# EGI-InSPIRE

## DEPLOYMENT PLAN FOR THE DISTRIBUTION OF OPERATIONAL TOOLS TO THE NGIS/EIROS

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Abstract

This document establishes the roadmap for the deployment of regionalised variations of the operational tools to the NGIs/EIROs.

## I. COPYRIGHT NOTICE

## II. DELIVERY SLIP

|  | Name | Partner/Activity | Date |
|---|---|---|---|
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| **Approved by** | **AMB & PMB** |  | 8/12/2010 |

## III. DOCUMENT LOG

| Issue | Date | Comment | Author/Partner |
|---|---|---|---|
| 1.0 | 11/08/2010 | TOC First draft | J. López Cacheiro/CESGA |
| 2.0 | 22/09/2010 | Updated with information from MS703 | J. López and S. Díaz /CESGA |
| 3.0 | 23/09/2010 | Minor changes | J. López and S. Díaz /CESGA |
| 4.0 | 28/09/2010 | Removed Accounting Repository section | T. Ferrari/ EGI.EU |
| 5.0 | 21/10/2010 | Updated with information from NGIs | J. López and S. Díaz /CESGA |
| 6.0 | 27/10/2010 | Review the whole document | T. Ferrari/EGI.EU |
| 7.0 | 02/11/2010 | Review Tiziana's version | S. Díaz / CESGA and Emir /srce.hr |
| 8.0 | 10/11/2010 | Update of GOCDB regionalization plans, update of GOCDB IGI deployment plans | T. Ferrari/EGI.eu |

## IV. 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.

## V. 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

## VI. TERMINOLOGY

A complete project glossary is provided at the following page: http://www.egi.eu/results/glossary/.

## VII. 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 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 within the ESFRI projects. Additional 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 (VRCs) – structured international user communities – that are grouped into specific research domains. VRCs are formally represented within EGI at both a technical and strategic level.

## VIII. EXECUTIVE SUMMARY

This document describes the NGI/EIRO plans for deployment of the regional instances of the following tools:

- Operations Portal
- Helpdesk
- GOCDB
- Accounting Repository
- Accounting Portal
- Nagios and MyEGI

**TABLE OF CONTENTS**

# 1 INTRODUCTION

The purpose of this milestone is to establish the roadmap for the deployment of regionalised variations of the operational tools to the NGIs/EIROs.

## 2 TOOL DEPLOYMENT PLAN

The tool deployment plan presented in this deliverable provides information about the NGI deployment plans of regionalized operational tools. Input for this document was gathered through a questionnaire distributed to NGI and EIRO operations managers. Not all NGIs have supplied answers to the questionnaire distributed, these are labelled with character *. For those NGIs additional information was complemented – where available – with data extracted from a EGEE-III questionnaire distributed in Spring 2010 (https://edms.cern.ch/document/1061529/). Details on individual NGI plans follow.

### 2.1 Operations Portal

**Overview**

The first release of the regionalized operations portal was distributed on 8 June 2010 [R1].
In the coming year the regional package will be constantly improved to:
- provide additional features as they will be integrated step by step into the Central Instance. These features will be added one by one into the central instance and if relevant to a regional instance will be also integrated in the regionalized portal.
- ease upgrade and set-up of the package in the regions.

For each central feature released, a regional package will be provided when applicable, in the coming months. For more details about the complete work plan, please refer to the EGI-InSPIRE Milestone MS701 detailing the Operations Portal work plan [R2].

**Deployment plans**

| Name of NGI/EIRO | Expected Deployment date |
|---|---|
| NGI_IBERGRID | The Regional Dashboard (not of the operation portal) is already installed at LIP-Lisbon, and it will enter in operation on the 04/10/2010 |
| NGI_CZ | Already running prototype version |
| NGI_AEGIS | As soon as the first stable version is released. |
| NGI_DE | End of this year (December 2010) |
| IGI | The regional instance of the portal will be installed provided it is possible to interface the regional dashboard to the regional ticketing system |
| UKI NGI | No date yet |

| Name of NGI/EIRO | Expected Deployment date |
|---|---|
| NGI_BY | Regional version of the central instance has already been setup but not validated at the time of writing |
| NGI_BG* | No date yet |

Alternative plans proposed by NGIs that will not deploy a regional instance of the Operations Portal:

| Name of NGI/EIRO | Alternative plan proposed |
|---|---|
| NGI_CH | Deployment of the central instance |
| NGI_HU | Deployment of the central instance |
| NGI_SK | Deployment of the central instance |
| NGI_GE | Deployment of the central instance |
| NGI_HR | Deployment of the central instance |
| NGI_RO | Deployment of the central instance |
| NGI_TR | TR-Grid operation center has been using an in-house developed operations portal for three years. For Turkish users and site administrators, it is important to have an operations portal that supports the native language. |
| NGI_PL | Deployment of the central instance |
| NGI_NL | Deployment of the central instance |
| NGI_MARGI | Deployment of the central instance |
| NGI_FRANCE | Deployment of the central instance |
| NGI_CYGRID* | Deployment of the central instance |
| NGI_SI* | Deployment of the central instance |
| NGI_GRNET* | Deployment of the central instance |
| NGI_NDGF* | Deployment of the central instance |

## 2.2 Helpdesk

**Current Status**. Three alternatives on how NGIs can connect to the central user support infrastructure are currently available:
- NGIs can set up a regional ticket system and interface GGUS via web services or messaging

- NGIs can use the GGUS system directly. In this case there is only one support unit in GGUS for the whole NGI
- NGIs can use a customisable version of GGUS called xGUS. This was developed to give NGIs a simple way to set up a ticket system without have to host it themselves.

Currently there is a first instance of xGUS in place for NGI-DE, the German NGI. A second instance for NGI-AEGIS, the Serbian NGI, is being finalised at the moment. Discussion with other NGIs on the use of xGUS has started. The xGUS system will undergo the same release procedures as the GGUS system, as the two systems are closely related.

**Deployment plans**

| Name of NGI/EIRO | Name of Helpdesk System that will be deployed | Expected Deployment date |
| --- | --- | --- |
| NGI_HU | xGUS | This depend on the German deployment |
| NGI_IBERGRID | SWE Helpdesk/RT | Already deployed. A new helpdesk system will be deployed in the future based on RT (Dec 2010) |
| NGI_CZ | RT | Already running |
| NGI_AEGIS | xGUS | Already deployed and it is in testing phase in collaboration with GGUS staff. It is expected to be officially put into production during October 2010 |
| IGI | Xoops/XHelp | Already deployed |
| NGI_TR | RT | Integration with central GGUS process is on progress. It is expected to complete integration task at the end of the year. |
| NGI_DE | xGUS | In production (https://helpdesk.ngi-de.eu) |
| NGI_PL | RT | It is already operational |
| NGI_MARGI | xGUS | By the end of the year |
| NGI_FRANCE | xGUS | For the moment central GGUS is used. Deployment of a regional helpdesk is not considered to be a priority at the moment. Deployment of xGUS will be evaluated |
| UK NGI | Footprints | A part of the NGI has deployed a local helpdesk based on Footprints. The rest are using the central GGUS. |
| NGY_BY | Other | No plans in nearest future to deploy any instances of GGUS. Local helpdesk is used along with central GGUS. |

| | | |
|---|---|---|
| NGI_BG* | Not decided | Not decided |
| NGI_GRNET* | Not decided | Not decided |
| NGI_NDGF* | Not decided | Not decided |

Alternative plans proposed by NGIs that will not deploy a regional helpdesk system:

| Name of NGI/EIRO | Alternative plan proposed |
|---|---|
| NGI_CH | Central GGUS |
| NGI_SK | Central GGUS |
| NGI_GE | Central GGUS |
| NGI_HR | Central GGUS |
| NGI_RO | Central GGUS |
| NGI_NL | Central GGUS |
| NGI_CYGRID* | Central GGUS |
| NGI_SI* | Central GGUS |

## *2.3  GOCDB*

**Current Status**. The last released version of GOCDB regional module dates from March 2010 (gocdb4.0d3). It is still not fully functional but all the basic components are included so that initial deployment can be tested using that version [R3]. The latest development version of the module is fully functional. It has not been packaged yet, but the code is available from the SVN repository [R4]. The release of the GOCDB regionalized package is expected during QR3. GOCDB development plans are constantly updated at [R5].

**Deployment plans**

| Name of NGI/EIRO | Expected Deployment date |
|---|---|
| NGI_IBERGRID | The regional version GOCDB will be tested during the last Quarter of the year after its release to then finalize plans according to the test results. At the moment HGSM is used |
| NGI_HR | Waiting for the packaged version of GOCDB-4 |
| NGI_CZ | Once properly packaged |
| NGI_AEGIS | We will participate in monitoring and testing of GOCDB releases. Due to the Oracle license requirement, and since MySQL version of the GOCDB regional module is planned for April 2011, we expect national GOCDB/MySQL instance in June 2011 |

| Name of NGI/EIRO | Expected Deployment date |
|---|---|
| IGI | No date yet |
| NGI_TR | We are using central GOCDB now. Both regional GOCDB and HGSM are on test by our NGI. Our plan is to migrate to a national configuration database before the end of this year. |
| NGI_DE | End of this year (December 2010) |
| NGI_PL | We are ready for installing regional GOCDB (waiting for the release). |
| NGI_FRANCE | Regional version of the central instance. Would be our priority, deployment date TBD |
| UKI NGI | No date yet |

Alternative plans proposed by NGIs that will not deploy a regional instance of GOCDB:

| Name of NGI/EIRO | Alternative plan proposed |
|---|---|
| NGI_CH | Central instance |
| NGI_HU | Central instance |
| NGI_SK | Central instance |
| NGI_GE | Central instance |
| NGI_RO | Central instance |
| NGI_NL | Central instance |
| NGI_MARGI | Central instance |
| NGI_BY | Central instance |
| NGI_BG* | Central instance |
| NGI_CYGRID* | Central instance |
| NGI_SI* | Central instance |
| NGI_GRNET* | Central instance |
| NGI_NDGF* | Central instance |

## 2.4 Accounting Portal

**Current Status.** The initial version of the regional accounting portal is already available. 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 NGIs. The roadmap for the accounting portal is the following.

| Features | Release date |
|---|---|
| Improved installation support. GOCDBPI-V4 support | December 2010 |
| New improvements based on NGI feedback | March 2011 |
| ActiveMQ support | June 2011 |

**Deployment plans**

| Name of NGI/EIRO | Expected Deployment date |
|---|---|
| NGI_HR | We will wait the version with GOCDB-4 support (due in December 2010). Expected deployment date is January 2011. |
| NGI_AEGIS | As soon as the first stable version becomes available |
| NGI_MARGI | Beginning of 2011 |
| NGI_FRANCE | Assessment of the regional version of the central instance in progress. |
| UKI NGI | No date |
| NGI_BY | The expected deployment date is 2011 |
| NGI_BG* | No date |
| NGI_SI* | No date |
| NGI_GRNET* | No date |
| NGI_NDGF* | No date |

Alternative plans proposed by NGIs that will not deploy a regional instance of the accounting portal.

| Name of NGI/EIRO | Alternative plan proposed |
|---|---|
| NGI_HU | Central instance portal |
| NGI_IBERGRID | Central instance portal |
| NGI_SK | Central instance portal |
| NGI_GE | Central instance portal |

| Name of NGI/EIRO | Alternative plan proposed |
|---|---|
| NGI_RO | Central instance portal |
| NGI_PL | Central instance portal |
| NGI_CZ | Next year (Decision whether to go with regional version of EGI solution or whether third-party software like DGAS/SGAS not yet done.) |
| IGI | HLRmon portal is in production. It requires a DGAS-based infrastructure. |
| NGI_TR | Local instances of repositories and portal are already used. Portal is being developed to better serve to the needs of national research groups and TR-Grid-HPC infrastructure. |
| NGI_DE | Not yet decided (regional version of the central instance or other), deployment will be in 2011 |
| NGI_CH | To be decided |
| NGI_NL | To be decided |
| NGI_CYGRID* | Central instance portal |

## 2.5 Nagios and MyEGI

**Current Status.** The monitoring infrastructure based on Nagios and Messaging is already completely regionalized, as described in the EGI-InSPIRE milestone  [R6]. The deployment of a local regionalized Nagios instance is a requirement for the creation of new NGIs.

**Deployment plans**

| Country | Current Nagios URL | Description |
|---|---|---|
| ASGC (APROC) | https://sam-ap-roc.cern.ch/nagios | Started migration (https://gus.fzk.de/ws/ticket_info.php?ticket=57154) |
| Albania | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Armenia | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation started (https://gus.fzk.de/ws/ticket_info.php?ticket=59034). |

| Country | Current Nagios URL | Description |
|---|---|---|
| Austria | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. This is a temporary solution until Austria becomes an independent NGI (https://gus.fzk.de/ws/ticket_info.php?ticket=60414) |
| Azerbaijan | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Belarus | https://glite.basnet.by/nagios | NGI Nagios instance deployed. |
| Belgium | https://sam-ngi.grid.sara.nl/nagios | Belgium sites are part of NGI_NL and are monitored by the NGI_NL Nagios instance. |
| Bosnia and Herzegovina | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Bulgaria | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation started (https://gus.fzk.de/ws/ticket_info.php?ticket=59483). |
| CERN | https://sam-cern-roc.cern.ch/nagios | CERN Nagios is the legacy EGEE project service instance, that is now only covering CERN resources. |
| Croatia | https://egi-mon.cro-ngi.hr/nagios | NGI Nagios instance deployed. |
| Cyprus | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation started (https://gus.fzk.de/ws/ticket_info.php?ticket=62549). |
| Czech Republic | https://nagios.egee.cesnet.cz/nagios | NGI Nagios instance deployed. |
| Denmark | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| Estonia | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |

| Country | Current Nagios URL | Description |
|---|---|---|
| Finland | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| France | https://ccnagboxli01.in2p3.fr/nagios | NGI Nagios instance deployed. |
| Georgia | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Germany | https://ngi-de-nagios.gridka.de/nagios | NGI Nagios instance deployed. |
| Greece | https://nagios.hellasgrid.gr/nagios | NGI Nagios instance deployed. |
| Hungary | https://grid19.kfki.hu/nagios | NGI Nagios instance deployed. |
| Ireland | https://gridppnagios.physics.ox.ac.uk/nagios | UK & Ireland are planning start NGI creation in Quarter 2. |
| Israel | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation started (https://gus.fzk.de/ws/ticket_info.php?ticket=63306). |
| Italy | https://mon-it.cnaf.infn.it/nagios | NGI Nagios instance deployed. |
| Latvia | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| Lithuania | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| Macedonia | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Moldova | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |
| Montenegro | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. NGI creation expected by the end of 2010. |

| Country | Current Nagios URL | Description |
|---|---|---|
| Norway | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| Poland | https://pl-mon.grid.cyf-kr.edu.pl/nagios | NGI Nagios instance deployed. |
| Portugal | https://rnagios.ibergrid.cesga.es | NGI Nagios instance deployed. |
| Romania | https://nagios.egee-see.org/nagios | Currently monitored by the SEE ROC Nagios instance. Started NGI Nagios installation (https://gus.fzk.de/ws/ticket_info.php?ticket=60769). |
| Russia | https://lcg05.sinp.msu.ru/nagios | NGI Nagios instance deployed. |
| Serbia | https://nagios.ipb.ac.rs/nagios | NGI Nagios instance deployed. |
| Slovakia | https://nagmon.ui.savba.sk/nagios | NGI Nagios instance deployed. |
| Slovenia | https://nagios.sling.si/nagios | NGI Nagios instance deployed. |
| Spain | https://rnagios.ibergrid.cesga.es | NGI Nagios instance deployed. |
| Sweden | https://sam.grid.sara.nl/nagios | Currently monitored by the legacy ROC Northern Europe Nagios instance. NGI_NDGF Nagios instance, when ready for production after full ARC integration, will be the reference instance. |
| Switzerland | https://ngi-de-nagios.gridka.de/nagios | The Nagios service is operated by NGI_DE. |
| The Netherlands | https://sam-ngi.grid.sara.nl/nagios | NGI Nagios instance deployed. |
| Turkey | https://www.grid.org.tr/nagios | NGI Nagios instance deployed. |
| UK | https://gridppnagios.physics.ox.ac.uk/nagios | UK & Ireland are planning start NGI creation in Quarter 2. |

# 3 CONCLUSIONS

Each NGI/EIRO has specific needs and not all the regional tools are required by all the NGIs. Some of them prefer to continue using the central instances, while others prefer to deploy the regional version of the central tool, and some even prefer to deploy specific tools that are better suited for their needs.

The overall deployment plans are summarized in the following table.

| Operational Tool | Regional | Central | Others | Undecided |
|---|---|---|---|---|
| Operational Portal | 8 | 13 | 1 | |
| Helpdesk | 8 | 8 | 6 (3 RT) | |
| GOCDB | 10 | 12 | | |
| Accounting Portal | 9 | 7 | 2 | 4 |
| Nagios & MYEGI | ALL | | | |

As it can be seen in the previous table the decision to use directly the central instance or a regional instance depends on the type of tool and the local needs. In the case of the GOCDB operational tool it is interesting to notice that no NGI/EIRO showed interest in using an alternative tool which means that GOCDB completely fits their needs.

There are still a lot of undecided NGIs/EIROs about which solution to use for the accounting portal. Probably this is due to the fact that the migration to ActiveMQ is still ongoing. When regional accounting repositories will be available NGIs/EIROs will be in a better position to decide the best alternative to use as their accounting portal.

Finally, it should be emphasized that the regionalization of the monitoring infrastructure based on Nagios and Messaging is almost finalized.

## 4 REFERENCES

| R 1 | SVN repository for Operations Portal Regional Package : <br> https://cvs.in2p3.fr/operations-portal/package |
|------|-----------------------------------------------------------------------------------------------------------|
| R2 | MS701 , Operations Portal Work plan <br> https://documents.egi.eu/document/39 |
| R3 | GOCDB (Grid Operations Centre Database) 4 test release <br> http://www.sysadmin.hep.ac.uk/rpms/egee-SA1/centos5-devel/x86_64/repoview/gocdb.html |
| R4 | GOCDB (Grid Operations Centre Database) 4 SVN repositorie <br> http://www.sysadmin.hep.ac.uk/svn/grid-monitoring/trunk/gocdb/ |
| R5 | GOCDB (Grid Operations Centre Database) 4 development wiki <br> http://goc.grid.sinica.edu.tw/gocwiki/GOCDB4_development |
| R6 | Milestone MS401: Operational Tools Regionalization Status <br> (https://documents.egi.eu/document/48) |