



# EGI-InSPIRE

## EGI OPERATIONAL PROCEDURES

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#### Abstract

This is a report covering all procedures relevant to operational activities within EGI. It encompasses the tools used, to the daily operations and the roles that the parties involved play in EGI operations.

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### **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.

### **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>

### **TERMINOLOGY**

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



## 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.

## **EXECUTIVE SUMMARY**

The purpose of this document is to list the policies, procedures and human interactions within the service operations activity of EGI supported by the EGI-InSPIRE project.

This document doesn't document any of the grid operations policies or procedures themselves, as these are already documented and held in other documentation repositories. Instead, this document categorises the processes, policies and procedures, gives a brief description of each and provides up-to-date links to these documents.

The document is organised in such a way that procedures are discussed that are currently valid, currently in development or require updating. There are different sections on each of these types of procedures. Each section is subdivided into subsections about Grid Oversight, Operational Security, User Support and Triage, Middleware Deployment, Virtual Organisations and Virtual Research Communities, Interoperability and Meetings. There are also two sections dedicated to Operational Tools and Procedures Approval Process.

This document provides a snapshot of the operational procedures and their status the time of writing of this document.

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# 1 INTRODUCTION

Procedures for an integrated pan-European infrastructure as EGI naturally require certain processes to ensure both their reliability and quality. This document aims to provide an overview of all the current Operational Procedures, ranging from the oversight of the infrastructure, to the tools used, the security measures required and taken for the Virtual Organisations that benefit from these procedures. The document does not aim to include all these procedures in detail, but rather it points to the repositories of the procedures.

For an overview of the operational infrastructure of EGI-InSPIRE we refer to <https://documents.egi.eu/document/218>, called “Operations Architecture” in which an overview is given of EGI operations.

This document is structured to show the current status, at the time of writing, of all valid Operational Procedures, procedures under development, and previous procedures – developed in the framework of the EGEE project series – which are currently being updated. Finally, it describes the procedure approval process and a section dedicated to the operational tools.

## 2 VALID PROCEDURES

Many of the currently valid procedures have been inherited from the EGEE project series, and are still being updated. Many of the documents require rebranding to reflect the EGI era, and require updating of links to various sources and other documents. In some cases, complete rewrites are inevitable. However, even given that some of these documents are currently not a true reflection of the project status, they suffice in that the procedures are technically correct and valid.

### 2.1 Grid Oversight

#### 2.1.1 ROD, NGIs and Sites

The procedures used by the Regional Operator on Duty teams (ROD) at each NGI are currently collected into one document. There is a separate parallel document for NGIs and Sites. Collectively they cover duties and responsibilities of the respective roles, and encompass procedures covering the various tools used for operations, procedures for handling incidents and similar workflows. The two documents are called “ROD Operational Manual” and “NGIs & Site Operational Manual” respectively.

These Operational procedures manuals [R 1] are further complimented by a Best Practices wiki at [https://wiki.egi.eu/wiki/Operations:Best\\_Practices](https://wiki.egi.eu/wiki/Operations:Best_Practices) and Training Guides at <https://edms.cern.ch/document/1015741> aimed at teaching new ROD personnel. An Operational Level Agreement (OLA) [R 25] between NGI and Sites is currently under revision (see section 3). This document will replace the EGEE Service Level Agreement between ROCs and sites, which may be found at: <https://edms.cern.ch/file/860386/0.7/>.

In terms of Grid Oversight [R 2], a procedure that was approved during EGI is the new NGI creation process [R 4]. Such a procedure was necessary in order to ensure a smooth transition from a multi-country regional, to a NGI-oriented structure, where in general NGIs are based in the individual countries or small aggregations of a few countries such as NGI NDGF and NGI IBERGRID.

The procedure is described at [https://wiki.egi.eu/wiki/Operations:NewNGIs\\_creation](https://wiki.egi.eu/wiki/Operations:NewNGIs_creation). This document describes the various steps needed for the creation of a new EGI operations center.

In addition to the NGI creation procedure, also an EGEE ROC decommissioning procedure was necessary [R 30]. The procedure has been approved in the meantime and it is described at [https://wiki.egi.eu/wiki/Operations:Operations\\_Centre\\_decommission](https://wiki.egi.eu/wiki/Operations:Operations_Centre_decommission).

#### 2.1.2 COD

Most of the material related to procedures which are relevant to COD are at the EGI wiki [R 2]. The Operational Procedure manual for COD is co-located with the manuals for ROD and NGIs & Sites. It covers similar threads to these other manuals: duties and responsibilities of the COD role, procedures for handling incidents and similar work flows.

Some of the more important procedures that COD is responsible for are:

- a procedure for informing Sites and NGIs that their performance is not within guidelines, and to collect justification from those Sites<sup>1</sup>

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<sup>1</sup> [https://wiki.egi.eu/wiki/Availability\\_and\\_reliability\\_internal\\_procedure\\_for\\_COD](https://wiki.egi.eu/wiki/Availability_and_reliability_internal_procedure_for_COD)

- a procedure for the creation of new NGIs, which COD (or alternative Integration Process Coordinator) helps to supervise<sup>2</sup>
- a procedure for when a site is not responding to any requests to repair a problem

The EGEE escalation procedure [R 5], which in its final stage leads to site suspension, was updated and streamlined. The new procedure is now described at

[https://wiki.egi.eu/wiki/Operations:COD\\_Escalation\\_Procedure](https://wiki.egi.eu/wiki/Operations:COD_Escalation_Procedure).

The reason for the update was that in the EGEE era sites could remain unresponsive to tickets for too long before suspension would take place. With the updated procedure we hope that this will improve the quality of the infrastructure.

A new procedure in EGI for COD is the follow-up of the availability and reliability requirements [R 3] that are imposed on sites. In the EGEE era this was done by the operations team at CERN. The new procedure is described at:

[https://wiki.egi.eu/wiki/Availability\\_and\\_reliability\\_monthly\\_statistics](https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics)

A procedure for setting Nagios [R 12] test to critical, which means that failure of such a test would cause an alarm in the ROD team's dashboard, is described at:

[https://wiki.egi.eu/wiki/Operations:Procedure\\_for\\_setting\\_Nagios\\_test\\_operational\\_for\\_COD](https://wiki.egi.eu/wiki/Operations:Procedure_for_setting_Nagios_test_operational_for_COD)

## 2.2 Operational Security

The EGI CSIRT and EGI SVG have developed two security procedures [R 6]: one for incident response, and the other for vulnerability handling. The EUGridPMA-IGTF liaison function of EGI provides a consolidated set of trust anchors endorsed by EGI for use by sites and NGIs. This list is comprised of the accepted CAs as per the EGI Policy Approval of Certificate Authorities. The document which describes the procedure by which the list of trusted Certification Authorities for use in WLCG and EGI-InSPIRE is created and maintained can be found at [R 7]. NGIs and sites can augment or alter this set in accordance with their own policy requirements.

EGI releases follow updates from the International Grid Trust Federation [R 7], following the incorporation of required monitoring changes and validation of the trust anchors in the infrastructure using the Staged Rollout process. The release process is described at:

[https://wiki.egi.eu/wiki/EGI\\_IGTF\\_Release\\_Process](https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process)

The new process supersedes the 'lcg-CA' distribution method and is currently being validated.

## 2.3 User Support and Triage

Most User Support activities are under the technical responsibility of SA3 and NA3, and are out of the scope of this milestone. For SA1, support relies on the EGI Helpdesk [R 10] – GGUS. The Ticket Processing Management [R 8] (TPM) – first line support and triage of incoming problems - is under the technical responsibility of the German and Italian NGIs.

This activity is described at: <https://edms.cern.ch/file/1000210/2>.

An OLA from the EGEE project describing the service commitment of the TPM teams towards GGUS - which is still relevant but will be soon reviewed - can be found at: <https://edms.cern.ch/document/888089>. This document will be updated in the future to adapt it to EGI operational models. A FAQ is available at [https://gus.fzk.de/pages/ggus-docs/PDF/8600\\_FAQ\\_for\\_TPM.pdf](https://gus.fzk.de/pages/ggus-docs/PDF/8600_FAQ_for_TPM.pdf). More information on this activity may be found by registered users at: <https://gus.fzk.de/pages/support.php>.

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<sup>2</sup> [https://wiki.egi.eu/wiki/Operations:NewNGIs\\_creation](https://wiki.egi.eu/wiki/Operations:NewNGIs_creation)

Since the start of EGI-InSPIRE this service is generally in a similar state to what it was at the end of EGEE III. For a description see Section 2.3.

The Distributed Middleware Support Unit (DMSU) [R 14] is new in EGI, due to the fact that middleware development is now a responsibility of third-party software providers, and no longer a part of the EGI-InSPIRE project. The DMSU provides an interface between middleware developers and users.

## **2.4 Middleware Deployment**

The current procedures for the gLite middleware releases [R 15] were inherited from the EGEE project, and are described at: <https://wiki.egi.eu/wiki/Transition>. The technology providers (initially gLite team in this case), create a savannah patch in the “jra1mdw” project, for a new version of a given component: <https://savannah.cern.ch/patch/?group=jra1mdw>.

This patch is certified firstly by the technology provider, and then it is verified by the gLite integration team. Finally it enters the staged rollout [R 18] phase coordinated by EGI-InSPIRE TSA1.3.

Early Adopter sites make the final verification in a production environment, and produce a report that is used to decide if the patch is going to be released to production or not.

At any step of this process, all communication between the several players is done directly in the patch. In the report small fixes to release notes can be requested, configuration issues can be discussed, and if some bug or issue arises, the rejection of the patch is discussed.

If the patch passes successfully the staged rollout phase, the preparation of the new release includes the preparation of the production repositories and the final release notes, after which a broadcast is sent to all interested parties through the EGI Operations Portal [R 11].

The operational tools are developed inside EGI-InSPIRE by the JRA1 activity. JRA1 is using already the procedures and tools devised in the TSA1.3 and TSA2. This will be described below in Section 3.4.

## **2.5 Virtual Organisations and Virtual Research Communities**

Virtual Organisations (VOs) are groups with a common interest that can, as a group, access resources at a VO level. The term VRC (Virtual Research Community) is used to indicate a structured group of related VOs. The co-ordinating activity is NA2 and NA3, but these naturally overlap within general EGI operations.

A document describing the Virtual Organisation Operations Policy [R 19] can be found at:

<https://documents.egi.eu/document/77>

A document to describe the VO registration workflow is in a draft process, though the process is almost equivalent to that used during the EGEE project series.

## **2.6 Interoperability**

A document that describes and defines the operational interfaces that must be supported for resources to be integrated into EGI is available [R 20]. This includes operational tools as well as procedures and policies.

## **2.7 Meetings**

In line with the described operational procedures [R 22], meetings [R 21] are, in general, recorded in the EGI Indico page at <https://www.egi.eu/indico/index.py> under their respective areas.

The minutes of each meeting are kept at the meeting page. Leaders of projects and tasks provide the information about their meetings to their group, and the individual links of these will not be given here. Meetings are sometimes organised on an *ad-hoc* basis.

However, the following two regular meetings encompass a wider audience involved within EGI:

**Grid Operations:** there is a biweekly operations phone conference [R 23] where representatives of the NGIs are present to discuss issues affecting the deployed middleware and their priority. Representatives from the Distributed Middleware Support Unit are present to collect this input, and discuss critical issues with third-party software providers. Agendas are available at: <https://www.egi.eu/indico/categoryDisplay.py?categId=32>

There is a biweekly operations phone conference where representatives of the NGIs are present to discuss issues affecting the deployed middleware and their priority. Representatives from the Distributed Middleware Support Unit are present to collect this input, and discuss critical issues with third-party software providers. Agendas are available at: <https://www.egi.eu/indico/categoryDisplay?catgId=32>

**OMB:** the body governing EGI operations – the Operations Management Board [R 24] – meets on a monthly basis to discuss procedures, policies and roadmaps.

Agendas are available at: <https://www.egi.eu/indico/categoryDisplay.py?categId=19>

The OMB also holds a face to face meeting every four months.

The OMB meeting and the bi weekly operations phone conferences have replaced the EGEE ROC managers meeting and operations phone conferences. There is a slight change in the bi-weekly operations meeting that the handover between different COD sub-groups is now internally handled within the group.

## 3 PROCEDURES UNDER DEVELOPMENT

Various procedures are under development at the time of writing. A procedure area is mentioned here only if some related procedures are currently in draft status.

### 3.1 Grid Oversight

The procedures under development that are relevant to grid oversight activities (either centrally or NGI level) are the following.

- Site Registration and Certification [R 26]
- COD Dashboard escalation procedure (draft) [R 5]
- An Operational Level Agreement (OLA) between NGI and Sites is currently under revision [R 25]
- A procedure for fixing inaccurate availability and reliability data caused by problems in the monitoring [R 3]

### 3.2 Operational Security

The EGI CSIRT together with EGI SVG area working on a critical vulnerability handling procedure, the first draft of which is currently under definition. This will be approved by the OMB added to the security documentation at: <https://documents.egi.eu/document/47>. The vulnerability issue handling has been revised since EGEE to take account of the extended scope to cover all middleware in the UMD [R 17], and that the SVG is not part of the same project as the middleware development teams.

### 3.3 User Support and Triage

No procedures are under development in this area.

### 3.4 Middleware Deployment

Middleware development is no longer a part of the EGI-InSPIRE project as it was during the EGEE projects. EGI will take the needed software from any Technology Providers that provides capabilities relevant to the UMD Roadmap, . The natural Technology Providers are the EMI project that will release the gLite, ARC and UNICORE middleware stacks, the IGE project for Globus, and the EGI-JRA1 activity that are responsible for the development of Operational Tools.

EGI has developed a procedure for deploying software into the production infrastructure (MS402 <https://documents.egi.eu/document/53>). The document describes the workflow of the whole release process of any software component to the EGI production infrastructure. It also describes what tools will be used, namely the RT for process tracking, mailing lists and wiki pages, and the EGI repositories (MS504 <https://documents.egi.eu/document/89>).

After discussion between TSA1.3, TSA2, JRA1 and EMI, some changes have been agreed to the initial workflow. The current state is now briefly described (<https://wiki.egi.eu/wiki/Staged-Rollout>).

According to the procedure, the Technology Provider external to EGI opens a GGUS ticket when a new version of a given component is released. This will trigger the creation of a RT ticket in the EGI domain that will be used to track the whole software verification and staged rollout process [R 28].

In one of the steps, the SA2 will produce a *verification* report that will be published in the EGI document server. Also in the Staged Rollout phase, the Early Adopters will produce a report and the staged rollout manager will gather all those reports to produce a summary about the release, this will also be published in the EGI document server under the same ID as the verification report.

Any bugs/issues/problems found in any of these steps will be communicated through the original GGUS ticket. The “Deployed Middleware Support Unit” (DMSU) will be managing and overseeing the progress of those tickets.

If the staged rollout phase ends successfully, a new release is prepared including updating the repositories, publishing the release notes and announcing it to the production infrastructure through the broadcast of the EGI Operations Portal.

Any middleware problems found thereafter should be reported to the DMSU through GGUS tickets. The DMSU Operations Procedures is available at [R 14].

For the Technology Provider internal to EGI – JRA1 (the operational tools) – the only difference with respect to the previous description is the ticket creation, which will be done directly in the RT system instead of GGUS.

A procedure to retire grid middleware [R 27 & R 17] is under development at:

<https://wiki.egi.eu/wiki/Operations:RetiringGridComponent>

### **3.5 Virtual Organisations and Virtual Research Communities**

A document to describe the VO registration workflow is in a draft process, though the process is almost equivalent to that used during the EGEE project series.

### **3.6 Interoperability**

New procedures specific to the integration of new resources in the EGI infrastructure will be documented in the future releases of MS407. An example of integration procedure is the creation, deletion and/or modification of service types registered in GOCDB [R 13]. This procedure will be drafted in the coming month. The first release of milestone MS407 is available at

<https://documents.egi.eu/document/111>

### **3.7 Meetings**

Nothing to report.

## 4 EXISTING PROCEDURES UNDER REVISION

A number of existing procedures, particularly those relevant to the operational tools need to be updated to reflect their function and for easier accessibility. There is also a current endeavour to move existing procedures from the GOCWIKI to the EGI wiki.

As these procedures have already been covered in Section 2, only the relevant links are provided. An empty subsection implies that no procedures are to be updated in that area.

### 4.1 *Grid Oversight*

#### 4.1.1 ROD, NGIs and Sites

The Operational Procedures Manual (OPS Manual) defines the procedures and responsibilities of the various parties involved in the running of EGI, namely the resource centres consisting of local support and sites administrators, the staff of the NGIs, the regional operations team consisting of the regional Operator on Duty and the 1<sup>st</sup> Line Support and the oversight grid monitoring operators.

The version valid under EGEE III of 9th April 2010 can be found at [R 1]. This version has been transferred by 1st May 2010 to the EGI wiki (<https://wiki.egi.eu/wiki/Operations:OD>) and the three documents are the OPS Manual is also available in PDF format on the EGI Document server. (<https://documents.egi.eu/document/15>). There are many inconsistencies in this current format. Re-Branding; the renaming of EGEE references to EGI is needed. All relevant links have to be updated. Wiki know-how has to be collected, i.e. on how to include common sections. New procedures have to be incorporated and references to tools that are not yet fully integrated like NAGIOS have to be incorporated:

The Best Practices are found at [https://wiki.egi.eu/wiki/Operations:Best\\_Practices](https://wiki.egi.eu/wiki/Operations:Best_Practices). Like the OPS Manuals they have to be re-branded and all relevant links have to be updated. New practices have to be collected and included.

The EGEE intervention procedures, describing the procedures with respect to site maintenances, scheduled and unscheduled need to be updated. They may be found at: <https://edms.cern.ch/document/1032984>

#### 4.1.2 COD

The COD operations manual at [R 5] needs to be rebranded since obsolete terms from the EGEE era may still be found in this document.

### 4.2 *Operational Security*

The EGI CSIRT together with EGI SVG area working on a critical vulnerability handling procedure, the first draft of which is currently under definition. This will be approved by the OMB added to the security documentation [R 6]. The vulnerability issue handling has been revised since EGEE to take account of the extended scope to cover all middleware in the UMD, and that the SVG is not part of the same project as the middleware development teams.

### **4.3 User Support and Triage**

An OLA from the EGEE project describing the service commitment of the TPM teams towards GGUS - which is still relevant but will be soon reviewed - can be found at [R 8]. This document will be updated in the future to adapt it to EGI-InSPIRE project.

### **4.4 Middleware Deployment**

A procedure for retiring obsolete middleware components needs to be updated [R 16]. See Section 3.4.

### **4.5 Virtual Organisations and Virtual Research Communities**

A document to describe the VO registration workflow is in a draft process, though the process is almost equivalent to that used during the EGEE project series.

### **4.6 Interoperability**

A procedure for updating the list of available service types is under revision and this document may be found at [R 20].

### **4.7 Meetings**

Nothing to report.

## 5 PROCEDURES APPROVAL PROCESS

The EGI Policy Development Team [R 29] has recently proposed a process for policy development that includes procedures. This is particularly important as the procedures need to address the global infrastructure and typically they span different technical areas, i.e. are not only of concerns for operations, but also for user communities and software providers, so a proper revision workflow needs to be defined. The document also provides policy and procedure templates: <https://documents.egi.eu/document/169>.

All operations procedures will be re-formatted to make them consistent to a unique EGI template.

Procedures should fulfil the following requirements:

- Core documents should be as general as possible and not refer to any specific instance of the middleware or operational tool used.
- They should be fully collected in one place with no external links in order to provide data loss in case of changing the document format.
  - In the case of EGI this means that documentation should only be on the wiki to avoid confusion regarding the freshness of a document. There can only be one current version, which is generally accessed and a work in progress version which is only available to the people working on the document.
- There should be a well defined valid procedure in integrating new procedures. All the relevant players should have the possibility to suggest new best practices and procedures or improvements to already existing ones. EGI is finalizing such a process for policy and procedure development with the Policy development process document: <https://documents.egi.eu/document/169>.
- Procedure manuals should have a release schedule of around 3 times a year to keep them updated and functional.
- Request on consistency: A procedures should always refer to where the rest of the most actual version of the procedures is found. Higher level links to come to the current collection have to be integrated.

## 6 TOOLS

There are various tools relevant to the efficient running of operations, monitoring, accounting, communication, etc. These are intertwined with the middleware that the grid infrastructure relies on. The documentation that is relevant in this case is the use of the tools. Therefore, links to a subsection of these are provided here, which in themselves, contain further links for more detailed procedures. Tools documentation lies on the border of the scope of this milestone, but efforts are made within EGI Operations to collate these and make them more easily accessible.

The Operational Tools Advisory Group (OTAG<sup>3</sup>) [R 9], has a collection of links to the tools that the group co-ordinates: [https://wiki.egi.eu/wiki/Operational\\_Tools\\_Documentation\\_links](https://wiki.egi.eu/wiki/Operational_Tools_Documentation_links)

The respective tools under consideration in this group are [R 31]:

- the central Accounting Portal and APEL repository,
- the central helpdesk ticketing system (GGUS): <https://gus.fzk.de/pages/docu.php>
- GOCDB: [https://wiki.egi.eu/wiki/GOCDB\\_Visualisation\\_Portal\\_User\\_Documentation](https://wiki.egi.eu/wiki/GOCDB_Visualisation_Portal_User_Documentation)
- MyEGI and the central monitoring system including NCG,
- Network monitoring tools,
- Operations portal and dashboard: <https://cic.gridops.org/index.php?section=roc&page=generaldoc>
- Security monitoring,
- Metrics portal: [http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/paper\\_metrics\\_iber2010.pdf](http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/paper_metrics_iber2010.pdf)

The SAM monitoring framework based on Nagios is documented on Confluence at CERN, and existing wiki pages are under migration. The following EGI wiki page provides a collection of the most relevant documents in this technical area:

[https://wiki.egi.eu/wiki/Operational\\_Tools\\_Documentation\\_links#SAM\\_Monitoring\\_Framework](https://wiki.egi.eu/wiki/Operational_Tools_Documentation_links#SAM_Monitoring_Framework).

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<sup>3</sup> <https://wiki.egi.eu/wiki/OTAG>

## 7 CONCLUSIONS

In this document, we have given an overview of the operational procedures being used within EGI. References to these descriptions were given in sections related to procedures valid at the moment of writing of this document, procedures that are currently in development and procedures that need revision. This document can be regarded as a snap shot of the state of the operational procedures at the time of writing of this document.

Apart from the operational procedures there are also two sections dedicated to operational tools and the procedure approval process.

It is foreseen that eventually, all documentation, whether procedures, policies or guidelines, will be found either on the EGI document server (<https://documents.egi.eu>) or on the EGI wiki (<https://wiki.egi.eu>). The Document Database will be primarily used for policies, which are expected to change less frequently. On the other hand, the EGI wiki will be the primary source for procedures, best practices and documentation, as these are to from more frequent changes.

For tool documentation produced by JRA1 Product Teams, the relevant links will be provided in wiki pages and this document.

## 8 OVERVIEW TABLES OPERATIONAL PROCEDURES

Title	URL	Status
Operations Manuals	<a href="https://documents.egi.eu/document/15">https://documents.egi.eu/document/15</a> <a href="https://wiki.egi.eu/wiki/Operations:Manuals">https://wiki.egi.eu/wiki/Operations:Manuals</a>	valid/ under revision
Best Practices	<a href="https://wiki.egi.eu/wiki/Operations:Best_Practices">https://wiki.egi.eu/wiki/Operations:Best Practices</a>	valid/ under revision
Training Guide	<a href="https://edms.cern.ch/document/1015741">https://edms.cern.ch/document/1015741</a>	Valid
New NGI Certification	<a href="https://wiki.egi.eu/wiki/Operations:NewNGIs_creation">https://wiki.egi.eu/wiki/Operations:NewNGIs_creation</a>	Valid
ROC Decommissioning	<a href="https://wiki.egi.eu/wiki/Operations:Operations_Centre_decommission">https://wiki.egi.eu/wiki/Operations:Operations_Centre_decommission</a>	Valid
COD Escalation Procedure	<a href="https://wiki.egi.eu/wiki/Operations:COD_Escalation_Procedure">https://wiki.egi.eu/wiki/Operations:COD_Escalation_Procedure</a>	Valid
Availability and Reliability Followup	<a href="https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics">https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics</a>	Valid
Operations Tests	<a href="https://wiki.egi.eu/wiki/Operations:Procedure_for_setting_Nagios_test_operational_for_COD">https://wiki.egi.eu/wiki/Operations:Procedure_for_setting_Nagios_test_operational_for_COD</a>	Valid
Site Certification Procedure	<a href="https://wiki.egi.eu/wiki/Operations:Site_Certification">https://wiki.egi.eu/wiki/Operations:Site_Certification</a>	under develop ment
COD Dashboard Escalation Procedure	<a href="https://www.egi.eu/wiki/Operations:COD_Dashboard_escalation_procedure">https://www.egi.eu/wiki/Operations:COD_Dashboard_escalation_procedure</a>	under develop ment
Availability/Reliability Data fixing Procedure	<a href="https://wiki.egi.eu/wiki/Operations:A/R_fixing_procedure">https://wiki.egi.eu/wiki/Operations:A/R_fixing_procedure</a>	under develop ment
Site Intervention Procedure	<a href="https://edms.cern.ch/document/1032984">https://edms.cern.ch/document/1032984</a>	under revision

**Table 1: Grid Oversight**

Title	URL	Status
CA Approval	<a href="https://edms.cern.ch/document/428038">https://edms.cern.ch/document/428038</a>	Valid
IGTF Release Process	<a href="https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process">https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process</a>	Valid
Operational Security Procedures	<a href="https://documents.egi.eu/document/47">https://documents.egi.eu/document/47</a>	valid/under development/under revision

**Table 2: Operational Security**

title	URL	Status
TPM Activity	<a href="https://edms.cern.ch/file/1000210/2">https://edms.cern.ch/file/1000210/2</a>	Valid
TPM OLA	<a href="https://edms.cern.ch/document/888089">https://edms.cern.ch/document/888089</a>	valid/under revision
TPM FAQ	<a href="https://gus.fzk.de/pages/ggus-docs/PDF/8600_FAQ_for_TPM.pdf">https://gus.fzk.de/pages/ggus-docs/PDF/8600_FAQ_for_TPM.pdf</a>	Valid

**Table 3: User Support and Triage**

Title	URL	Status
gLite Middleware releases	<a href="https://wiki.egi.eu/wiki/Transition">https://wiki.egi.eu/wiki/Transition</a>	Valid
Technology Providers	<a href="https://savannah.cern.ch/patch/?group=jra1mdw">https://savannah.cern.ch/patch/?group=jra1mdw</a>	Valid
Staged Rollout	<a href="https://wiki.egi.eu/wiki/Staged-Rollout">https://wiki.egi.eu/wiki/Staged-Rollout</a> <a href="https://wiki.egi.eu/wiki/NSRW_IMPLEMENTATION_RT">https://wiki.egi.eu/wiki/NSRW_IMPLEMENTATION_RT</a>	Valid
Software Deployment Procedure	<a href="https://documents.egi.eu/document/53">https://documents.egi.eu/document/53</a>	under development
Software Repository	<a href="https://documents.egi.eu/document/89">https://documents.egi.eu/document/89</a>	under development
DMSU Operations Procedures	<a href="https://documents.egi.eu/document/69">https://documents.egi.eu/document/69</a>	Valid
Component Retirement	<a href="https://wiki.egi.eu/wiki/Operations:RetiringGridComponent">https://wiki.egi.eu/wiki/Operations:RetiringGridComponent</a>	under development

**Table 4: Middleware Deployment**

Title	URL	Status
Virtual Organisations Operation Policy	<a href="https://documents.egi.eu/document/77">https://documents.egi.eu/document/77</a>	Valid
VO Registration workflow		under development/under revision

**Table 5: Virtual Organisations and Virtual Research Communities**

Title	URL	Status
Operational Interfaces	<a href="https://documents.egi.eu/document/111">https://documents.egi.eu/document/111</a>	valid/under development
Available Service Types	<a href="https://wiki.egi.eu/wiki/Operations:Procedure_for Updating_the_List_of_Available_Service_Types">https://wiki.egi.eu/wiki/Operations:Procedure for updating the list of available service types</a>	under revision

**Table 6: Interoperability**

## 9 REFERENCES

R 1	<a href="https://documents.egi.eu/document/15">https://documents.egi.eu/document/15</a> <a href="https://wiki.egi.eu/wiki/Operations:Manuals">https://wiki.egi.eu/wiki/Operations:Manuals</a> <a href="https://wiki.egi.eu/wiki/Operations:Best_Practices">https://wiki.egi.eu/wiki/Operations:Best Practices</a> <a href="https://edms.cern.ch/document/1015741">https://edms.cern.ch/document/1015741</a> <a href="https://edms.cern.ch/document/1032984">https://edms.cern.ch/document/1032984</a>
R 2	<a href="https://wiki.egi.eu/wiki/Grid_operations_oversight">https://wiki.egi.eu/wiki/Grid_operations_oversight</a>
R 3	<a href="https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics">https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics</a> <a href="https://wiki.egi.eu/wiki/Availability_and_reliability_internal_procedure_for_COD">https://wiki.egi.eu/wiki/Availability_and_reliability_internal_procedure_for_COD</a> <a href="https://wiki.egi.eu/wiki/Operations:A/R_fixing_procedure">https://wiki.egi.eu/wiki/Operations:A/R_fixing_procedure</a>
R 4	<a href="https://wiki.egi.eu/wiki/Operations:NewNGIs_creation">https://wiki.egi.eu/wiki/Operations:NewNGIs_creation</a>
R 5	<a href="https://wiki.egi.eu/wiki/Operations:COD_Escalation_Procedure">https://wiki.egi.eu/wiki/Operations:COD_Escalation_Procedure</a> <a href="https://www.egi.eu/wiki/Operations:COD_Dashboard_escalation_procedure">https://www.egi.eu/wiki/Operations:COD_Dashboard_escalation_procedure</a> (draft) <a href="https://wiki.egi.eu/wiki/Operations:CODOPSmanual">https://wiki.egi.eu/wiki/Operations:CODOPSmanual</a>
R 6	<a href="https://documents.egi.eu/document/47">https://documents.egi.eu/document/47</a>
R 7	<a href="https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process">https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process</a> <a href="https://edms.cern.ch/document/428038">https://edms.cern.ch/document/428038</a>
R 8	<a href="https://gus.fzk.de/pages/support.php">https://gus.fzk.de/pages/support.php</a> <a href="https://gus.fzk.de/pages/ggus-docs/PDF/8600_FAQ_for_TPM.pdf">https://gus.fzk.de/pages/ggus-docs/PDF/8600_FAQ_for_TPM.pdf</a> <a href="https://edms.cern.ch/file/1000210/2">https://edms.cern.ch/file/1000210/2</a> <a href="https://edms.cern.ch/document/888089">https://edms.cern.ch/document/888089</a>
R 9	<a href="https://wiki.egi.eu/wiki/OTAG">https://wiki.egi.eu/wiki/OTAG</a>
R 10	<a href="https://gus.fzk.de/pages/docu.php">https://gus.fzk.de/pages/docu.php</a>
R 11	<a href="https://cic.gridops.org/index.php?section=roc&amp;page=generaldoc">https://cic.gridops.org/index.php?section=roc&amp;page=generaldoc</a>
R 12	<a href="https://twiki.cern.ch/twiki/bin/view/EGEE/MultiLevelMonitoringOverview">https://twiki.cern.ch/twiki/bin/view/EGEE/MultiLevelMonitoringOverview</a>
R 13	<a href="https://wiki.egi.eu/wiki/GOCDDB_Visualisation_Portal_User_Documentation">https://wiki.egi.eu/wiki/GOCDDB_Visualisation_Portal_User_Documentation</a>
R 14	<a href="https://documents.egi.eu/document/69">https://documents.egi.eu/document/69</a>
R 15	<a href="https://documents.egi.eu/document/53">https://documents.egi.eu/document/53</a> <a href="https://wiki.egi.eu/wiki/Transition">https://wiki.egi.eu/wiki/Transition</a> <a href="https://documents.egi.eu/document/89">https://documents.egi.eu/document/89</a> <a href="https://wiki.egi.eu/wiki/Staged-Rollout">https://wiki.egi.eu/wiki/Staged-Rollout</a>
R 16	<a href="https://edms.cern.ch/document/985325/1">https://edms.cern.ch/document/985325/1</a>
R 17	<a href="https://wiki.egi.eu/wiki/Middleware:Release_Process">https://wiki.egi.eu/wiki/Middleware:Release_Process</a>
R 18	<a href="https://wiki.egi.eu/wiki/Staged-Rollout">https://wiki.egi.eu/wiki/Staged-Rollout</a>
R 19	<a href="https://documents.egi.eu/document/77">https://documents.egi.eu/document/77</a>
R 20	<a href="https://documents.egi.eu/document/111">https://documents.egi.eu/document/111</a> <a href="https://wiki.egi.eu/wiki/Operations:Procedure_for Updating_the_list_of_available_service_types">https://wiki.egi.eu/wiki/Operations:Procedure_for Updating_the_list_of_available_service_types</a>

<b>R 21</b>	<a href="https://www.egi.eu/indico/index.py">https://www.egi.eu/indico/index.py</a>
<b>R 22</b>	<a href="https://wiki.egi.eu/wiki/Procedures">https://wiki.egi.eu/wiki/Procedures</a>
<b>R 23</b>	<a href="https://www.egi.eu/indico/categoryDisplay.py?categId=32">https://www.egi.eu/indico/categoryDisplay.py?categId=32</a>
<b>R 24</b>	<a href="https://www.egi.eu/indico/categoryDisplay.py?categId=19">https://www.egi.eu/indico/categoryDisplay.py?categId=19</a>
<b>R 25</b>	<a href="https://documents.egi.eu/document/31">https://documents.egi.eu/document/31</a> (draft)
<b>R 26</b>	<a href="https://wiki.egi.eu/wiki/Operations:Site_Certification">https://wiki.egi.eu/wiki/Operations:Site_Certification</a> (draft)
<b>R 27</b>	<a href="https://wiki.egi.eu/wiki/Operations:RetiringGridComponent">https://wiki.egi.eu/wiki/Operations:RetiringGridComponent</a> (draft)
<b>R 28</b>	<a href="https://wiki.egi.eu/wiki/NSRW_IMPLEMENTATION_RT">https://wiki.egi.eu/wiki/NSRW_IMPLEMENTATION_RT</a> (draft)
<b>R 29</b>	<a href="https://documents.egi.eu/document/169">https://documents.egi.eu/document/169</a>
<b>R 30</b>	<a href="https://wiki.egi.eu/wiki/Operations:EGEE_ROC_decommission">https://wiki.egi.eu/wiki/Operations:EGEE_ROC_decommission</a>
<b>R 31</b>	<a href="https://gus.fzk.de/pages/docu.php">https://gus.fzk.de/pages/docu.php</a> <a href="https://wiki.egi.eu/wiki/GOCDB_Visualisation_Portal_User_Documentation">https://wiki.egi.eu/wiki/GOCDB_Visualisation_Portal_User_Documentation</a> <a href="http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/paper_metrics_iber2010.pdf">http://www3.egee.cesga.es/gridsite/accounting/CESGA/links/paper_metrics_iber2010.pdf</a> <a href="https://cic.gridops.org/index.php?section=roc&amp;page=generaldoc">https://cic.gridops.org/index.php?section=roc&amp;page=generaldoc</a> <a href="https://wiki.egi.eu/wiki/Operational_Tools_Documentation_links#SAM_Monitoring_Framework">https://wiki.egi.eu/wiki/Operational_Tools_Documentation_links#SAM_Monitoring_Framework</a>