURPOSE

This document is a report on the work plan of the regionalisation process of the operational tools that needs to be addressed by the WP7. The upcoming functionality is presented here.

### 1.2. APPLICATION AREA

This document is a formal deliverable for the European Commission, applicable to all members of the EGI-InSPIRE project, beneficiaries and Joint Research Unit members, as well as its collaborating projects.

### 1.3. REFERENCES

**Table 1: Table of references**

<b>R 1</b>	Milestone MS401: Operational Tools Regionalization Status ( <a href="https://documents.egi.eu/document/48">https://documents.egi.eu/document/48</a> )
<b>R 2</b>	The CIC Operations Portal ( <a href="https://cic.gridops.org">https://cic.gridops.org</a> )
<b>R 3</b>	<i>Global Grid User Support (GGUS) Plan, EGEE-III Deliverable DSA1.1, August 2008</i> ( <a href="https://edms.cern.ch/document/931935">https://edms.cern.ch/document/931935</a> )
<b>R 4</b>	Mathieu, G.; Casson, J.; <i>GOCDB4, a New Architecture for the European Grid Infrastructure</i> ; to appear in the Proc. of the Int. Symposium on Grid Computing 2010, Mar 2010, Academia Sinica, Taipei, Taiwan
<b>R 5</b>	Jiang, M.; Del Cano Novales, C.; Mathieu, G. et alt; <i>An APEL Tool Based CPU Usage Accounting Infrastructure for Large Scale Computing Grids</i> , in the Proc. of ISGC 2010, Mar 2010, Academia Sinica, Taipei, Taiwan
<b>R 6</b>	The Accounting Portal ( <a href="http://www3.egee.cesga.es">http://www3.egee.cesga.es</a> )
<b>R 7</b>	The Service Availability Monitoring Framework ( <a href="http://www.youtube.com/watch?v=PADq2x8q0kw">http://www.youtube.com/watch?v=PADq2x8q0kw</a> )
<b>R 8</b>	The Metrics Portal ( <a href="http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/EGEE-III-SA1-Metrics_Portal_Roadmap_and_Requirements-v3.1.xls">http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/EGEE-III-SA1-Metrics_Portal_Roadmap_and_Requirements-v3.1.xls</a> )
<b>R 9</b>	The Regional Dashboard ( <a href="https://operations-portal.in2p3.fr/index.php">https://operations-portal.in2p3.fr/index.php</a> )
<b>R 10</b>	The Messaging Infrastructure ( <a href="https://twiki.cern.ch/twiki/bin/view/LCG/MessagingSystemforGrid">https://twiki.cern.ch/twiki/bin/view/LCG/MessagingSystemforGrid</a> )
<b>R 11</b>	<i>The Apache ActiveMQ messaging system</i> ( <a href="http://activemq.apache.org">http://activemq.apache.org</a> )
<b>R 12</b>	Nagios ( <a href="http://www.nagios.org/">http://www.nagios.org/</a> )

### 1.4. DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the authors. The procedures documented in the EGI-InSPIRE “Document Management Procedure” will be followed: <https://wiki.egi.eu/wiki/Procedures>

### 1.5. TERMINOLOGY



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A complete project glossary is provided in the EGI-InSPIRE glossary:  
<http://www.egi.eu/results/glossary/>.

## 2. EXECUTIVE SUMMARY

<< The text should provide a summary of the full report so that the reader can 'in a page' understand the problem it has been written to cover. This includes an overview of the background material and motivation for the report, a summary of the analysis, and the report's main conclusions.>>

### 3. OPERATIONAL TOOLS REGIONALISATION STATUS IN EGI-INSPIRE

The regionalisation of the operational tools is an activity that started and was very much developed during the EGEE-III project. For some of the tools, this activity took longer than expected and is being continued within EGI's JRA1.

The status of the regionalisation process is fully described in the 'Operational Tools Regionalisation Status' EGI's milestone [R1], covering the following tools: the *Operations Portal* [R2], *GGUS* [R3], *GOCDDB* [R4], the *Accounting Repository* [R5], the *Accounting Portal* [R6], the *Service Availability Monitoring Framework* [R7], the *Metrics Portal* [R8] and the *Regional Dashboard* [R9].



## 4. ROADMAPS IN THE REGIONALISATION PROCESS

### 4.1. ACCOUNTING PORTAL

The initial version of the regional accounting portal is already available. Currently several NGIs have expressed their interest in deploying a regional instance of the regional portal.

During the following months the installation scripts will be improved making easier to deploy the portal. Additional improvements will be incorporated based on the feedback from the candidate NGIs. New functionalities incorporated into the central accounting portal will be ported to the regional accounting portal.

In the future the regional accounting portal will use the new accounting infrastructure based on Messaging [R10]. This new accounting infrastructure allows greater flexibility to configure regional accounting repositories. Several modifications are foreseen in the regional accounting portal to support ActiveMQ [R11].

Besides the regional accounting portal a country view is offered in the central accounting portal that allows NGIs to review the usage in their region. This view will be continuously improved based on NGI feedback.

The roadmap for the accounting portal is the following:

Release date	New functionalities
Dec 2010	Improved installation support GOCDBPI-V4 support
March 2011	New improvements based on NGI feedback
June 2011	ActiveMQ support

### 4.2. METRICS PORTAL

There are currently no regionalization plans for the Metrics Portal.

### 4.3. MONITORING INFRASTRUCTURE

The monitoring infrastructure based on Nagios [R12] and Messaging is already completely regionalized, as described in the EGI-InSPIRE milestone MS401 [R1]



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## 5. CONCLUSIONS

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