EGI-InSPIRE

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Abstract

Q1 of EGI-InSPIRE was dominated by the startup of the project – both technical and administrative – with the transference of the management of the European Grid Infrastructure from the EGEE-III project to a sustainable coordinating body EGI.eu, based upon a federation of national and domain oriented resource providers. The CE ROC completed its migration to independent NGIs and SEE ROC saw the inclusion of resources previously part of other regional infrastructures. The software provisioning and software rollout activities were established, and the operational structures established under EGEE were taken over by EGI.

I. COPYRIGHT NOTICE

II. DELIVERY SLIP

	Name	Partner/Activity	Date
From	Catherine Gater & Steven Newhouse	EGI.eu	1/11/2010
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III. DOCUMENT LOG

Issue	Date	Comment	Author/Partner
1	21/8/10	First draft	Steven Newhouse /EGI.eu
2	5/9/10	Second draft	Catherine Gater/ EGI.eu
3	1/11/10	Final	Steven Newhouse/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/about/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

In general the main focus across all the whole project during PQ1 has been on establishing contact with the staff working within the various partners. This information was needed to populate the activity management and technical mailing lists within the project, and the Project Progress Tracking (PPT) tool for the purposes of completing staff timesheets across the partners. All of the activities saw some changes in their management structure from those experienced under EGEE to those within EGI-InSPIRE. The transition activity that took place during the final year of the EGEE-III project reduced some of these disruptive effects through the extensive dissemination activity that had raised the community awareness of the changes. Another recurring issue has been the recruitment of the staff. The Grant Agreement was not available during PQ1 and many partners were unable to recruit staff without this document. As a result the effort delivered by partners within the project was approximately 75% of the expected effort.

However, despite these issues the European Grid Infrastructure has smoothly transition from the support provided by the EGEE-III project to the support of EGI-InSPIRE. The production infrastructure has seen the establishment of independent national operations centres, a process started during EGEE-III, was completed for the Central Europe ROC during PQ1. South Eastern Europe saw many of the national infrastructures previously supported by regional projects join the EGI, with some of these new national infrastructures planning, starting and completing their transition to independent operational entities. The 'EGI Global Services' identified to coordinate the production infrastructure covering security; staged software rollout; operational tool development, maintenance and support; monitoring the availability and reliability of the infrastructure; EGI Helpdesk; and core support services were all established and put into operation. Regionalised versions of the operations portal, EGI Helpdesk and the accounting portal, along with the use of the messaging backbone to relay accounting records where released for evaluation and feedback to a small number of NGIs.

The building of the distributed teams within the production infrastructure, and in other activities within the project, has been aided by the dedicated support services being run by the project for the project. These include an authentication and authorisation service (the EGI Single Sign On) that is used to manage groups of individuals across the project. These are used to build the project mailing lists, control access to the document server, wiki, websites, issue tracker, PPT, chat server, etc. Although all the activities held 'kick-off' meetings during PQ1 the EGI Technical Forum in September will be used across the project to further build the collaboration between the partners and the communities they serve through presentation, panels and training sessions.

The production infrastructure needs to be refreshed through new software releases coming from external software providers. An initial version of the EGI Software Repository which is the backbone to this process was established (with content from the software providers) and a workflow around the contribution, definition and verification of software against established criteria has been defined. The Deployed Middleware Support Unit, that supports the software in use in the production infrastructure, has been established to help sites resolve middleware issues through their own expertise and in collaboration with the external software providers as 3rd line support units.

The technical user services provided by EGI to help coordination within the community (the training event calendar, trainers repository, training material library, application database, and VO related services) have been established under the EGI brand. The User Community Support Team in EGI.eu has been established and contact has been established with the NGI user support teams. The engagement with the Virtual Research Communities, including those from the ESFRI projects, has started and plans have been established as to how these communities will be represented within EGI.

The interactions that EGI.eu has within the EGI community and with those outside of it are defined by the Policy and Dissemination activities are coordinated by EGI.eu through the engagement with representatives from the NGIs. Dissemination activities supported by EGI-InSPIRE include the monthly Director's letter and quarterly newsletter – 'Inspired'- where prepared and distributed. As key staff at EGI.eu were recruited effort was devoted to adding content to the website and preparing dissemination material for the EGI Technical Forum – the project's first major event. Policy development activities during PQ1 focused on establishing contact with the 'Distributed Computing Infrastructure' projects that were funded alongside EGI-InSPIRE and defining the terms of reference to the many policy bodies supported by EGI.eu that define how various aspects of the European Grid Infrastructure operate. Some of these bodies started during PQ1 and the remainder will begin operation in PQ2. The preparation of the EGI Technical Forum in September continued during PQ1 with the finalisation of the technical sessions, keynote speakers, social events, networking infrastructure and many other aspects.

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1. INTRODUCTION

1.1. Purpose

This document describes the progress of the EGI-InSPIRE project during its first quarter of activity from May to July 2010.

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. 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:
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1.4. Terminology

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

2. OPERATIONS

2.1. Summary

PQ1 has seen countries that were not yet part of EGEE integrated into EGI under the operational unit of SEE ROC. Further, NGIs that were previously part of SEE ROC have now transitioned to independent operational NGIs. The remaining NGIs in SEE are expected to be independent in the next six months and are currently getting familiar with EGI procedures and tools. The seven countries in CE are now registered as NGIs in EGI. For Austrian sites, the operational coordination was transferred to NGI_NDGF. A new procedure has been created (and regularly updated) for the creation of an NGI in the operational infrastructure of EGI.

The operational security team EGI CSIRT and the EGI Software Vulnerability Group (SVG), have been established and are in full operation. The staged rollout process for deployment of new middleware releases in the production infrastructure has been entirely redefined, and the related tools (RT and wiki pages) put in place. The EGEE PPS service was entirely decommissioned. 26 Early Adopter teams are contributing to the staged rollout of gLite, UNICORE, Nagios/SAM and Globus.

The NGI operational tool administrators mailing list (currently 54 members) has been established to announce releases, distribute information, and to get technical support from the community. GOCDB started its transition from version 3 to version 4. The old SAM submission framework was decommissioned on June 23th 2010, but the centralized portal is available at https://lcg-sam.cern.ch:8443/sam/sam.py and will be phased out by the end of the year. A new portal is now available at https://grid-monitoring.egi.eu/myegee/. There are currently 24 Nagios services in production.

The operations portal team released the regionalized version on June 8th 2010. At the end of QR1 two NGIs have deployed and validated the regionalized version of the tool (NGI_CZ and NGI_GRNET). Ibergrid is still in the process of validating it. The centralized operations portal is accessible at: http://operations-portal.in2p3.fr. Finally, the web portal with network tools for troubleshooting and monitoring[1] was migrated to GARR (Italy), together with the network availability monitoring tool (DownCollector) – developed in the framework of the EGEE-III SA2 activity.

The release to production of the APEL ActiveMQ client in early June meant the APEL server was ready to accept records through the new messaging architecture. The initial version of the regionalized accounting portal is already available for deployment.

The support infrastructure has been adapting to the EGI model by establishing new NGI support units for the new operational NGIs. With the July release of the GGUS Portal the first prototype of the GGUS NGI view[2]. A new workflow for middleware related issues has been discussed with the Deployed Middleware Support Unit (DMSU). Since the beginning of EGI the new Ticket Processing Management (TPM) model with two teams is in place and activities consolidated during PQ1. The first EGI-InSPIRE Regional Operator on Duty (ROD) teams workshop was organised on June 1st and 2nd. The meeting gathered up 51 people from 18 countries. A considerable number of the people attending the workshop come from countries not involved in operations in the EGEE project and were new to the ROD work.

The EGEE SLA document was updated to produce a EGI OLA document covering all the agreed and adopted practices. In parallel, a new process has been defined and finally approved for managing the

[1] http://eginet.garr.it.

[2] https://helpdesk.ngi-de.eu/

monthly availability and reliability statistics. A new procedure involving the Central Operator on Duty (COD) was created for getting explanations from sites for their figures if they fall below the Operational Level Agreement (OLA) requirements. In order to solicit feedback from the NGIs regarding the existing OLA and the need for expanding it to other services, a questionnaire was circulated to NGI operations managers.

A WMS and a MyProxy service – for the EGI Nagios Security Monitoring tool – were installed and entered production. In parallel a new VOMS/VOMRS server has been setup in order to host the DTEAM VO. Data from the VOMS server at CERN is currently under migration to the new VOMS server hosted at AUTH.

2.2. Main achievements

All EGI global services are running smoothly given the transition plans that guaranteed a smooth migration from EGEE to EGI.

New countries that were not integrated in EGEE are now part of EGI under the operational unit of SEE ROC. Even before the start of EGI-InSPIRE, NGIs in the southeast region have been quite active in their preparations to become autonomous. In line with this, NGIs from Albania, Armenia, Azerbaijan, FYR of Macedonia, Georgia, Moldova, Montenegro that were part of the SEE-GRID-SCI project joined EGEE-SEE-ROC in April in order to have their corresponding sites registered in EGEE (now EGI) infrastructure and the corresponding monitoring and accounting tools.

NGI_GRNET took over operations for GREECE on 22nd of April followed soon after by NGI_AEGIS that took over operations for Serbia on the 16th of June. NGI_TR is already in the final stages of the NGI migration and integration procedure, and is expected to take over operations for Turkey during QR2. Finally NGI_BG for Bulgaria, NGI_ARMGRID for Armenia and NGI_IL for Israel have already started the migration procedures and are expected to take over operations for their corresponding countries by the beginning of September 2010. The remaining NGIs in SEE are expected to be independent in the next six months and are currently getting familiar with EGI procedures and tools.

CE ROC transition went smoothly thanks to good co-operation between countries. To give a chance for all partners to prepare themselves for transition, CE ROC was operating for two months after EGEE project was closed. Within this quarter, seven of the CE ROC countries created their own structures and registered them as NGIs in EGI and sites were moved respectively. In case of Austrian sites, the operation was transferred to NGI_NDGF as they (Austria) do not have a national infrastructure in place to carry out this task.

Legacy multi-country EGEE ROCs (Central Europe, South East Europe and South West Europe) continued their operations during PQ1 on a best effort basis to ease the transition of NGIs from EGEE to EGI and foster the integration of SEE-Grid sites within EGI.

New NGIs have been working towards the establishment of NGI middleware and operational core services, and are getting familiar with EGI procedures.

Decommission of CE ROC is in preparation – a new procedure is now being drafted. The decommissioning of other EGEE legacy ROCs will follow as well.

Various NGIs are concretely planning towards the integration of different middleware stacks within the national e-Infrastructure: Switzerland (ARC and gLite) and Germany (gLite, Globus and UNICORE).

The collaboration and synergy between NGI CSIRT teams and NREN CERT teams has been improving in several countries.

2.2.1. Security

Most resources used by the teams such as mailing lists, wikis, security monitoring servers etc. have been migrated from EGEE to the egi.eu domain. The security monitoring services (Pakiti and Nagios security monitoring) covering the whole EGI infrastructure are now in full operation. Other work related to the transition from EGEE to EGI is in progress and will be completed during PQ2.

Both teams have produced respectively operational security procedures forming milestone MS405.

The first phase of Security Service Challenge 4 (SSC4) was completed by EGI CSIRT. In total 13 sites (all WLCG Tier1 sites plus a few others) were tested and the evaluation of site performance is underway. The final result and the debriefing will be presented at the first EGI Technical Forum.

During PQ1 the EGI CSIRT also handled three security incidents and issued one security advisory on a vulnerability found in Intel compiler suite.

2.2.2. Middleware Deployment

Two months before the start of the project, work started to pave the way towards the transition between EGEE and EGI. Handover of coordination activities started together with the definition of new procedures for the timely staged rollout of new middleware releases. These are described in MS402

- **Software releases.** The gLite 3.2 services are supported for the Scientific Linux 5 (SL5) operating system in the x86_64 (64 bits) architecture, while the WN client is also supported in Debian 4 for 64 bits architecture. During PQ1 four gLite 3.2 updates were announced to be ready for deployment. Generally speaking, each release contains updates of a few different components, and 10 components were updated in PQ1. DPM, LFC (both with MySQL and Oracle backend), and CREAM were updated twice. In some cases bugs were discovered during the production phase, as testing environments usually not covering all deployment scenarios. For the gLite 3.1 series two updates were released: seven i386 components and four x86_64 components.

  For gLite 3.2, six components underwent the new staged rollout process, while for the remaining four "Early Adopter" sites still need to be identified. As for the glite 3.1, three out of the eleven components underwent the full staged rollout process. During PQ1 components that have no sites contributing to their Staged Rollout, were directly released as they were provided by the respective Product Team, after the developers' internal certification. In PQ2 we plan to extend the list of sites contributing to SR in order to get full coverage.

  Testing of new releases of the operational tools will follow the same procedures adopted for Grid middleware. The first tool to adopt the new procedure is Nagios/SAM.

- Wiki, tools and SSO groups. Several wiki pages in the EGI domain have been created, the relevant ones are listed below:
  - https://wiki.egi.eu/wiki/Staged-Rollout: will contain full information about the SW rollout process to production (draft version).
  - https://wiki.egi.eu/wiki/Components and https://wiki.egi.eu/wiki/Early_Adopters: the former contains up to date information about all software components and the later contains the list of Early Adopter teams that have volunteered up to now for the process.
  - https://wiki.egi.eu/wiki/Coordination_of_interoperations_between_NGIs_and_with_other_Grids: provides information about operational interoperability activities in the project.
  - https://wiki.egi.eu/wiki/EGI_IGTF_Release_Process: this page document the first proposal of the EGI IGTF Release Process. It is currently under discussion.

Several groups have been created in the EGI SSO system which are relevant for this task:

- staged-rollout for the staged rollout managers.
- early-adopters-arc for ARC early adopter site administrators.
- early-adopters-glite for gLite early adopter site administrators.
- early-adopters-globus for Globus early adopter site administrators.
- early-adopters-opstools for operational tools early adopter site administrators.
- early-adopters-unicore for UNICORE early adopter site administrators.

Each early-adopters group has a corresponding mailing list hosted by the EGI Mailman synchronized with the SSO group.

A queue named "staged-rollout" has been created in the EGI RT system for this task.

The workflow of new software releases from certification by the providers until the final release to the production infrastructure was designed and discussed through the SA1 and SA2 activities and documented in milestone MS402 (see below).

The technical implementation and the details concerning the RT queue and the repositories which will hold the software packages, is currently under discussion

- **Early adopters.** The Early Adopter (EA) teams are key players including service administrators, operations staff, and/or managers of sites integrated in the EGI production infrastructure that volunteer to deploy a given SW component after the Verification phase, formerly performed by the CERN integration team and in the future by the EGI Technical Unit, before it's released for wide deployment. Two months before the start of EGI-InSPIRE, an inquiry was sent to all participants of the staged rollout process to assess the plans of each site for the EGI era. This also included a campaign to phase out the PPS infrastructure. Ten teams already contributing to EGEE PPS activities are now also contributing effort to EA activities in EGI.

  At the end of PQ1 26 EA teams are contributing to staged rollout. 23 of them contribute to staged rollout of gLite components, one to Globus, one to UNICORE and one to Nagios/SAM.
- **Meetings**. "Grid Operations Meeting" are held on a bi-weekly basis. These are targeted to SA1 staff, SA2 and NGI Operations Managers. Purpose of such meetings is to give information about:
  - Middleware components which are in the staged-rollout process or about to enter this stage.
  - Early Adopters, or request for new volunteers.
  - Deployment of operational tools.
  - Central Operations on Duty (COD) issues.
- **Coordination of interoperations between NGIs and with other Grids.** During PQ1 contacts points have been promoted and established, and activities have been carried out in the framework of the Infrastructure Policy Group (IPG) and the Production Grid Infrastructure Working Group (PGI-WG) within OGF (OGF 28 – Munich, and OGF 29 – Chicago).

2.2.3. Help desk and support teams

During PQ1 the support infrastructure has been adapting to the EGI model following the work already started in the last year of the EGEE-III project. It has involved new NGIs setting up their national support tools and processes, and transferring the operations for the former EGEE ROCs to these NGIs. A workflow for this was defined and used to migrate operations. New NGI support units were implemented for NGIs that have currently gone through this process: NGI_AEGIS, NGI_AT,

NGI_BY, NGI_CZ, NGI_DE, NGI_FRANCE, NGI_GRNET, NGI_HR, NGI_HU, NGI_IBERGRID, NGI_NDGF, NGI_NL, NGI_PL, NGI_SI, NGI_SK and NGI_TR.

With the July release of the GGUS Portal the first prototype of the GGUS NGI view (xGUS) was moved to production as the NGI-DE helpdesk. A second xGUS instance for NGI-AEGIS is currently under development.

A new workflow for middleware related issues has been discussed and principally agreed between EGI and EMI. The implementation work for this is on-going, as it needs the definition of various new support units for middleware components and a review of the existing ones.

Grid Operations and e-Infrastructure oversight.

Before the start of EGI-InSPIRE effort was devoted to insure a smooth transition as far as the oversight activity is concerned. In this preparation several issues were already dealt with beforehand.

The availability and reliability of sites in the grid infrastructure is monitored and safeguarded by ROD (Regional Operator on Duty) teams in different countries. This way a production quality grid infrastructure can be delivered to the EGI's user communities. The first EGI-InSPIRE ROD teams workshop was organised on June 1st and 2nd. The meeting gathered up 51 people from 18 countries. A considerable number of the people attending the workshop come from countries not involved in operations in the EGEE project and were new to the ROD work. There was two tutorial sessions intended especially for those new people to discuss the operational procedures and operational tools used by the ROD teams. Other sessions in the workshop included an overview from the COO of EGI, presentations on the Operations model and how NGIs are embracing this new structure, and presentations and discussions of tools used to monitor the resources. There was also a presentation on a new gLite middleware component called Argus which addresses consistent authorisation decisions for distributed services.

A new procedure has been created (and regularly updated) for the creation of an NGI in the operational infrastructure of EGI. Various NGI's have successfully completed the procedure and have are now fully operating in the EGI model of operations.

A first start is made on monitoring and interpreting of the availability and reliability metrics. A new procedure involving COD was created for getting explanations from sites for their figures if they fall below the OLA requirements. Within this procedure there is the option of suspending sites if they fall below minimum thresholds or do not sufficiently respond to inquiries about their low performance in this field.

First Line Support

Since the beginning of EGI the new TPM model with two teams is in place and activities consolidated during PQ1. The Italian and the German teams share the TPM effort in biweekly shifts[3].

During PQ1 726 tickets were handled by the TPM:

- May 2010: 199 tickets;
- June 2010: 265 tickets:
- July 2010: 262 tickets.

Of these, 58 tickets in total were solved by TPM directly. 158 tickets were assigned by the TPM to the responsible SU after more than one working hour, of which most were submitted after 16hrs UTC, before 8 hrs UTC or during week-ends i.e. between Friday 16hrs and the following Monday 8am

[3] The schedule is accessible here: https://gus.fzk.de/admin/tpm_list.php

(UTC). For the remaining tickets the reason for the delayed ticket assignment must be found out and appropriate action must be taken to reduce this number as much as possible.

Coordination of Network Support

The overall strategy for network support has been designed. It will focus on few general functionalities: troubleshooting on demand, light deployments, the deployment and further refinement of the tools developed within EGEE SA2: PerfSONAR-Lite-TSS, the Grid Jobs based Network monitoring approach and the DownCollector. It will also aim at building a unique contact point for NGIs around PERT-like network performance issues.

An initial poll for the NGIs has been included in the general EGEE poll for the NGIs, including initial general questions on network support by the NGIs and a request for providing contact persons to establish an EGI community on network support:

- 30 % of the NGIs have appointed a contact person for the network support.
- 50 % stated they will appoint someone in the next weeks.

2.2.4. Grid Management

TSA1.4 Deployment of operational tools. A mailing list was created in July 2010 (tool-admins at mailman.egi.eu) including all NGI operational tool administrators. This list currently includes 54 members and it is used to announce releases and distribute information, and to get technical support from the community. The new list replaces the previous EGEE list hosted at CERN (regional-nagios-admins at cern.ch).

The existing central instances of operational tools are being migrated to the egi.eu domain to phase out the EGEE domain gridops.org. The validity of the EGEE domain was recently extended for an additional year to allow for a graceful transition to egi.eu. Tools concerned by this transition are: ENOC and GStat (immediate transition), SAM and CIC portal (end of 2010) and GOCDB. Usage of dynamic DNS updates is under discussion[4].

Work started for the implementation of the monitoring framework needed to collect availability and reliability statistics for central tools. In particular, tool probes were identified and implementation work in ongoing. Finally, discussion on needs and mechanisms for operational tools failover configuration started. At the end of the EGEE-III project a dedicated Nagios box was installed at CERN[5] with the purpose of monitoring ActiveMQ Brokers and Nagios instances. CERN developed probes for monitoring these two services. CERN committed to run this instance during the EGI-InSPIRE. Other operational tools developers were requested to provide probes for monitoring their tools. Once the probes are provided, they will be integrated into the ops-monitor Nagios instance[6].

An analysis of failover configuration of centralized tools was performed[7].

At the end of the EGEE-III project two different versions of GOCDB were deployed in parallel: version 4 and version 3. The programmatic interface (PI) was swapped from version 3 to version 4 on July 13th 2010. Migration of the whole system is planned for the next quarter.

[4] https://rt.egi.eu/rt/Ticket/Display.html?id=187.
[5] https://ops-monitor.cern.ch/nagios.
[6] https://rt.egi.eu/rt/Ticket/Display.html?id=79.
[7] https://rt.egi.eu/rt/Ticket/Display.html?id=188.

ActiveMQ broker network consists of three brokers deployed in CERN, Croatia and Greece. Additional broker is deployed for the APEL needs. Integration of APEL with production broker network started during the first quarter[8].

SAM monitoring framework was redesigned during the EGEE-III project and the new version based on the Nagios monitoring framework was developed. The new version was completely distributed from the beginning. The deployment strategy assumed that each ROC/NGI runs its own instance, while the central instance collects results and provides: a centralized MyEGI portal[9] for accessing status and historical data[10], and availability calculation.

Before the end of the EGEE-III project 14 project Nagios instances were deployed at CERN. The role of a project instance was to emulate individual EGEE ROCs. The plan was for each ROC to deploy an own instance and start monitoring sites belonging to the region. CERN was in charge of validating ROC instances. During PQ1 ROC Nagios administrators haven been in charge of performing validation of the NGI Nagios services for countries that belong to the ROC.

The old SAM submission framework was decommissioned on June 23th 2010, and the centralized portal is available at the following address (https://grid-monitoring.egi.eu/myegee/). Currently there are 24 Nagios services in production.

Type of Nagios	Number of instances	NGIs/ROCs	Number of EGI partners covered
NGI	11	Belarus, Czech, France, Germany, Greece, Hungary, Serbia, Slovakia, Slovenia, Poland, Turkey	11
ROC	8	CentralEurope, GermanySwitzerland, IGALC, Italy, Latin America, NorthernEurope, SouthEasternEurope, UKI	27
Project	5	AsiaPacific, CERN, Canada, Russia, SouthWesternEurope	5

The table above provides details (more information can be found at: *https://twiki.cern.ch/twiki/bin/view/EGEE/ExternalROCNagios*). The following Nagios servers are in various stages of validation: five NGI instances covering 14 EGI partners: Canada, Croatia, IBERGRID, NDGF, NGI_NL; and two ROC instances covering AsiaPacific and Russia.

The operations portal released the regionalized version on June 8th 2010. At the end of PQ1 two NGIs deployed and validated the regionalized version of the tool (NGI_CZ and NGI_GRNET). Ibergrid is still in the process of validating it. The centralized operations portal is accessible at: *http://operations-portal.in2p3.fr*, while the historical one is at *http://cic.gridops.org*, and it will be phased out by the end of the year.

Finally, the web portal with network tools for troubleshooting and monitoring[11] was migrated to GARR (Italy), together with the network availability monitoring tool (DownCollector) – developed in

[8] https://rt.egi.eu/rt/Ticket/Display.html?id=76.
[9] https://grid-monitoring.egi.eu/myegee/
[10] https://grid-monitoring.cern.ch/myegee.
[11] http://eginet.garr.it.

the framework of the EGEE-III SA2 activity. Developers of the PerfSONAR-Lite_TSS tool have been contacted and a strategy for the further development of perfSONAR-Lite_TSS is being discussed among GARR, CNRS, UREC and DFN. Similarly, developers of the Grid Job based approach to network monitoring have been contacted and a strategy on how to move on is currently under discussion.

TSA1.5 Accounting. The release to production of the APEL ActiveMQ client in early June meant the APEL server was ready to accept records through the new architecture. The migration of existing clients will start in PQ2.

As to the accounting portal, the main improvements have been the porting to GOCDBPI-V4 to adapt to the upcoming phasing out of GOCDB3, and views and reports for WLCG Tier2 sites were enhanced. The initial version of the regionalized accounting portal is already available for deployment. Currently several NGIs (Germany, Portugal and Spain) have expressed their interest in deploying a regional instance of the regional portal. The regionalisation plans as well as the general accounting portal development plans for the first year were defined and documented in "MS703 Operational Tools regionalisation work plan". A dedicated GGUS SU has been created to provide specific support about the accounting portal.

TSA1.8 Core services and availability. The goal of TSA1.8 is to ensure that sites, operational and middleware services are functional, reliable, and responsive by providing Core Software Services, Interoperability, and the continual refinement of best practice policy and procedures to achieve this. During QR1 this has focused on assessing the current Operational Level Agreements (OLAs)[12] and on working towards an extension of them. For a smooth transition from the EGEE era, the EGEE Service Level Agreement[13] was used as starting reference point. The EGEE SLA document was updated to produce an EGI OLA document covering all the agreed and adopted practices. In parallel, a new process has been defined for managing the monthly availability and reliability statistics[14]. In order to solicit feedback from the NGIs regarding the existing OLA and the need for expanding the OLA to other services, a questionnaire[15] was circulated to NGI operations managers. An OLA workshop will take place during the EGI Technical Forum.

In PQ1 EUGridPMA accredited the SEE-GRID CA in order to provide EGI Catch All CA Services. The current network of Registration Authorities covers Albania, Azerbaijan, Bosnia – Herzegovina and Georgia.

A WMS and a MyProxy service – for the EGI Nagios Security Monitoring tool – were installed and entered production. In parallel a new VOMS/VOMRS server has been setup in order to host the DTEAM VO. Data from the VOMS server at CERN is currently under migration to the new VOMS server hosted at AUTH.

A set of wiki pages[16] was created to providing pointers to documentation and best practices that are relevant to EGI operations at different levels: site, NGI and EGI.

[12] https://documents.egi.eu/public/ShowDocument?docid=31.
[13] https://edms.cern.ch/document/860386.
[14] https://wiki.egi.eu/wiki/Availability_and_reliability_monthly_statistics.
[15] https://documents.egi.eu/public/ShowDocument?docid=58.
[16] https://wiki.egi.eu/wiki/Operations:OD.

2.2.5. Tools

The development and maintenance of the supported operational tools were described in MS702. The JRA1 activity is also responsible for providing support to the integration of the tools with the message broker network run by EGI. Effort in PQ1 concentrated on setting up the activity, including the creation of groups, mailing lists, activity wiki space and RT queues on the EGI services, Collection of the staff details for the PPT, activity metrics, and the organisation of the JRA1 meetings: face to face kickoff and of the periodic (every two week) JRA1 phone conferences. The activity has contributed or edited the following milestones:

- MS701: CIC Operations Portal Workplan
- MS702: Establishing the Operational Tool Product teams.
- MS703: Operational Tools regionalisation workplan
- MS704: Roadmap for the maintenance and development of the deployed operational tools,

During PQ1 all the tools started work on creating probes for a central Nagios to monitor availability of the operational tools in tight collaboration with SA1. Progress tracked on the RT system: https://rt.egi.eu/rt/Ticket/Display.html?id=79 (and all its child tickets). A set up of new mailing list for operational tools (mailing list of emails/aliases/mailing lists) were established.

2.2.5.1. Operation Portal

The Regional Package (released on June 8th) it is an operation portal deployable on the NGI instances.

After three weeks of testing ending in mid-July the instances hosted in NGI_GRENET and NGI_CZ are operating successfully in production mode. These instances are synchronized with the central one IBERGRID NGI regional instance is being set-up, status is in progress. Further details are provided in Started the porting to Symfony of some modules within the portal. Worked on the definition of the detailed roadmap for the tool (MS701)

2.2.5.2. GOCDB

The GOCDB4 release plan has been established, details of which can be found at: https://www.egi.eu/indico/getFile.py/access?contribId=2&resId=0&materialId=0&confId=63

1. Swap all GOCDBPI URLs to point to GOCDB4 only
2. Release the frontend GOCDB4 input web portal

During PQ1 step 1 was completed following a large-scale production test after having verified that compatibility issues were solved (https://gus.fzk.de/ws/ticket_info.php?ticket=59146 and https://www.egi.eu/indico/getFile.py/access?contribId=2&resId=1&materialId=0&confId=63).

Overloading issues were found during the first hours of the test and promptly solved by the developers. No further issues were found in the following days and the large scale was test successfully passed and the GOCDB4 API is now permanently in production.

Step 2 will be performed during the next quarter.

2.2.5.3. EGI Helpdesk (GGUS)

Three GGUS minor releases were performed during PQ1, one per month.

https://gus.fzk.de/pages/releasenotes/release2010-05-19.html

https://gus.fzk.de/pages/releasenotes/release2010-06-23.html

https://gus.fzk.de/pages/releasenotes/release2010-07-21.html

Main achievements:

- Regional view (xGUS) in production for NGI-DE since July. This is a prototype to be evaluated by other NGIs.
- GGUS redesign: With the end of EGEE and the start of EGI the GGUS website will get a new logo and a new style sheet. Along with the trend of decreasing height/width ratio of modern monitors (less height, more width) the navigation bar will be moved from the top to the left of each web page. That way more space for the content will be available.

2.2.5.4. Accounting Repository

Worked on the integration of the APEL system with the message broker network as the ActiveMQ based APEL server has been consolidated to a production level to accept and process records through the newly released glite-APEL client

2.2.5.5. Accounting Portal

Work performed to support GOCDBPI-V4. Tier2 report updated and several issues solved. An issue was corrected relating to duplicated accounting records when the same site appears under two different federations in the Tier2 view.

2.2.5.6. Service Availability Monitor

Three releases of the system during the quarter: NAGIOS-update 1/2/3. Details and release notes can be found in the CERN JIRA task tracker:

https://tomtools.cern.ch/jira/browse/SAM/fixforversion/10027

https://tomtools.cern.ch/jira/browse/SAM/fixforversion/10044

https://tomtools.cern.ch/jira/browse/SAM/fixforversion/10046

Regionalization activity still ongoing and tracked on the following wiki page:

https://twiki.cern.ch/twiki/bin/view/EGEE/ExternalROCNagios

Created the procedure to validate an NGI NAGIOS box, available at this wiki page:

https://twiki.cern.ch/twiki/bin/view/EGEE/ValidateROCNagios

Starting from NAGIOS-update2 in conjunction with SA1/SA2 and following the procedure described in MS402 RT tickets were opened in order to have the Staged Rollout of operational tools in place.Broker-Update-2 was released and included the two new features to meet the APEL broker requirements in the EGI message broker network:

- Addition of GOCDB support to activemq-voms2users (https://tomtools.cern.ch/jira/browse/MIG-112)
- Addition of group support for to activemq-voms2users (https://tomtools.cern.ch/jira/browse/MIG-118)

2.2.5.7. Metrics Portal

Sensors updated to support GSTAT2.

2.3. Issues and Mitigation

2.3.1. Issue 1: General NGI Issues

Integration of EGI and regional resources. In this transition phase, not all national resources are always ready for integration with EGI. Some NGIs (such as IBERGRID and Romania) need the existing operational tools to ease the management tasks for such regional resources, which need to coexist with EGI ones in this transient phase.

MITIGATION. This requirement will be provided to JRA1.

Availability/reliability calculation algorithm. The algorithm for the calculation of availability/reliability statistics needs to be refined, as it does not take into account the certification time for a site. Site/NGI availability/reliability monthly statistics are penalized in this transition phase, were many NGIs and new sites are under certification. The current algorithm gives origin to two different situations: (a) if a site was certified on the middle of the month, the normalization of the Availability/Reliability metrics is incorrect since the whole month is considered, (b) if a site was certified on day 1 of month X, and the Availability / Reliability computation (for month X-1) is triggered on the same day, that site will appear on the report of month X-1 with a 0% value. MITIGATION. The availability/reliability calculation engine development plan will be discussed with JRA1 and the relevant WLCG partners.

Better integration of ARC-CE resources in the operational tools. Better integration of ARC-CE resources in the operational tools such as Gridmap, is needed for a correct display of installed capacity.

Middleware issues. Some unreliability issues in glite3.2 middleware affecting Top BDII have been reported. This is tracked in GGUS Tickets.

Information flow in case of middleware bugs. Information flow concerning middleware bugs is considered to be unsatisfactory by the French NGI: feedback given back to sites about long standing middleware issues recorded initially in GGUS (that are subsequently taken to other tracking tools) is quasi-nonexistent at the moment.

MITIGATION. The Deployed Middleware Support Unit is responsible of monitoring the progress of patches requested upon notification of middleware issues by liaising with middleware providers. At the bi-weekly operations meetings DMSU is invited to participate and update partners on progress. The DMSU is a new entity in EGI-InSPIRE and needs to be advertised to partners in such a way that middleware issues are always notified and tracked according to the new communication channels that have been put in place.

Better automation of site certification procedures. The procedures for site certification need to be streamlined in order to simplify the various steps, from site registration to certification. Operational tools need to be assist site managers and should be extended to automate this procedure. MITIGATION. This requirement will be discussed with the JRA1 partners.

No standard certification procedure. There is not a standard procedure to certify a site. MITIGATION. TSA1.8 with the collaboration of a few NGIs will draft a site certification procedure during PQ2.

Accounting enforcement. At the moment a APEL Nagios probe is missing, so there is no mechanism to automatically enforce the publishing of accounting records from when SAM was replaced by Nagios.

MITIGATION. JRA1 was notified about the need of an APEL Nagios probe to automatically raise operational alarms. The respective Product Team is working towards this.

Hiring of new personnel. Hiring of new personnel is still ongoing in many NGIs. This has slowed down plans.

MITIGATION. The project negotiation and setup are now almost completed and NGIs are in a better position to complete hiring procedures.

2.3.2. Issue 2: Lack of early adopter sites for a few gLite3.1 components

Although the number of EAs for gLite components more than doubled since the beginning of the project, there are still widely used components (like the gLite 3.1 UI, WN, DPM) that do not have volunteer sites for the staged rollout process. The issue is that new versions of these components are released into the production infrastructure without the staged rollout test.

MITIGATION: a survey will be conducted to collect plans of migration from gLite 3.1 to gLite 3.2 to assess the real impact of gLite 3.1 UI, WN and DPM components.

2.3.3. Issue 3: Slow responsiveness of some early adopters

It can happen that EA teams are unresponsive to staged rollout notifications, or answer too late. This leads either to delays to the release process, or then again to the release of components without the staged rollout test.

MITIGATION: production sites and NGI's will be made increasingly aware about the importance of the staged rollout process. A session will be dedicated to staged rollout at the first EGI Technical Forum to discuss, and to request sites to be more pro-active.

2.3.4. Issue 4: Lack of input for Grid interoperations

Interoperation activities greatly depend on the plans of individual NGIs in integrating novel resources and deploy different middleware stacks. So it is important that NGIs provide input about their individual plans. Unfortunately, only a few NGIs have provided any input so far.

MITIGATION: interoperation activities will start focusing on ARC, UNICORE and gLite operational interoperability issues concerning accounting and monitoring. Sessions covering different aspects of interoperation are scheduled at the first EGI Technical Forum, and these will be good opportunities to meet NGI representatives.

2.3.5. Issue 5: Network monitoring tools

Network monitoring tools that were developed in the framework of SA2 in the EGEE-III project require maintenance and need to be further developed to either integrate them within the EGI overall monitoring framework, or to consolidate the existing functionality.

MITIGATION: discussions with the developers' teams are ongoing to ensure commitment and assess the future tool sustainability.

2.3.6. Issue 6: APEL message passing infrastructure

APEL's use of the message passing infrastructure requires authorisation. This still needs to be deployed in the production messaging infrastructure used for monitoring.

MITIGATION: a plan was defined for the deployment of a single extended message passing infrastructure.

2.3.7. Issue 7: Missing input from advisory bodies

The USAG and the OTAG, the main advisory bodies for the Helpdesk activity have not yet started providing input on which a detailed development and release planning could be based.

MITIGATION: the USAG and OTAG Terms of References were defined at the end of PQ1, this giving the possibility to proceed with the definition of the respective membership, and with the kickoff of activities starting from PQ2.

2.3.8. Issue 8: Network support

There is a general issue related to the level of involvement and participation by the NGIs around Network Support, as witnessed by the outcome of the survey conducted at the end of EGEE-III.

MITIGATION: NGIs will be contacted to consolidate their engagement in network support during the first EGI Technical Forum.

2.3.9. Issue 9: Lack of feedback regarding the OLAs

The feedback received so far from NGI Operations Managers about how OLAs might evolve in the coming months has been poor so far.

MITIGATION: A questionnaire was distributed in July to gather input in a structured way. The deadline for submission of input is end of August. The feedback received will be discussed during the OLA workshop at the first EGI Technical Forum.

2.3.10. Issue 10: Contribution of NGIs to procedures and best practices

The effort at the EGI level is only sufficient for managing the process. The actual effort for providing input to new procedures, and maintaining existing documentation has to come from the NGIs.

MITIGATION: existing procedures and best practices will be regularly checked by the partner responsible of coordinating this in EGI-InSPIRE to ensure that these are always up to date and easily accessible from the EGI wiki. New procedures and best practices will be drafted with the contribution of a few NGIs depending on the NGI expertise, while the coordinating partner will be responsible of overlooking the overall process from the creation of the first draft to the final approval stage.

2.3.11. Issue 11: Migration of VOMS server

Catch-all VOMS service will be provided by EGI, and the VOMS service will rely on a MySQL backend. Unfortunately the current catch-all VOMS service hosted at CERN relies on a Oracle backend, this making the import of data into the new one very complex.

MITIGATION: in order to re resolve this data will be imported using the CERN VOMS service programmatic interface. This process is ongoing and we expect it to complete at the end of August 2010.

2.3.12. Issue 12: Operational Tool Requirements

A common, standardized way to get prioritized requirements for all the tools is still not in place, but strongly needed by all the development teams. The Operational Tool Advisory Group (OTAG) should provide the prioritized table of requirements. Starting the OTAG in PQ2 will mitigate the issue.

2.4. Plans for the next quarter

2.4.1. Infrastructure

2.4.1.1. TSA1.2 Operational security

The EGI SVG will establish contact details with new parties, including third-party software providers. In PQ2 security monitoring will be prioritised. In addition, the second phase of Security Service Challenge 4 will be discussed. EGI CSIRT will continue improving their internal procedures such as risk assessment. Further collaboration on incident response with peer grids and related projects will be formally defined and implemented. A face to face meeting with security officers from OSG, TeraGrid and WLCG security officer will be hold at the EGI Technical Forum. The EGI CSIRT is organizing a security training session at EGI Technical Forum. Handling of security issues is an ongoing activity, which will continue in PQ2. EGI CSIRT and SVG will present their activities at EGI Technical forum. The first EGI CSIRT face-to-face meeting will be held at EGI technical forum as well.

2.4.1.2. TSA1.3: Software deployment into the production infrastructure

In PQ2 the first prototype of the RT queue "staged-rollout" fully integrated with other support tools will be released for an automated software rollout workflow implementation. Additional 'early adopter' sites will be recruited to provide full cover of the all the products requiring staged rollout.

The EGI IGTF Release Process currently under discussion, is expected to be finalized and implemented in PQ2. Further tuning is expected in the following months. Related to this a new EGI SSO group called early-adopters-ca for the Early Adopters of new releases of the CA packages, will be created.

Interoperability sessions have been planned and organized in the framework of the upcoming EGI Technical Forum.

2.4.1.3. TSA1.3: Coordination of interoperations between NGIs and with other Grids

Work continues to get a comprehensive overview of the current status of how the operational tools will integrate with other middlewares. A special focus will be laid on defining and improving the procedures and the operational activities allowing the NGIs to interwork.

2.4.1.4. TSA1.4 Operational tool deployment

During PQ2 the migration of remaining addresses from the gridops.org domain to egi.eu will continue (this including the migration of the network support portal[17]) and the implementation of dynamic DNS updates for failover tool configurations under the egi.eu domain will be discussed.

The development of probes for monitoring operational tools and integration into ops-monitor Nagios instance will continue. The implementation of failover configuration of centralized tools, especially after implementation of dynamic DNS on the egi.eu domain, will start where applicable.

The deployment and validation of remaining regional and NGI Nagios services will be finalised. Deployment plans of the remaining NGIs are as follows:

- 9 NGIs from South East Europe will be established in the coming 6 months: Albania, Azerbejstan, Bosnia and Herzegovina, Cyprus, Georgia, Macedonia, Moldova, Montenegro and Romania

[17] http://net.egi.eu.

- 3 NGIs from South East Europe will be established by October 1st 2010: Armenia, Bulgaria and Israel.
- Switzerland NGI will be monitored by the German NGI instance
- UK and Ireland plan to start the creation of independent NGIs by the end of 2010.

The development and deployment of tools for network monitoring and support will continue, this including the perfSONAR-Lite TSS Troubleshooting Service. The integration with the regionalised Nagios tool will be investigated, and the workflows for network scheduled downtimes reporting will be defined.

2.4.1.5. TSA1.5 Accounting

A workshop on accounting is planned for the EGI Technical Forum. This will gather requirements for accounting plans in SA1, JRA1, and EMI as well as reporting on the short-term roadmaps

During PQ2 the progress of the transition to the new APEL client using messaging will be assessed and a plan defined for PQ2 and the following quarters according to the results of PQ1.

The accounting portal installation scripts will be improved making it easier to deploy the tool by NGIs. 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 regionalized instance of the tool being deployed Germany, Portugal and Spain.

2.4.1.6. TSA 1.6 Helpdesk

Helpdesk-workflows for project-wide support areas like community and application support, network support and others need to be defined to enable the full operation of the central helpdesk.

The advisory bodies (USAG) need to be established and their feedback channelled towards the helpdesk activity.

Quality assurance procedures and criteria for the helpdesk activity need to be set-up and the technical means to evaluate the functioning of the system need to be provided. This needs to be done in close collaboration with TSA1.7.

The adaptation process of the helpdesk infrastructure to the EGI model is an ongoing effort. New NGI will continue to join for at least the next quarter.

A thorough review of the support units will be performed to clean up the legacy support units and transfer the effort to the actual support units.

2.4.1.7. TSA1.7 Support

Grid Operations and e-Infrastructure oversight is an ongoing activity and no major changes are expected. COD escalation procedures, whose revision already started in PQ1, will be redefined and new procedures will be discussed within OMB for approval.

The changes in operational tools used in the EGI project, especially the change to Nagios, will also require the COD to adapt and formulate new requirements on the operational tools.

The migration of ROCs to NGIs is an ongoing activity that will continue in PQ2. COD will be responsible of the validation of NGIs that do not formally belong to a legacy EGEE ROC.

A procedure will be drafted and discussed for the phasing out of a ROC to cope with the case of a ROC which closes its operations and handles all sites to their respective new NGI's.

The overall responses to the EGEE poll on network support will be collected in an initial document on Network Support for EGI. Required mailing lists will be set up, including all required contact persons for Network Support within EGI.

Similarly further procedures related to network support will have to be jointly agreed for a better integration with the NREN PERT service.

A ROD Forum F2F meeting is planned during the EGI Technical Forum in September 2010.

2.4.1.8. TSA 1.8 Core Services and Reliability

The transition of the DTEAM VO from CERN to AUTH will be completed. The feedback gathered through the OLA questionnaire will be processed for extending existing OLAs and introducing new ones. The ROC decommissioning procedure and site certification procedure will be drafted and discussed for approval. An OLA workshop will take place during the EGI Technical Forum.

2.4.2. Tools

All tools will continue the work to create probes for a central NAGIOS to monitor availability of the operational tools. In tight collaboration with SA1:

1. Failover configuration of centralized tools (https://rt.egi.eu/rt/Ticket/Display.html?id=188)
2. Integration of the operational tools probes into a tool Availability monitor NAGIOS based
3. Migration to egi.eu domain for all the centralized tools (https://rt.egi.eu/rt/Ticket/Display.html?id=187)

More generally start the work of the OTAG group in order to collect and prioritize development requirements and to finish organizing and preparing for the operational tools section at the EGI Technical Forum 2010. Other work planned for the next quarter includes:

- Completing the SAM regionalization – a few regions are still missing: Canada, Asia Pacific and Russia.
- Support the regional installation of the Operation Portal for the interested NGIs.
- Collaboration with SA1 to have a fully operation staged rollout process for the regional operation tool.

2.4.2.1. Operations Portal

The migration of modules to Symfony will continue and should be completed by the end of the calendar year

VO ID CARD: Agreement on the validation of the work flows and procedures for the VO ID card foreseen for mid-August. New VO ID card features for end of August will include:

- New “look and feel” of the features revisited for EGI scope
- The integration of new work-flows including :
  - yearly registration renewal
  - workflow for VO deregistration

Enhancements of the current features will be provided:

- Distribution of available resources on a per VO basis through a synoptic browser showing the geographical distribution of the resources for a given VO (e.g. CPU, Storage or Services).
- All global Information per VO available under several format HTML , RSS or XML
- Statistics and metrics according to EGI needs
- Notifications on demand about changes on the VO ID Cards.

Broadcast tool: Due in August, the next release will have the new EGI "look and feel" but same principle:

- Select different targets (VO Managers, Site managers, ngi managers, ...)
- Send a email to all targets

What's new:

- Define your own list of targets
- Define your own predefined categories (template + list)
- Add an attachment to the mail

Notification system and PI: Start the development of new Notifications system and API. Its release due in December 2010 will include:

- Migrate all the system under Symfony and a Mysql DB .
- Generalize the RSS system
- Propose more information available through REST operations: VO , downtimes , resources
- Extend the proposed format from XML to JSON or notifications via ActiveMQ.

The aim is to provide a panel of services usable by external applications.

2.4.2.2. GOCDB

Continue the release to production of GOCDB4 in August 2010 with new releases for the GOCDB4 input system and central instance, and the decommissioning of GOCDB3 when GOCDB4 enters into full production. Work will continue on improving the regional package to reach production quality.

Work on user requests for improvement of the tool as listed in GOCDB savannah tracker at https://savannah.cern.ch/task/?group=gocdb. Work will also start on the following issues:

- Support GOCDB4 regional module rollout
- Improvement of the failover system and backend replication (in conjunction with sa1)
- Provide a MySQL version of regional GOCDB4
- Data access optimization
- Extend WS and programmatic interfaces

2.4.2.3. EGI Helpdesk

No release during August, the next one will be in September.

The regional view (xGUS) is available for NGI-DE since July. It has been advertised to the NGIs. A proposal demonstration of xGUS at the EGI Technical Forum has been submitted.

Finalization of the automation of the GGUS - VOMS synchronization: GGUS is notified on every update of the VOMS roles for teamer and alarmers. Up to now manual intervention is necessary to update the GGUS user database with the current users' properties. A script will be implemented as a step towards full automation regarding the VOMS – GGUS synchronization.

Report generator enhancements: New type of reports will be implemented, currently requested is the report "Response time per SU".

Review of support units: reorganise support units to fit the EGI model, adapt or remove legacy support units from EGEE.

Review of documentation: Update and adapt GGUS documentation to fit the EGI model and purpose.

2.4.2.4. Accounting Repository

Finalize the move to production of the ActiveMQ based APEL system

Will work on:

- Consolidation of central accounting server:
  - Regular developments and maintenance
  - Interfaces standardization
- Regular developments and maintenance:
  - Support deployment of glite-APEL
  - Bug fixing
  - Regular development tasks to follow gLite evolution
- Interfaces standardization:
  - Extend AMQ publishing to summaries

2.4.2.5. Accounting Portal

Next release planned for December will include:

- Regional accounting portal
  - Improved installation support
  - GOCDBPI-V4 support
- Central accounting portal
  - NGI View V1

2.4.2.6. Service Availability Monitor

The first release for this quarter is foreseen for the end of August with ongoing development for:

NCG component:

- Integration with new MDDB
- Configuration caching
- Multiple checks for single metric

MyEGI component:

Continuing the developing work needed by the following goals, to be completed by the end of the first year of the project:

- Be adapted to a new pluggable framework
- Provide EGI-specific NGI views
- Be the place to see availability, reliability and service status
- Add 'GridMap style' TreeMap views

Broker component:

– Finalize the configuration for the integration of APEL in EGI PROD broker network

2.4.2.7. Metrics Portal

Working on the new release (due in December, 2010) with associated functionalities:

- New metrics and update access protocols to data providers
- Support for changes in the data providers
- Support for new data providers

3. USER SUPPORT

3.1. Summary

The main focus and achievement for user support during PQ1 has been to bring all of the elements involved together and to ensure that all of the technical services are at least available. The EGI website provides a rudimentary mechanism for delivering these services and also provides at least minimal information to guide users toward them. All of the technical services have been rebranded as EGI and have been migrated to servers under the control of EGI partners who are beneficiaries of NA3. Broader oversight of the user support process will be ensured through the establishment of the User Support Advisory Group and the User Community Board in conjunction with the NA3 team and the other various management boards within EGI. Draft Terms of Reference for the USAG and UCB have been prepared and we anticipate that they will come into existence early in PQ2.

The user support team in Amsterdam now numbers three and will reach four during the next quarter. Weekly meetings have commenced as well as fortnightly ones for the distributed team of task and sub-task leaders. This team also meets face to face periodically at meetings including the forthcoming EG Technical Forum.

The EGI Virtual Research Community accreditation process is described in the Deliverable D3.1 User Community Support Process. Considerable initial work has been done on refining this process and also on identifying potential candidate VRCs. This has included attending events such as ESFRI meetings in Brussels and the HealthGrid meeting in Paris. It is planned that the first two or three VRCs will sign MOUs early in the next quarter.

The key goals for NA3 for the next quarter are to sign MOUs with at least 2 VRCs and to complete a full revision cycle of evaluating and redesigning the full User Support process including the web-based resources as part of what is an ongoing process.

Support for the Heavy User Community has focused on identifying and hiring appropriate manpower, setting up internal wiki and other documentation pages and mailing lists and completing the initial milestones and first deliverable. All of these are directly related to user support as they describe respectively the contact points, the software roadmap, services for HEP and LS and finally capabilities offered by the HUCs to other communities. As part of the latter support for two new VOs was established – EnviroGRIDS (ES) and ILC (HEP) – the details of which are now documented and have been tested. Ongoing support for HEP and other communities has continued, particularly in this critical first extended physics run of the Large Hadron Collider. Whilst this has included effort beyond EGI-InSPIRE, SA3 personnel hold key roles in this support activity (WLCG Service Coordination and Operations).

3.2. Main achievements

3.2.1. User Community Support Team

The user support team at EGI.eu now numbers three and will reach four during the next quarter. Weekly meetings have commenced as well as fortnightly ones for the distributed team of task and sub-task leaders. This team also meets face to face periodically at meetings including the forthcoming Technical Forum.

The focus for the next quarter includes a plan for ramping up attendance at events hosted by different disciplines. Now that the team is growing we can spread this load and cover a range of contact points with a view to formally accrediting VRCs.

There is also much work to do in reefing the process whereby the support services including the web pages and wiki for the distributed support team will evolve and continue to meet users' needs.

LIP organised a face-to-face meeting with researchers from the Portuguese Civil Engineering Laboratory that which to setup an oceanographic VO for research related with the evolution of maritime coastal areas. This VO is of potential interests to researchers in other countries where similar research is being conducted. Gather requirements and discuss the possibility and scenarios for creating a VO backed up by services and NGI resources based in Portugal, including the integration of the Portuguese Civil Engineering Laboratory parallel computing cluster. A face-to-face meeting with the grid user communities of the University of Minho, University of Porto and University of Aveiro in Portugal was also organised to present and discuss the transition of operations and user support to the EGI model. This affects mostly the users of the CYCLOPS and BIOMED international VOs in these Universities, together with international users supported by old EGEE SWE generic VO which will have to migrate to other VOs.

3.2.2. User Support Services

All five technical services described in the DoW were established during the first quarter as required and linked from the main EGI website. These pages are rudimentary but do maintain continuity with EGEE. The pages are delivered from a content management system (CMS) and therefore it has not been possible to integrate the constituent applications within the system other than as links embedded within pages. The intention is that this integration will be rendered more seamless as the website evolves.

The status and achievements associated with the five technical services are described below:

1) Training Events

UE: The EGEE training support services have been migrated from the EGEE web site to the EGI web site. In order to support this process, and to make the services robust to expected short term modifications to the EGI web site, the front-ends for the services have been minimally re-factored during the migration process and are described in MS30X

2) Training Repository (materials and trainers)

The Training Materials repository provides access to a digital library which holds all forms of training related materials. This acts as a resource allowing trainers to share, find and re-purpose materials. The

Trainers information repository holds information about trainers across the EGI area. This allows trainers to contact each other and solicit expertise to help support training.

These services were migrated to the EGI web site, providing the same functionality as under EGEE.

3) Applications Database (AppDB)

IASA: The EGEE ported applications database is hosted by IASA and has been rebranded under EGI. The application can be found at: http://appdb.egi.eu/ and there is a link to this from the Support pages from the EGI website. The following screen shot illustrates the site rebranded under the current EGI theme. This process and the future plans for the database are described in the milestone document: MS303. The executive summary of this report is as follows:

The EGI Applications Database (henceforth also referred to as AppDB in this document) is the descendant of the EGEE Applications Registry portal, which was initially developed by the IASA regional coordination team during the course of the EGEE-III project. It provides a catalogue of applications that have been ported, or are being ported, within the infrastructure. As such it enables

new communities to discover and reuse EGI applications, thus avoiding duplication of effort. By the reuse of ported applications one of the main barriers of grid adoption is eliminated.

At the time of writing, the first release of the EGI Applications Database portal is in production, and it provides read-only access to the hosted applications and people data.

4) VO Services

EGI.eu currently offers registration and VOMS hosting services for new VOs. This is a minimal set that is required by new communities to establish VOs on the grid. The activity will broaden this list with monitoring and other central services in the next quarter and establish the GGUS support mechanism for the new types of services.

The selection of which VO services are to be maintained and offered will be made and monitored through USAG. So far the Terms of References for the User Services Advisory Group (USAG) and User Community Board (UCB) have been written but have yet to be ratified. Once this has happened, the two groups will commence meeting. The effort for all of the above will come from the EGI effort. NGI effort is minimal and will offer only small amounts of supplementary help for these activities as required.

The role of NA3 with respect to VO Services is to monitor and ensure that they continue running and are well supported and utilised. Additionally, NA3 will ensure that the services evolve in such a manner as to meet the needs of new communities as they engage with the infrastructure. This process is defined in the Deliverable D3.1 User Community Support Process. Work to date has mainly comprised developing the organisational processes and relationships required to facilitate this configuration for EGI's VO services.

3.3. NGI User Support Teams

EGI.eu: Much of the work here involved bringing the distributed team of NGI support staff into the new post-EGEE process. This focussed on identifying contact points and establishing communication channels.

LIP: Prepare the IBERGRID wiki and start populating it with EGI information relevant at regional level for the Portuguese and Spanish users and sites. This includes mostly transition information and plans. Materials were prepared and a grid training session organised for end-users focused on accessing computing resources in the grid environment for sequential and MPI jobs. The training session was organized in the context of the IBERGRID conference, held in Braga, Portugal in May 2010. Orientation was also provided for new potential users interested in performing simulations in the life sciences domains both for GEANT4 and protein docking that wish to join international VOs

3.4. Shared Services& Tools

3.4.1.1. Dashboards

Among the most important directions of work are the following:

- a redesign of the job monitoring applications;
- the development of a new site usability portal, based on the results of the remote tests submitted through the Service Availability Monitoring (SAM) system.

In the first quarter, the new job monitoring system was enabled for ATLAS jobs submitted via GANGA to WMS.

This included:

- modification of the job monitoring schema;
- instrumentation of jobs generated with GANGA and of the GANGA client. This instrumentation enables reporting of job status information via the Messaging System for the Grids (MSG);
- development of the Dashboard collectors for consuming information from the MSG;
- adapting existing user interfaces to the new schema.

Development of the new user interface for the analysis users is in progress.

The Site Usability Portal is used by the LHC VOs for evaluating from their perspective the quality of the site and services hosted by the site. The LHC VOs submit remote tests that can simulate production or analysis activity or check a particular functionality of the distributed services. The original SAM system, which is currently used by the LHC VOs, was redesigned using the Nagios open-source framework for monitoring network hosts and services. In order to realign with the very important changes in the SAM architecture, the new Site Usability Portal is being developed. The deployment of the first prototype for pilot users is currently in preparation.

3.4.1.2. Tools

Ganga & Related Tools: During this quarter there was no funded effort to work in this area – a board was held in late June at CERN and a candidate selected to start in October 2010. Ganga continued to be heavily used by both ATLAS and LHCb experiments, as well as by related projects, such as the Earth Science project EnviroGRIDS and the Life Science projects PARTNER and ULICE.

Hammercloud – a Ganga-based tool inspired by the CMS JobRobot – is a distributed analysis stress testing system built. It was motivated by a requirement from the ATLAS collaboration for site- and central-managers to easily test a set of grid sites with an arbitrarily large number of real analysis jobs. These tests are useful during site commissioning to validate and tune site configurations, and also during normal site operations to periodically benchmark the site performance. HammerCloud generates a test report including metrics such as the event processing rate, the mean CPU utilization, and timings related to various stages of the user analysis jobs. The report is presented in a web-interface that makes it simple to compare sites and observe trends over time. The system has been used by the ATLAS experiment to run greater than 200,000 CPU-days of test analyses. HammerCloud is implemented as a Django web application, with state maintained in a MySQL database and job management built around Ganga in python. Jobs can be submitted to WLCG sites using the gLite UI and to all ATLAS sites using PanDA. Prototype plugins for the CMS and LHCb experiments are in development.

Ganga release 5.5.8 (end of June).

- General improvements: Timeouts to handle gracefully "hanging" glite job submit commands
- ATLAS: improved handling of DQ2 datasets (including sanitizing the dataset names) and improved Panda client
- LHCb: T1 sites are now excluded by default for user jobs that do not have any input data (experiment request). This is to help avoid overloading these sites. Added more flexibility with the user choice of SE for output data storage.
- Ganga and user support: the new plug-ins to help user support is in use by ATLAS. Users can automatically capture the status of a user session and upload it in a repository for the support team to browse it via a web interface. CMS is interested and look forward to evaluate it.

DIANE is a tool for managing very large number of small tasks (typically for parametric study). In comparison with the built-in parametric support in gLite, DIANE can significantly reduce the overhead, improve execution time and provide partially fault tolerance. DIANE uses GANGA as execution backend.

In this quarter, support for using DIANE was continued from EGEE III for applications from Astrophysics and Astronomy. Requirements from users are also being collected and analyzed which will be used for tool improvement and adaption for application requirement.

3.4.1.3. Services

GRelC (Grid Relational Catalogue) is a Grid database access and integration service. In the first quarter one person has been hired to start working on the tasks related to the GRelC service. In particular a system database to support the management and monitoring framework of the GRelC services network has been designed and implemented.

The main subtasks and achievements have been the following ones:

- Identification of the most important classes of information related to management and monitoring activities. First version of the Entity/Relationship diagram modelling such concepts and of the associated logical schema. First implementation (MySQL based) of the system database. Preliminary tests and bug fixing.
- Extension of the system database to include a registry section. New classes of information concerning the grid-databases managed by the GRelC services have been identified and modelled. An extended version of the E/R model, a new logical schema and the related MySQL implementation has been provided. This work represents a core part of the EGI Database of Databases described in the DoW.
- Design of the management and monitoring client performing the data ingestion into the system database. The client has to take care of the databases and the GRelC services availability and status. It must check and store all of the information identified in the previous tasks. It is important to note that this client will be GSI and VOMS based to retrieve the relevant information about the available grid-databases, the supported Virtual Organizations, etc. It will be built on top of the GRelC libraries.

It is worth mentioning that the system database has been designed to be as general and flexible as possible. In particular it is able to manage “projects”, “GRelC services”, “grid-databases”, “Virtual Organizations”. In particular, the project concept is a way to group set of GRelC services according to the geographical location (country), main target (domain), and other criteria. It helps high level interfaces in providing different views: “country-based”, “domain-based”, “site-based”, “production-based”, etc.

On the other hand, the GRelC service concept allows users to manage the GRelC service instances. For each GRelC service two other classes of information (grid-databases and supported virtual organizations) are stored into the system database; this means that the registry, monitoring and management functionalities will be also VO-centric.

Moreover, due to the nature of the information we intend to store into the system catalogue, the related database design allows the management of historical data. This way, high level interfaces integrated into the GRelC Portal will be able to display a wide variety of views.

No activity was recorded for Hydra in PQ1.

3.4.1.4. Workflow & Schedulers

During PQ1 the Workflow & Schedulers support team has started the coordination of tasks for the rest of the project. A survey with all the different support tools regarding the elements involved on this task has been carried out, so an overall view of the of the main elements for this task has been established. Thus, the support activity related to all the involved tools can be now performed and all the input required by users can be provided.

A second activity concern the preparation of a survey of the possible types of workflows required by the users and the functionalities that are needed for the implementation of these workflows that are not presently included in the Kepler workflow engine. A survey of the applications and tools that are not supported by Kepler and need to be is also under preparation.

The molecular science and technology community (to a large extent represented in the project by the

COMPCHEM VO) will contribute to workflows and schedulers development and will be engaged as well in the combined exploitation of HPC and HTC platforms.

3.4.1.5. MPI

During this quarter the MPI support team has started the coordination and setup of tasks for the rest of the project. A new mailing list for internal discussion was created, the wiki with information of the task was updated and contact with the middleware developers was established.

The "MPI Working Group Recommendations" document, initially produced under EGEE-III, was updated and finalised following dialogue between middleware developers, the MPI working group, and the user communities. The updated document clarifies the semantics of several new proposed variables that would enhance the Job Description Language (JDL). These new additions allow for greater flexibility and control of MPI jobs, however, the implementation requires changes to the gLite Workload Management System and CREAM CE. The finalized recommendation document is available at http://grid.ie/mpi/wiki/WorkingGroup?action=AttachFile&do=get&target=MPIWG-recommendation-1.0-final.doc.

New training material for MPI courses was prepared and used in a training event at the Grids & e-Science 2010 course (Valencia, Spain). This material is publicly available for download at http://indico.ific.uv.es/indico/contributionDisplay.py?contribId=15&confId=317

Extension of the documentation useful to the molecular science community (COMPCHEM in particular) has been considered for offering to the users examples of MPI use at three levels of software complexity.

The MPI support activity has continued with the support in the GGUS system with the management and resolution of any MPI related tickets during this quarter.

3.5. Domain Specific Support

3.5.1.1. High Energy Physics

PQ1 project overlapped to a large degree with the first extended data-taking period of the Large Hadron Collider (LHC) at CERN, which restarted on March 30th 2010. The four main experiments / collaborations that take data at the LHC – ALICE, ATLAS, CMS and LHCb – are part of the Worldwide LHC Computing Grid (WLCG) project, together with sites (Tier0, Tier1 and Tier2) from Europe, the Americas and Asia-Pacific. Whilst the focus of the HEP support is for these experiments, it also addresses the needs of other High Energy Physics experiments (some of which are VOs in their own

right), as well as projects that use common technology (such as Ganga, in both Life Science and Earth Science domains).

WLCG continues to rely on a number of infrastructure tools to support its daily operations, such as the GGUS ticketing system, the GOCDB and the CIC portal. A specific feature that was provided by GGUS for WLCG – but which is of more general use – is the support for "team" and "alarm" tickets. These are both used regularly by WLCG and form part of a Key Performance Indicator that is used to judge the status of the WLCG service at the WLCG Management Board. (A summary of all user, team and alarm tickets by LHC VO is presented, together with drill-downs on the response to any alarm tickets. Time intervals for response to and resolution of problems have been agreed and each alarm is measured against these.) In summary, the WLCG service has withstood the challenges of first data taking as well as the transition from EGEE III to EGI. The service has not been without its problems, but at least as measured by problem resolution, the targets are consistently met.

Further information on the WLCG service during this quarter (a calendar quarter for WLCG) can be found in the relevant quarterly report.

In terms of EGI-InSPIRE SA3, much of this quarter was devoted to hiring personnel – now largely completed – and bringing them up to speed. Three people were in place as of June 1st, a further two (including one in the Dashboard area) as of July 1st, with remaining staff identified and due to commence later this year or early 2011.

During mid-July, a 3-day workshop (including a closed Collaboration Board meeting), was held at a WLCG Tier2 site: Imperial College, London. Around 150 people attended this workshop, mainly oriented at Tier2 and Tier1 sites, ensuring that they were fully aware of and involved in service and operations issues. A number of issues were raised at this workshop which will drive the direction for the coming quarter, including relevant SA3 personnel, on service optimisation and consolidation.

Earlier in the quarter, a "jamboree" on Data Access and Management issues was held in Amsterdam, with 100 attendees. This led to the proposal of a number of "demonstrators" – discussed further at the London workshop – in areas including caching of data at Tier2 sites, catalogue / SE consistency, data access protocols and storage solutions. These too will form a key part of the ongoing programme of work – many, if not all, of the issues being general in nature and not specific to HEP.

In addition, a workshop on multi-core, parallelisation, virtualisation and so on was organized at CERN between these two above events. It is clear that these developments will have an impact on other aspects of grid operations and deployment – such as the informal request (at least at this stage) for scheduling to be done at the level of an entire (unvirtualized) node.

WLCG operations continues to be centred around a week-daily conference call involved all four experiments, service providers from the Tier0, Tier1 and some Tier2 sites, as well as grid projects such as GridPP in the UK and OSG in the US. These meetings / calls focus on short-term issues and are much appreciated by the experiments and (most) sites. These are complemented by bi-monthly Service Coordination meetings, which focus on longer term issues, including release / deployment planning, reviews of key open GGUS tickets, pending or recent Service Incident Reports, the planning of major site interventions and the status of key services such as data management and conditions database services. These meetings also agree some policy issues, such as on the scheduling of site downtimes – it being agreed that no more than 3 sites and not more than 1/3 of the resources of any VO – should schedule concurrent downtimes – and make clear deployment recommendations (e.g. on upgrades to / rollbacks from new service versions).

ATLAS Distributed Data Management: ATLAS is the largest of the LHC experiments and is fully dedicated to the use of grid computing for offline processing and analysis. This processing is done using the well-known tier model using resources across heterogeneous interoperable grids

worldwide and being the ATLAS Distributed Data Management (DDM) project responsible for the replication, access and bookkeeping of ATLAS data across more than 100 distributed grid sites.

In terms of support to ATLAS DDM, the work during the months of June and July has had its main focus on improving and including new views in the DDM Accounting web frontend and automatizing the DDM Centralized Site Exclusion.

For the last 2 years ATLAS DDM has held a historic accounting database with storage space information for all ATLAS Grid sites that is collected via SRM. During this quarter, a new agent has been put in place to retrieve the storage space information from the BDII. The information provided by the BDII is supposed to be more complete than the one provided by SRM, as it should give an estimation of the space related to offline pools. From our first observations this source seems to be less reliable and we have implemented a simple web table to follow up and understand the differences between the SRM and BDII values. This work is being carried out in collaboration with Wahid Bhimji from the University of Edinburgh.

The accounting database also contains the storage usage information recorded in the DDM catalogues, which can be broken down by different types of metadata as for example the data ranking. Data ranking is a concept introduced recently introduced in ATLAS Distributed Computing (ADC), which is necessary to distinguish primary Computing Model replicas from secondary replicas distributed by applying more generous distribution policies. The amount of secondary copies at sites has to be monitored and for this reason new data ranking plots have been included in the DDM Accounting.

One worry in ADC is to have a measure of the amount of replicas that are actually used. New plots have been put in place to also show the proportion of data that has ever been accessed out of the total data volume registered in the catalogues.

The DDM Centralized Site Exclusion is a central database used by the different DDM agents to see which sites should temporarily be excluded. Until now entries in this database were done manually by the shifters and experts on call – a time consuming and error prone activity. Targeting to improve this situation, two automatic collectors have been put in place that are capable of setting sites offline. The first collector gets the official GOCDB and OIM downtime information from the ATLAS Grid Information System and is thus capable of excluding sites during the duration of their downtime. The second collector allows ATLAS DDM to temporary stop replicating datasets to Grid space token endpoints with no free space.

The excluded site information is being published on a DDM webpage, but also fed to the Site Status Board in order to provide a single entry point for all ADC systems (e.g. analysis tools).

Another time consuming, but less visible activity has been the migration and configuration of the 10 DDM Site Services machines to SLC5 under the direction of the ATLAS Central Services Operations team. The DDM Site Services are a critical service in ATLAS that is responsible for the data replication and throttling of the underlying WLCG middleware.

The results of the work were presented in the WLCG Collaboration Meeting in London (8 July 2010) and in the ATLAS Software and Computing Week (15 July 2010).

Persistency framework: The Persistency Framework consists of three software packages (CORAL, POOL and COOL) which address the requirements of the heavy user communities in HEP for storing and accessing several different types of scientific data produced by the LHC experiments (ATLAS, CMS, LHCb). CORAL is an abstraction layer with an SQL-free API for accessing relational databases. POOL is a hybrid technology store for C++ objects, using a mixture of streaming and relational technologies. COOL handles the time variation and versioning of the conditions data of the HEP experiments.

Two new personnel on EGI-InSPIRE funding joined the Persistency Framework team on June 1st and July 1st. Their activities during the quarter focused on CORAL and POOL, respectively. Initially, both newcomers had to gain a better understanding of these software components, by studying and extending the documentation that describes their goals and implementation details and by analysing and executing subsets of the CORAL and POOL test suites.

In the next phase, the activity on CORAL has concentrated on the preparation of more advanced tests to compare the performances of two middle-tier and caching technologies, involving a 'CORAL server' and a 'Frontier server', respectively. After setting up the infrastructure for initial performance tests, a dedicated Frontier server has been installed. The next steps will include the setup of a more complex test environment containing many client nodes to stress the CORAL and Frontier servers, emulating a realistic load in a production environment. These tests will be useful to identify any bottlenecks and suggest further performance improvements.

For POOL, the next task consisted in the analysis and debugging of some problems observed during the automatic nightly builds and tests of the POOL software. In particular, software patches have been prepared to fix some of the intermittent failures observed in the tests of the relational storage service component. This included the development of a better understanding of the Configuration Manager Tool (CMT), which is used to build the Persistency Framework packages and configure their tests.

3.5.1.2. Life Science

The Life Science community invested effort in PQ1 in setting up a sustainable operation model for its Virtual Research Community (VRC). Indeed, the fragmentation of the former EGEE infrastructure and management into National Grid Initiatives calls for a new decentralized model, that serves the community well while remaining compatible with the overall EGI structure. An important moment in this organization process was the Life Science VRC meeting organized in Paris in conjunction with the HealthGrid 2010 conference on June 28. A broad consortium representative of the community decided to push forward the emergence of an international VRC implemented through a large-scale pan-European Virtual Organization (rather than relying on national-scale structures and VOs) to foster international collaborations and facilitate grid adoption. This operational model requires a lot of work to define governance policies, secure sustainable funding and design technical tools for daily operations. A first proposal for the Life Sciences VRC governance has been written and distributed to all stakeholders for feedback and formal declaration of support. Funding models are jointly being investigated by the HealthGrid association, funded in 2003 to promote and facilitate the use of grid technologies in Life Sciences. Technical work on VO administration tools has started with the design of a VO users and application database and associated tools to monitor and manage the population of VRC members exploiting the grid infrastructure. This activity is expected to dominate the next quarter as well.

GReIC: In the Life Sciences context, we plan to define (jointly with the LS community) some domain-based use cases that will be implemented in the next months. Right now the support provided to this community relates to a new GReIC service instance that will be used to implement specific use cases exploiting LS (e.g. biological) data sources.

3.5.1.3. Astronomy and Astrophysics

In the Astronomy and Astrophysics context, we currently focus on the planning activity for what concerns tools and services for A&A and the support to provide to our users (in close contact with the Italian NGI) during the first year. The identification of some domain specific key topics is in progress; they include data visualization, database access and high performance computing in Grid

environments, in particular for what concerns numerical simulation algorithms (e.g. N-Body and hydrodynamic simulations).

The main activity related to data visualization is planned to take place on VisIVO as it is one of the main tools proposed for A&A during the preparation of EGI-Inspire. At this stage the main activities identified for VisIVO concern the production of a VisIVO server release able to run in integrated Grid-MPI environments. VisIVO will also be enabled to perform I/O activity directly on Grid Catalogues rather than on local filesystems. Finally the most popular Grid portals will be evaluated aimed at providing support to VisIVO from one or more of them; in this way users will be enabled to transparently access and use the tool in Grid, everywhere it is available.

For what concerns the integration between Grid and HPC environments, the main goals is the accomplishment of a good level of interactivity among different technologies related to supercomputing, i.e. HPC/HTC, Grid and Cloud and test different operational environments that combine all of them (or a part thereof) to identify those that better fit the needs of A&A applications. To achieve this goal we will continue to interact with EGI-InSPIRE WGs and any other activity targeted on Grid and HPC and to contribute to them. An exhaustive collection of A&A requirements will be built for this purpose. Use-cases and complex workflows, moreover, will be set up and run to test existing tools and eventually to propose/develop new ones.

For what regards databases, we are planning to evaluate the current state of the art in particular for what regards GRelC and the status of the G-DSE; other tools currently in production (e.g. OGSA-DAI, AMGA) will be analysed to understand the effort requested to adapt them to A&A applications and to implement a successful support.

3.5.1.4. Earth Sciences

In the Earth Sciences GRelC has been used extensively in the Climate-G testbed. The Climate-G testbed provides an experimental large scale data environment for climate change addressing challenging data and metadata management issues. The main scope of Climate-G is to allow scientists to carry out geographical and cross-institutional climate data discovery, access, visualization and sharing. Climate-G is a multidisciplinary collaboration involving both climate and computer scientists and it currently involves several partners such as: Centro Euro-Mediterraneo per i Cambiamenti Climatici (CMCC), Institut Pierre-Simon Laplace (IPSL), Fraunhofer Institut fur Algorithmen und Wissenschaftliches Rechnen (SCAI), National Center for Atmospheric Research (NCAR), University of Reading, University of Salento and SPACI.

A new version of the GRelC service has been released and it is now tested to manage climate metadata. A new version of the Climate-G portal has been deployed (http://grelc.unile.it:8080/ClimateG-DDC-v2.0/) and tested. The new version fixes some bugs related to the search and discovery functionalities as well as to the metadata extraction and presentation. New requirements and scenarios will be gathered and defined by talking with the Earth Sciences representatives involved into the EGI-InSPIRE project.

ES is discussing a memorandum of understanding on collaboration with the GENESI-DEC project, the successor / evolution of the GENESI-DR project for an open Earth Science repository infrastructure. One of GENESI-DEC's major goals is to enhance the previously established platform by federating and interoperating existing infrastructures of Digital Earth and Earth Science initiatives. The major goal of the collaboration is to allow and ease access to the data infrastructure for users of EGI. Additionally, integration with existing tools commonly used in the Grid by Earth Scientists will be investigated.

3.6. Issues and Mitigation

3.6.1. Issue 1: Staffing

The recruitment and identification of staff amongst the partners was a significant issue during PQ1. Staff are still coming into place but a sufficient critical mass is now in place. This has led to some delays in the achievement and documentation of the initial milestones. One remaining issue that is likely to continue into PQ2 is the difficulty in building a cohesive collaboration amongst the SA3 partners.

3.7. Plans for the next quarter

3.7.1. User Community Support Team

The UCST of EGI.eu is finalising the definition of user support processes and mechanisms and will report these in the D3.1 deliverable. This document will serve as a guidebook for NGIs on how to define their support activities, how to integrate these with other activities and partners. The team is establishing the UCB and USAG and will set the first meetings early in the next quarter. The first MoU with VRCs are expected to be established early in the next quarter as well.

3.7.2. User Support Services

The EGI Technical Forum will provide an excellent opportunity to further our understanding of the needs of NGIs and users, and to better define the focus and role of the user support services. Based on this input the partners in this task will do an analysis of the user support services, and feed recommendations to both UCB and USAG for further discussion. Once these changes are prioritised and approved by UCB they will be implemented by the NGI User Support Teams.

In the next quarter the partners involved in this task will focus on the setup of shared services for new VOs. These services will lower the barriers of enabling VOs on EGI and will simplify the usage of the grid for new communities. All of the services provided under NA3 will be continually reviewed and evaluated throughout the project. The services will be progressively improved in alignment with the emerging requirements of the users. For example, the next quarter will see the release of the next version of the Application Database which will provide write-access to people who possess EGI SSO account.

3.7.3. NGI User Support Teams

After the slow start up of the NGI user support teams, it is expected that many of the NGI teams will be fully operational in the forthcoming quarter and will actively search for and will serve users within their countries. The Technical Forum will be used as an opportunity by EGI.eu UCST to understand the needs of NGI teams and the support they expect from EGI.eu and from other NGIs. Various meetings have been planned to achieve this. New services and changes to existing services are expected by UCB and USAG, these will be delivered by NGI User Support Teams.

3.7.4. Shared Services and Tools

The EGI Technical Forum will provide an excellent opportunity to continue building the community of developers, providers and users for the shared services and tools. Primarily, within the partners working in these tasks but also with the users of their work, and with other potential users outside of the EGI community, e.g. (PARTNER, ULICE, EnviroGRIDS, ILD etc.).

3.7.4.1. Dashboards

Continued support will be provided for issues that arise during the LHC data taking. PQ2 will see the final staff being put into place.

3.7.4.2. Workflow & Schedulers

A survey of the applications and tools that are not supported by Kepler and need to be is also under preparation.

3.7.5. Domain Specific Support

3.7.5.1. High Energy Physics

During the next quarter the hiring process for CERN will be completed, with the remaining effort scheduled to start on 1 October 2010. 2 further positions for INFN remain open and will hopefully be filled during the following quarter. This effort will focus on issues related to LHC data taking, production and analysis, with increased focus on the latter. The services supported are described in detail in MS603

4. SOFTWARE PROVISIONING

4.1. Summary

The main focus during PQ1 was the setting up of the activity. To manage the distributed teams, both within SA2 and other activities, considerable investment has been made in collaborative support services, dedicated to EGI (website, wiki, document server, issue tracker, chat server, mailing lists server, single sign on infrastructure, etc.), to support this work. These services are now in use across the project.

Alongside these general services, the EGI Software Repository has been established (MS501) to support the evaluation of the software components contributed to EGI. The repository has been established with contents from the gLite, UNICORE and ARC distributions from the EMI project and other software releases will be integrated in the future. The current architecture of the EGI Software Repository and future developments are described in MS504.

The workflow for verifying the quality of software components has been described in MS503 and an initial set of quality criteria have been defined. As software releases are contributed to the EGI Software Repository these criteria and workflows will be applied to the new releases and the criteria set expanded.

Issues found with the software used in production will be assigned to the DSMU. The DMSU will analyse these issues and either propose configuration and usage changes, or assign the issue to the appropriate 3rd line support unit in the software provider for resolution. The details of this process are described in MS502.

The process and outline of the Unified Middleware Distribution Roadmap, as part of the EGI Technology Roadmap, was documented in D5.1.

4.2. Main Achievements

4.2.1. Quality Criteria

The Quality Criteria for the UMD software has been documented in the EGI wiki that can be accessed at https://wiki.egi.eu/wiki/EGI-InSPIRE:UMDQualityCriteria. The documentation is divided in three different sections:

- Validation of Criteria: this section specifies the documentation and reports required from the software provider in order to proceed with the validation of the criteria. A template for test validation is provided.
- Generic Acceptance Criteria: the Criteria included in this section should hold for any component in UMD.
- Specific Acceptance Criteria: the different criteria for each of the capabilities of the UMD are documented in this section.

The Quality Criteria Definition Task team has analysed the currently deployed software in production infrastructures in order to define an initial set of capabilities that should be included in the UMD software distribution. The main capabilities are classified in three areas: Functional, which provides services to the end-users; Operational, which provides services for the operation of the infrastructure; and Security, which provides a common security framework for the previous areas.

The initial Generic Acceptance Criteria are defined at the wiki (https://wiki.egi.eu/wiki/EGI-InSPIRE:UMDQualityCriteria#Generic_acceptance_criteria). This list will evolve according to the needs of UMD. Current criteria defined are:

- Documentation
- Source Code Quality and Availability
- Management, Monitoring, and Traceability
- Configuration

In the case of Specific Criteria, a template for new capabilities is provided at https://wiki.egi.eu/wiki/EGI-InSPIRE:UMDQualityCriteria:Template. In this first phase of the task, a list of requirements for the Computing and Job Scheduling capabilities of the Functional area were identified and from them, a list of validation criteria for them is defined at https://wiki.egi.eu/wiki/EGI-InSPIRE:UMDQualityCriteria:ComputingServices. The same process of identification of requirements and definition of validation criteria was started for the Storage, Information and Security Capabilities.

4.2.2. Criteria Verification

The Software Provisioning process has been documented in MS503 describing the process by which components will be deposited in the repository by the external providers, processed and released for deployment into production.

Most of the testing of the quality criteria will be done by the software provider. For each release, the software provider will have to provide, apart from the software packages, the following documentation:

- Installation instructions
- Release notes, including changes from previous releases and bug fixes
- The testing procedure of the software and the result. This report will have to be so detailed as to be able for SA2 to follow it and repeat the procedures if needed

The verification process will check the documentation and the reports of the software provider and, with that information accept the release or deny it. In the second case, it will give a report of the causes of not being accepted and a period of time to resolve that issues. For minor releases some of the functionalities will be randomly tested to check that the report of the software provider corresponds with the tested results. For major releases, new functionalities will be checked and some of the procedures described in the report provided by the software provider will be checked.

4.2.3. Deployed Middleware Support Unit

During PQ1 the work of the Deployed Middleware Support Unit was devoted to the gathering of the team, which as of now, consists of more than 20 people at 5 institutions. This large number of people, means that we have experts available for almost all middleware components, but also that the management of the DMSU have to follow a hierarchical setup, with a small core group, the Assigners, and a larger expert pool. The day-to-day work in the DMSU has been discussed and defined at the DMSU kick-off meeting. Further the interface to the EGI helpdesk and to EMI and other middleware providers has also been discussed and it is described in greater detail in the milestone document MS502 “Deployed Middleware Support Unit Operational Procedures”

The work in the DMSU has hence started, with weekly chat-room meetings a wiki for documentation and an in-flow of tickets from the helpdesk.

The number of tickets in PQ1 has, however, been quite low, with only 4 tickets, as the procedure for assigning middleware related issues to the DMSU has not yet been fully deployed at the EGI Helpdesk.

4.2.4. Support Infrastructure

During PQ1 the work was mainly concentrated on setting up the infrastructure. This included the:

- Installation and Maintenance of the EGI Software Repository (http://repository.egi.eu) that mirrors gLite, ARC and UNICORE repositories and offers a web portal and yum and rsync functionality. This is described in more detail in MS501 – "Establishment of the EGI Software Repository and associated support tools" and the future plans in MS504 – "EGI Software Repository Architecture and Plans" Initiated and coordinated a series of Audio conferences with the Software Providers (e.g. EMI, IGE, and the operational tools development activity in EGI-InSPIRE – JRA1) in order to establish a common understating on the requirements of each software release that is to be provided and hosted in repository.egi.eu.
- Collaborated with SA1 Release Manager to define the EGI Software Release cycle workflow that will be supported by the EGI Software Repository. The results of these discussions are captured in MS503.
- Establishing the support infrastructure for the project for EGI.eu which includes the installation, maintenance and where needed customisation of the EGI.eu web space www.egi.eu and related content management system, the LDAP based EGI Single Sign On (SSO) system, the EGI wiki wiki.egi.eu, EGI Document server doc.egi.eu, the EGI Request Tracker rt.egi.eu, the EGI Integrated Digital Conference system (Indico), the EGI mailing list service bind with the SSO (maimain.egi.eu), the Instant Messaging Service (Jabber Server)

TSA2.4 members form CESNET and GRNET continue to collaborate for the next release of the EGI Software Repository with automated support for the EGI Software Release Cycle workflow and the integration of the EGI Request Tracker (RT) with the EGI Software Repository.

4.3. Issues and Mitigation

4.3.1. Issue 1: Staffing

EGI.eu was unable to recruit a full time activity manager to be in place before the start of the project. Instead, overall management of the activities were delegated to the task managers where ever possible with the remaining management duties undertaken by the project director. Other partners within the activity, notably (CSIC and LIP) were unable to recruit new staff due the project's GA not being in place. EGI.eu has been able to recruit an activity manager that will start early in PQ2.

4.3.2. Issue 2: Number of tickets being allocated to the DMSU

Establishing the ideal workflow for middleware support issues detected in the production infrastructure to be allocated to the external software providers, under the supervision of the DMSU, has taken significant discussions. Tickets in this PQ1 have frequently not been using this procedure which will in PQ2 be implemented through changes in the EGI Helpdesk configuration and dissemination at the EGI technical Forum.

4.4. Plans for the Next Quarter

During PQ2 the processes described in MS503 about software provisioning will be implemented. By CISC and LIP with the current and newly recruited staff. For the DMSU the prime focus will be to ensure that the workflow defined in MS502 is implemented, which should result in a dramatic increase in the number of tickets to be handled by the DMSU in PQ2. Further, discussions relating to 3rd-level support, mainly with the EMI project and with the EGI Helpdesk are planned to facilitate the implementation.

5. EXTERNAL RELATIONS

5.1. Summary

Recruitment at EGI.eu and connecting the central activities at EGI.eu with the staff working on external relations within the NGIs has dominated this activity during PQ1. During PQ1 the appointed Dissemination Manager and Policy Development Manager started and interviews for their teams were completed with the Dissemination Officer starting during PQ1.

Many of the NGIs contribute effort to both the Dissemination and Policy tasks and establishing contact with the relevant staff in each NGI dominated the work. Contact has now been established with the majority of the staff effort committed in the DoW. As part of the startup phase relevant task specific areas of the website, wiki and mailing lists were established. For the Policy Development team the focus was on establishing the terms of reference of the various policy bodies within EGI and links with the other DCI projects funded alongside EGI-InSPIRE. The Dissemination team were focused on establishing the communication channels within the project (Director's letter and project newsletter) and externally through the public website.

The main upcoming project event is the EGI Technical Forum which takes place in Amsterdam 14-17th September. A program was finalised early in PQ1 and registration opened.

5.2. Main Achievements

5.2.1. Dissemination

The aim of TNA2.2 is to disseminate EGI's activity within the project and worldwide through dissemination contacts located within the NGIs and related projects. It will maintain and develop content for the website, produce the monthly Director's Letters, the quarterly newsletter and develop case studies and success stories. The Global task within TNA2.2 will coordinate the contributions of the network of dissemination contacts within the partners, and ensure a flow of information between the different stakeholders. An overview of these plans is included in D2.1 Dissemination Plan.

Q1 has been devoted to setting up the basic communication channels, including the inspire-na2-dissemination mailing list and the NA2.2 pages on the EGI Wiki site. Social media channels are also being set up, including a Twitter micro-blogging feed, a Flickr photostream and a YouTube channel. Contact has been established with the dissemination contacts already identified by the partners. A press mailing list has also been set up at press@mailman.egi.eu to facilitate issuing press releases to media contacts. The media are able to contact the dissemination team directly through the press@egi.eu email address.

TNA2.2 has also been working to develop the branding for EGI and EGI-InSPIRE during PQ1. A designer was commissioned to develop logos for use on printed materials and on all EGI websites, and these will be launched at the EGITF 2010 event in September. A guide to usage of the logo, fonts and corporate colours is included in MS203, the Dissemination Handbook

TNA2.2 has also developed content for a number of areas of the website during the first quarter and is populating the pages as this is approved. The 'About EGI.eu' section has been updated, including new contact details and a staff page for EGI.eu, as well as a new policy section. The 'Results' section has also been populated with links to articles, newsletters and presentations. Using the new logos and colour palettes as a basis, the team has worked with a web designer to commission new designs

for the home page and the underlying pages, changes which should be implemented in the second quarter.

A project presentation template has been developed and a standard project presentation has been added to the website for download by partners. The dissemination team has also produced three Director's Letters in May, June and July. The project newsletter, *EGI Inspired* was also prepared during the quarter, ready for publication in August. A series of articles about EGI were written by a freelancer for *International Science Grid This Week*, a weekly grid publication produced by collaborating project, e-ScienceTalk. The articles profiled Tiziana Ferrari as COO and Steve Brewer as CCO and also profiled the PLGrid NGI. The articles will be published in iSGTW during the next quarter.

During the first quarter, planning has got underway for attendance at a number of grid events by the dissemination team, including shared booths at ICT 2010 in Brussels, SC10 in New Orleans and a booth and masterclass at SciTech 2010, Brussels. In particular, an outreach plan for the first major EGI event, EGITF 2010 has been put in place, including approaches to media sponsors such as *iSGTW*, and preparation of an introductory brochure, booth posters and User Forum posters and postcards.

Partners BME have been maintaining the local website and collecting success stories. CSC provided essential dissemination support during the PQ1 while key members of staff were being recruited to the central team, working on the project website and drafting press releases, general articles and presentations. IMCS UL have been working on local website management, translation of materials, and issuing local articles. IPB have been preparing dissemination material for the website, conferences, events and press. IUCC have been preparing materials on the web and targeting academia and hi-tech companies. MTA SZTAKI are contributing to case studies and organising events. UNIMELB has continued dissemination activities within the Australian HPC community, working toward further building the grid user base and influencing national policy around grid middleware and implementation.

5.2.2. Policy

EGI.eu: during the first quarter, the activity was focused on the following main topics:

- Internal policy groups; The policy groups defined in the DoW were created by structuring a Terms of Reference (TOR) template including purpose, composition and operating procedures; by identifying the key experts who could support the definition of the TORs for each group and by drafting TORs for TCB, OMB, OTAG, UCB, USAG, SPG, SVG and SCG; the Software Security Group (SSG) was not started and the key technology provider representatives have been invited to join the SCG instead; the Organisational Task Force (OTF); was not started as its activity has been taken up by working groups formed from the EGI Council; a new group was created, the Operations Automation Team (OAT).
- Interactions with DCI projects; at the end of May 2010 a DCI projects interaction closed meeting was held in Brussels to establish collaborations with EU-funded DCIs related projects via MOU; the involved projects are EMI, IGE, Venus-C, StratusLab and EDGI; template and framework for MOU were defined and the discussion will evolve during PQ2 to achieve final agreements; a structure for a common deliverable was later defined;
- The policy area of the website was defined and the content was structured and drafted; publication of the Web policy area is expected at the beginning of PQ2;
- Staffing: selection for filling the policy development team was performed; a Policy Development Officer will start working at the beginning of PQ2.

STFC: the main activity of the Security Policy Group (SPG) has been to define the Terms of Reference of the new group according to the provided template and to work on the transition from the old

EGEE/WLCG Joint Security Policy Group. This included a meeting of a subset of the members of SPG (18/19 May at Nikhef) to complete the security policy "Glossary of Terms" and to work on the development of a standard security policy framework for future use in EGI. All existing security policies (from JSPG) have been imported into standard EGI policy documents and are available on the SPG web. These are now awaiting formal approval. Other activities by the SPG leader included attending a meeting (27/28 May) of TAGPMA (the IGTF body in The Americas) and reporting on EUGridPMA news, giving a presentation on "Federating the Grid" at the TNC2010 conference in Vilnius (2nd June) and participating in all security group activities at the OGF29 meeting in Chicago (20 to 22 June). The leader also led an activity in WLCG to define a draft security policy for the endorsement of trusted virtual machine images. This work for the particle physics community should be of use to EGI in the future and will be discussed by SPG in due course.

FOM: the main activity was targeted at making EGI.eu part of GridPMA and IGTF (MS208); the milestone was achieved and the document was authored.

UI SAV: participation in e-IRG activities in May (Blue Paper) and in EGI Council meeting in June

PB: Participation in EGI Council activities; liaison activities with the Ministry of Science and Technological Development of the Republic of Serbia on the implementation of the National Research and Development Strategy in relation to e-Infrastructures, Grid and HPC.

5.2.3. Events

The main focus during PQ1 has been the preparation of the EGI Technical Forum in Amsterdam on 14th-17th September. Even before the start of the project considerable planning effort had been contributed by EGI.eu and through the host institution Nikhef. A venue in Amsterdam had been selected and a local professional conference organiser appointed by the local host – the Dutch NGI – through the BiG Grid project. An attendance of 300 people is expected with a programme including sessions on the various project activities, collaborations with the DCI projects. Representatives from the ESFRI and VRC projects have been invited to dedicated sessions discussing how they will interact with EGI-InSPIRE through the use of the European Grid Infrastructure.

Initial planning for the User Forum has already taken place with an open call within the EGI Council for host NGIs. The location and dates will be confirmed at the next EGI Council meeting.

5.3. Issues and mitigation

5.3.1. Issue 1: Dissemination contacts

The following issues have become apparent for the dissemination task in PQ1:

- A number of partners have not yet nominated contacts for their dissemination activities. These include UPT, IPP-BAS, CSIC, VU, SIGMA, ARNES, UCPH, ASTI, ITB, NUS and UPM.
- Of those partners that have not yet nominated contacts, a number have also not yet reported staff effort in PPT during the first quarter: UPT, IPP-BAS, CSIC, VU, SIGMA, ARNES, UCPH

In order to mitigate these issues, the dissemination task will contact the Collaboration Board and Project Management Board members for the unresponsive partners in order to identify nominated contacts for the dissemination tasks, and ensure that their effort is reported in PPT in the forthcoming quarter.

5.3.2. Issue 2: Policy contacts

A number of partners have not yet nominated contacts for their policy activities. Among the funded partners, we have UPT, JKU, UCY, VU, SIGMA, ARNES, KTH, UCPH and E-ARENA. Among the unfunded partners we have ASGC, ASTI, ITB and NUS. The committed effort, especially for the funded partners is small compared to the duration of the project. We plan to mitigate this issue during PQ2.

5.4. Plans for the next quarter

During PQ2, the Dissemination task will establish regular communication with the NGI and partner dissemination contacts. This process will be launched at the face to face NGI dissemination meeting at EGITF2010. The session will aim to establish ways to work together effectively and share ideas for promoting EGI-InSPIRE in the different regions. The meeting will establish the NA2.2 wiki pages as a key mechanism for facilitating this process, and the content of this area will be developed.

The new branding for the project, including the logos, colour pallette, fonts and website designs will be launched at the EGITF 2010. During PQ2, TNA2.2 will start to roll out the new branding to all dissemination materials, including the wiki site and other project websites and online services. The project presentation template, document templates and newsletter will also be evolved to reflect the new branding.

In PM4, TNA2.2 will carry out a review of the website and identify areas that still require substantial development. TNA2.2 will also work with the other work packages to identify contacts who could help to keep the technical areas of the website updated. The structure of the main project wiki site will also be reviewed to ensure that information is easy to find.

During the PQ2, the dissemination team will attend a number of events, including ICT 2010 in Brussels, 27-29 September. EGI is sharing a joint booth focusing on e-Infrastructures and climate change with EUIndiaGrid, EUMedGridSupport and e-ScienceTalk, as well as a number of other projects. EGI will host a number of demos at the booth and will distribute dissemination materials electronically as it is a paperless event. Plans for the shared booths at SC10 in New Orleans in November and the booth and masterclass at SciTech 2010, Brussels, also in November, will also be developed during the quarter.

EGITF 2010 will take place in Amsterdam, on 14-17 September. Two dissemination sessions are planned during the event, one targeted specifically at NGIs as described above, and a general session on reaching out to the media, which will include a presentation from a journalist. Press releases are planned, and the local media will be targeted in partnership with BiGGrid, the event hosts. In addition, the dissemination team will promote the Flickr and Twitter feeds at the event, setting up an event hashtag to enable delegates to share their photos and blogs with the rest of the community. An iPhone and Android app will be available to download, featuring a full programme, the option to select favourite sessions and a link to the social media channels. TNA2.2 will work with the Gridcast team from e-ScienceTalk to run an event blog, and will contribute bloggers from the dissemination team.

The brochure, posters and publicity materials for the EGI 1st User Forum in Vilnius will all be produced for the EGITF event, and additional publicity materials such as clocks and bags will be printed for ICT2010. Further editions of the Director's Letter will be issued in August, September and October, together with the Autumn edition of the newsletter.

The first major event of the EGI-InSPIRE project will take place in Amsterdam. The event will last 4 days and is expected to draw in around 300 people from within the project and related activities such as the DCI and ESFRI projects. Initial planning for the User Forum has already taken place with an open call within the EGI Council for host NGIs. The location and dates will be confirmed at the next EGI Council meeting in September, and planning will start for the meeting which will be held in March/April 2011.

As regards the Policy development activity (TNA2.3), PQ2 will be dedicated to the following actions:

1) push forwards the finalization and approval of TORs for TCB, OMB, UCB, USAG, OTAG, OAT, SPG, SCG and SVG groups;
2) write and sign MOUs with a selected number of external partners in the area of technology providers, infrastructure providers and Virtual Research Communities;
3) write a Policy Development Paper describing the process by which policy documents can be proposed and approved;
4) expand the website content for the policy area;
5) participate in the discussion related to making EGI.eu an ERIC;
6) work on DCI interactions and Standard roadmap deliverables;
7) participate in the EGITF and engage the community and the relevant contact points;
8) participate in the OGF event in Brussels.

6. CONSORTIUM MANAGEMENT

6.1. Summary

The establishment of the project management and administrative structures have dominated activities during PQ1.

6.2. Main Achievements

6.2.1. Project Management

During PQ1 the main focus of the project management activity (all based at the coordinator EGI.eu) was on the startup of the project. EGI.eu had been due to be established in November 2009, however it was eventually established a legal entity on 8th February 2010. As a result, even though the first round of recruitment had been completed, at the start of the project it consisted of 1 administrative, 1 secretarial and 1 technical member of staff. By the end of PQ1, 2 administrative, 2 secretarial and 5 technical members of staff were employed and contracts signed with 6 further staff. The project management function was therefore fully staffed by the end of PQ1.

The main focus of the staff has been on establishing the project structures and procedures. A quality assurance procedure has been documented for the deliverables and milestones developed within the project. The procedures have been documented on the QA website (https://wiki.egi.eu/wiki/Quality_Assurance:Main_Page) and in MS101. An issue tracker is used to track the status of the deliverables and milestones as they move through a table of contents, draft, review within the activity, review outside the activity, by the Activity Management Board and then finally the Project Management Board. The project management structures – the Activity Management Board and Project Management Boards have met. The AMB has been meeting frequently (at least once a fortnight and normally weekly) and the PMB has met once in person and once by phone to discuss issues relating to the consortium agreement and the project as a whole.

Administrative procedures within the consortium have been established. All staff contributing to the project will complete a timesheet through CERN's PPT tool. This will allow the effort to be tracked from each partner and the work with each activity against the commitments made in the description of work. Refinement of the description of work, the contents of the grant agreement and other administrative procedures related to the European Commission have dominated administrative activity during PQ1.

6.2.2. Milestones and Deliverables

The transition from EGEE-III to EGI-InSPIRE contained many significant changes in personnel and management structures. Within the project plan, PQ1 saw the transition recorded through a number of milestones and the resulting structures and new procedures documented for the community through a series of deliverables. These are recorded below.

Id	Activity No	Deliverable / Milestone title and url	Nature (***)	Lead partner	Original Delivery date(*) [18]	Revised delivery date(*)	Status (**)
D1.1	WP1	Quality Plan and Project Metrics https://documents.egi.eu/document/55	R	1	2	6	PMB approved
D 2.1	WP2	EGI-InSPIRE Presentation https://documents.egi.eu/document/43	R	1	1	3	PMB approved
D 2.2	WP2	Dissemination Plan https://documents.egi.eu/document/56	R	1	3	6	PMB approved
D3.1	WP3	User Community Support Process https://documents.egi.eu/document/106	R	14	3	6	PMB approved
D5.1	WP5	UMD Roadmap https://documents.egi.eu/document/100	R	1	3	5	PMB approved
MS101	WP1	Quality Assurance website with document templates and processes https://documents.egi.eu/document/144	R	1	1	4	PMB approved
MS102	WP1	Execution Plan	R	1	2		Achieved, being documented
MS103	WP1	Quarterly Report Template https://documents.egi.eu/document/45	R	1	2	3	PMB approved
MS104	WP1	External Advisory Board https://documents.egi.eu/document/170		1	3	5	PMB approved
MS105	WP1	Quarterly Report https://documents.egi.eu/document/156	R	1	3	5	PMB approved
MS201	WP2	Basic website with key collaborative tools https://documents.egi.eu/document/126	R	1	1	5	PMB approved

[18] *(*) Dates are expressed in project month (1 to 48).*

(**) Status = Not started – In preparation – Pending internal review – PMB approved

*(***) Nature = **R** = Report **P** = Prototype **D** = Demonstrator **O** = Other, Deliverable id: for Milestone attached to a deliverable*

Id	Activity No	Deliverable / Milestone title and url	Nature (***)	Lead partner	Original Delivery date(*) [18]	Revised delivery date(*)	Status (**)
MS202	WP2	Project Presentation Template https://documents.egi.eu/document/44	R	1	1	4	PMB approved
MS203	WP2	Dissemination Handbook https://documents.egi.eu/document/145	R	12	2	6	PMB approved
MS204	WP2	EGI Newsletter https://documents.egi.eu/document/146	R	1	3	4	PMB approved
MS205	WP2	Establishing the policy area of the website covering the policy bodies and collaborating projects https://documents.egi.eu/document/93	R	1	3	6	PMB approved
MS206	WP2	Terms of reference and initial composition of the policy related groups within EGI.eu https://documents.egi.eu/document/125	R	1	3	6	PMB approved
MS301	WP3	User Support Contacts https://documents.egi.eu/document/60	R	21	1	4	PMB approved
MS302	WP3	Training Website https://documents.egi.eu/document/104	R	34	2	4	PMB approved
MS303	WP3	Ported Applications Website https://documents.egi.eu/document/92	R	16	2	4	PMB approved
MS304	WP3	User Support Metrics https://documents.egi.eu/document/94	R	18	3	6	PMB approved
MS401	WP4	Operational Tools regionalisation status https://documents.egi.eu/document/48	R	21	1	4	PMB approved
MS402	WP4	Deploying Software into the EGI production infrastructure https://documents.egi.eu/document/53	R	12	2	4	PMB approved
MS403	WP4	EGI Helpdesk and NGI Support Units https://documents.egi.eu/document/49	R	10	2	6	PMB approved
MS404	WP4	Operational Level Agreements (OLAs) within the EGI production infrastructure https://documents.egi.eu/document/65	R	16	2	4	PMB approved
MS405	WP4	Operational Security Procedures https://documents.egi.eu/document/47	R	14	3	4	PMB approved

Id	Activity No	Deliverable / Milestone title and url	Nature (***)	Lead partner	Original Delivery date(*) [18]	Revised delivery date(*)	Status (**)
MS501	WP5	Establishment of the EGI Software Repository and associated support tools https://documents.egi.eu/document/46	R	9	1	4	PMB approved
MS502	WP5	Deployed Middleware Support Unit Operations Procedures https://documents.egi.eu/document/69	R	41	2	5	PMB approved
MS503	WP5	Software Provisioning Process https://documents.egi.eu/document/68	R	12	2	5	PMB approved
MS504	WP5	EGI Software Repository –Architecture and Plans https://documents.egi.eu/document/89	R	16	3	6	PMB approved
MS601	WP6	HUC Contact points and the support model https://documents.egi.eu/document/91	R	13	1	6	PMB approved
MS701	WP7	CIC Operations Portal work plan https://documents.egi.eu/document/39	R	14	1	5	PMB approved
MS702	WP7	Establishing the Operational Tool product teams https://documents.egi.eu/document/52	R	21	1	4	PMB approved
MS703	WP7	Operational Tools regionalisation work plan https://documents.egi.eu/document/107	R	35	2	7	PMB approved
MS704	WP7	Roadmap for the maintenance and development of the deployed operational tools https://documents.egi.eu/document/50	R	10	3	7	PMB approved

The majority of the delays in the milestones and deliverables related to the establishment of new procedures and new teams at the start of the project. In many cases, the discussions around the subject matter of the milestone were completed in the anticipated timescale, however the documentation of these discussions and their review frequently took several months longer due to the delays caused by the summer break. Together, these milestones have forced through the necessary discussions and documentation of the new procedures that are now in place to finalise the migration of EGEE to EGI.

The MS703 and MS704 milestones are in the final process of review and will be completed in PM7. MS102 (the execution plan) is a 'living document' that identifies which staff are working on the various work packages from each partner. This information was collected over the summer to populate the Project Progress Tool (PPT) which has been used to monitor the progress of the project. Effectively, this milestone has been achieved, but remains to be documented.

6.2.3. Consumption of Effort

The effort contributed by the partners within the consortium is recorded in the Project Tracking Tool (PPT), and a summary provided below. PPT is used by partners to record and report their consumed effort on a monthly basis. The report lists the effort by each partner within each work package, and includes the worked PM and the committed PM figures. A comparison between these two figures is also included as a percentage of achieved PM. Project period 1 shows the cumulative total for period 1, the right hand table shows the PQ1 figures. A definition of terms is included below:

Committed PM: Person months planned in the Annex I for the full project duration. The comparison is based on the linear plan of the full person months, i.e. over 16 quarters. After every reporting period, any deviations to the plan will be adjusted in the second year plan. So that person months and budget will be balanced in the subsequent period

Worked Person Month funded: these are the resources engaged by the partner for the realisation of their tasks; the person month are computed using the yearly labour hours applicable in the partner's country. These resources are recorded in PPT as fully funded. The funding being shared between the three stakeholders: the European Commission, the National Grid Initiative, i.e. the partners and its national source of funding and EGI.eu.

Overview of effort committed across the project

Type	Work Package	Worked PM Funded	Committed PM	Achieved PM %
MGT	WP1 (NA1)	6.7	20.1	33%
COORD	WP2 (NA2)	24.5	44.9	54%
COORD	WP3 (NA3)	32.1	60.0	54%
SUPPORT	WP4 (SA1)	242.9	290.8	84%
SUPPORT	WP5 (SA2)	12.5	31.4	40%
SUPPORT	WP6 (SA3)	36.6	61.7	59%
RTD	WP7 (JRA1)	15.6	14.5	108%
	Total	370.9	523.4	71%

The lower effort levels across many of the work packages are due to the ramp up as new staff are allocated to the project. For EGI.eu, as a new organisation, many staff had to be recruited for the project and there was then a delay as the appointed staff became active within the organisation. Other organisations were unable to allocate or recruit new staff until the grant agreement were in place.

The detailed breakdown of effort contributed to each work package by each partner is provided in the following tables. Each work package (for reporting purposes) is split into the different types of effort used within EGI-InSPIRE (which has different re-imbursement rates) and is therefore reported separately.

The different types are:

- M: Project Management as defined by the EC.
- E: EGI Global Task related effort.
- G: General tasks within the project.
- N: NGI International Task related effort.

WP1-E - WP1 (NA1) - NA1 Management

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	0	8,9	0%
Total:	0	8,9	0%

WP1-M - WP1 (NA1) - NA1 Management

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	6,7	11,2	60%
Total:	6,7	11,2	60%

WP2-E - WP2 (NA2) - NA2 External Relations

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	4,7	19,3	25%
26A-FOM	0,1	0,3	36%
34A-STFC	1,1	2,0	56%
Total:	6,0	21,6	28%

WP2-N - WP2 (NA2) - NA2 External Relations

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
2-UPT	0	0,8	0%
5A-IPP-BAS	0,1	0,5	17%
7C-SWITCH	0	0,4	0%
8-UCY	0,4	0,5	70%
9-CESNET	0,2	0,5	33%
10B-KIT-G	1,0	0,9	115%
10E-BADW	0	0,2	0%
12A-CSIC	1,6	1,4	114%
12D-UPVLC	1,0	0,8	128%

13-CSC	2,2	1,1	209%
14A-CNRS	0,6	1,0	55%
14C-HealthGrid	0,7	0,3	218%
18B-BME	0,1	0,1	80%
18C-MTA SZTAKI	0	0,1	0%
19-TCD	0,4	0,4	100%
20-IUCC	0,2	0,3	86%
21A-INFN	1,1	1,3	85%
22-VU	2,0	1,3	154%
26A-FOM	0	0,2	0%
26B-SARA	0,0	0,3	3%
27A-SIGMA	0	0,4	0%
28A-CYFRONET	1,5	1,0	150%
29-LIP	0	0,8	0%
30-IPB	0,8	0,8	104%
Partner	Worked PM Funded	Committed PM	Achieved PM %
31-ARNES	0	1,1	0%
31B-JSI	0	0,6	0%
32-UI SAV	0,4	0,5	79%
33-TUBITAK ULAKBIM	1,0	1,0	103%
34A-STFC	1,4	1,5	94%
36-UCPH	0	0,8	0%
38A-KTH	0	0,5	0%
39-IMCS-UL	0	1,4	0%
40A-E-ARENA	1,9	0,9	222%
Total:	18,5	23,3	79%

WP3-E - WP3 (NA3) - NA3 User Community

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	4,0	12,6	32%
12A-CSIC	0	0,8	0%
16A-GRNET	0	2,1	0%
16E-IASA	2,5	0,8	306%
29-LIP	0	0,8	0%
34B-UE	2,5	1,4	173%
Total:	9,0	18,4	49%

WP3-N - WP3 (NA3) - NA3 User Community

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
2-UPT	0	1,9	0%
3-IIAP NAS RA	0	0,4	0%
5A-IPP-BAS	0,4	0,5	86%
7A-ETH ZURICH	0,2	0,3	66%
7B-UZH	0,0	0,5	1%
8-UCY	0,8	0,5	161%
9-CESNET	2,2	1,8	125%
10B-KIT-G	2,1	2,6	78%
10C-DESY	0,6	0,6	109%
Partner	Worked PM Funded	Committed PM	Achieved PM %
10D-JUELICH	0	0,2	0%
10G-FRAUNHOFER	0	0,8	0%
12A-CSIC	0	0,2	0%
12D-UPVLC	0,5	1,5	36%
13-CSC	0	1,5	0%
14A-CNRS	0	1,7	0%
14B-CEA	0	0,7	0%
14C-HealthGrid	2,2	1,0	219%
15-GRENA	0,1	0,4	33%
18A-MTA KFKI	0,6	0,6	104%
18B-BME	0,5	0,6	81%
18C-MTA SZTAKI	0,8	0,9	91%
19-TCD	0,9	0,9	97%
20-IUCC	1,4	0,8	173%
21A-INFN	2,5	2,5	100%
22-VU	0	0,9	0%
23-RENAM	0,6	0,6	108%
26A-FOM	0	0,3	0%
26B-SARA	0	0,3	0%
27A-SIGMA	0	0,8	0%
27B-UIO	0	0,4	0%
27C-URA	0	0,4	0%
28A-CYFRONET	0,4	0,3	177%
28B-UWAR	0	1,1	0%
28C-ICBP	0,4	0,9	48%

29-LIP	0	1,8	0%
30-IPB	1,1	1,0	105%
31-ARNES	0	0,7	0%
31B-JSI	0	0,5	0%
32-UI SAV	2,1	2,4	90%
33-TUBITAK ULAKBIM	2,3	2,3	102%
34A-STFC	0,4	1,0	44%
34C-UG	0	0,3	0%
34D-IMPERIAL	0	0,3	0%
34E-MANCHESTER	0	0,3	0%
36-UCPH	0	1,3	0%
38A-KTH	0	0,6	0%
40A-E-ARENA	0	0,4	0%
Total:	23,1	41,6	56%

WP4-E - WP4 (SA1) - SA1 Operations (EGI)

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	1,8	2,3	82%
10B-KIT-G	5,3	4,4	122%
12A-CSIC	0,4	1,1	38%
12B-FCTSG	0,1	0,8	17%
13-CSC	1,0	1,4	72%
14A-CNRS	0,6	0,8	86%
16A-GRNET	0	4,4	0%
17-SRCE	0,6	0,7	87%
21A-INFN	1,7	2,3	76%
21B-GARR	0,8	0,8	107%
26A-FOM	2,8	3,6	76%
26B-SARA	2,5	0	#DIV/0
28A-CYFRONET	1,6	1,4	109%
29-LIP	0	1,1	0%
34A-STFC	5,0	4,4	113%
35-CERN	2,3	3,7	62%
38A-KTH	1,7	1,4	119%
Total:	28,3	34,4	82%

WP4-N - WP4 (SA1) - SA1 Operations

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
2-UPT	0	1,8	0%
3-IIAP NAS RA	0,8	1,2	69%
5A-IPP-BAS	2,5	6,8	37%
5B-IOCWCP-BA	0	0	#DIV/0
5C-GPhI	0	0,5	0%
6-UIIP NASB	2,5	1,6	155%
7A-ETH ZURICH	1,1	2,1	51%
7B-UZH	0,1	1,1	11%
7C-SWITCH	0,9	1,9	47%
8-UCY	2,3	3,0	76%
9-CESNET	6,9	7,8	88%
10B-KIT-G	9,5	8,2	116%
Partner	Worked PM Funded	Committed PM	Achieved PM %
10C-DESY	2,0	1,6	120%
10D-JUELICH	0,9	1,6	55%
10E-BADW	0	2,8	0%
10G-FRAUNHOFER	1,0	1,3	78%
10H-LUH	0	1,6	0%
11-UOBL ETF	0	4,4	0%
12A-CSIC	2,8	2,5	113%
12B-FCTSG	5,5	4,3	129%
12C-CIEMAT	0	2,4	0%
12D-UPVLC	0,6	1,8	34%
12E-IFAE	3,3	2,9	114%
12F-RED.ES	0	3,3	0%
12G-UNIZAR-I3A	9,0	3,3	277%
12H-UAB	0	2,5	0%
13-CSC	2,1	3,9	54%
14A-CNRS	31,6	15,5	204%
14B-CEA	4,1	4,0	102%
15-GRENA	0,4	1,2	35%
16A-GRNET	3,6	7,4	48%
16B-AUTH	0	0,8	0%
16C-CTI	0	0,8	0%
16D-FORTH	0	0,8	0%

16G-UI	0	0,5	0%
16H-UP	0	0,6	0%
17-SRCE	5,0	4,5	112%
18A-MTA KFKI	4,1	3,8	107%
18B-BME	0,7	1,6	42%
18C-MTA SZTAKI	1,6	1,3	125%
19-TCD	7,5	5,6	134%
20-IUCC	1,4	1,6	87%
21A-INFN	26,2	22,6	116%
21B-GARR	0	0,8	0%
22-VU	1,0	1,4	73%
23-RENAM	0,7	1,0	74%
24-UOM	0,6	4,4	13%
25-UKIM	3,7	4,4	82%
26A-FOM	1,6	2,0	78%
26B-SARA	2,3	7,7	29%
27A-SIGMA	0	1,7	0%
Partner	**Worked PM Funded**	**Committed PM**	**Achieved PM %**
27B-UIO	0	1,8	0%
27C-URA	0	1,4	0%
28A-CYFRONET	11,4	6,7	171%
28B-UWAR	0	0,5	0%
28C-ICBP	0,2	1,1	21%
28D-POLITECHNIKA WROCLAWSKA	0	1,2	0%
29-LIP	0	6,4	0%
30-IPB	7,4	7,1	103%
31-ARNES	0	2,7	0%
31B-JSI	0	3,2	0%
32-UI SAV	4,7	5,8	81%
33-TUBITAK ULAKBIM	10,0	7,9	127%
34A-STFC	5,0	6,2	81%
34C-UG	6,8	3,6	188%
34D-IMPERIAL	6,7	3,6	184%
34E-MANCHESTER	4,8	3,6	132%
36-UCPH	1,1	5,1	22%
38A-KTH	0,1	0,4	20%
38B-LIU	2,5	1,9	134%
38C-UMEA	2,5	2,8	92%
39-IMCS-UL	0,8	3,0	26%
40B-SINP MSU	0	1,3	0%

40C-JINR	0	0,8	0%
40D-RRCKI	0	0,8	0%
40F-ITEP	0	0,8	0%
40G-PNPI	0	0,8	0%
51A-ICI	1,2	1,9	63%
51C-UPB	0	0,8	0%
51D-UVDT	0	0,6	0%
51E-UTC	0	0,6	0%
51H-INCAS	0	0,2	0%
51J-UB	0	0,1	0%
Total:	214,7	256,4	84%

WP5-E - WP5 (SA2) - SA2 Provisioning the Software Infrastructure

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
1-EGI.EU	0,4	2,3	19%
9-CESNET	5,5	6,7	82%
10D-JUELICH	0,2	1,5	15%
12A-CSIC	1,5	3,3	46%
12B-FCTSG	0	1,1	0%
16A-GRNET	0	3,5	0%
16B-AUTH	0	0,8	0%
16E-IASA	2,5	0,8	309%
16F-ICCS	0	0,8	0%
21A-INFN	2,4	2,9	81%
29-LIP	0	4,4	0%
36-UCPH	0	1,5	0%
38B-LIU	0	1,5	0%
41-NORDUNET	0	0,4	0%
Total:	12,5	31,4	40%

WP6-G - WP6 (SA3) - SA3 Services for Heavy User Communities

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
10G-FRAUNHOFER	0	2,3	0%
12A-CSIC	2,3	2,3	103%
12C-CIEMAT	0	1,5	0%
13-CSC	2,9	1,5	196%
14A-CNRS	0,7	4,5	16%
14B-CEA	0	0,7	0%

14C-HealthGrid	2,3	2,4	94%
19-TCD	1,7	1,8	100%
21A-INFN	0	5,0	0%
21C-INAF	0	2,5	0%
21D-UNIPG	2,7	0,8	366%
21E-SPACI	1,3	2,3	58%
28C-ICBP	0	0,5	0%
31-ARNES	0	0,3	0%
32-UI SAV	0,8	1,5	52%
35-CERN	21,7	28,4	77%
37-EMBL	0	3,7	0%
Total:	36,6	61,7	59%

WP7-E - WP7 (JRA1) - JRA1 Operational Tools

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
10B-KIT-G	3,1	2,9	105%
12B-FCTSG	1,4	0,8	188%
14A-CNRS	0,6	0,8	85%
16A-GRNET	0	0,8	0%
17-SRCE	0,2	0,8	30%
21A-INFN	2,9	1,5	190%
34A-STFC	1,5	1,5	101%
35-CERN	0	0,8	0%
Total:	9,7	9,7	100%

WP7-G - WP7 (JRA1) - JRA1 Operational Tools

	Q1		
Partner	Worked PM Funded	Committed PM	Achieved PM %
12B-FCTSG	0	0,3	0%
14A-CNRS	3,3	3,6	93%
17-SRCE	0,9	0,3	357%
21A-INFN	0,1	0	#DIV/0
34A-STFC	0,1	0,3	41%
35-CERN	1,4	0,5	286%
Total:	5,9	4,8	122%

6.2.4. Overall Financial Status

Below is a report of the financial status of the project, based on the effort figures reported via PPT, as listed in the previous section. A definition of the terms is listed below:

Cost average: based on the cost provided by the partners during the preparation of the budget; it includes the average of the gross salary, a lump sum to cover the travel costs and the overhead costs.

Eligible costs estimate: these are computed using the person months declared and the cost average of every partner; these costs will be reviewed in the annual report when the partners will be requested to prepare their cost statements based on the real costs registered in their account books.

Estimated funding: It is calculated from the eligible costs estimate on which has been applied the percentage rate of the funding applicable within the task grouping activity defined in the Annex I. Three groups have been identified:

- the **NGI International** tasks are being funded 33% by the Commission and 67% by the project partner
- the **General** tasks are funded 40% by the Commission and 60% by the project partner
- the **EGI Global** tasks are funded 25% by the Commission, 25% by EGI.eu foundation and 50% by the project partner.

As a distinct activity resulting from the daily project management, the management tasks are 100% refunded by the Commission. The funding to each partner from the European Commission is detailed in a separate confidential document.

Partner	Committed PM	Worked PM Funded	Eligible Cost Estimate (€)	Estimated Funding (€)
1-EGI.EU	56,4	17,8	157.643	108.621
2-UPT	4,4	0	0	0
3-IIAP NAS RA	1,6	0,8	2.437	804
5A-IPP-BAS	7,8	3,0	18.489	6.102
5B-IOCWCP-BA	0	0	0	0
5C-GPhI	0,5	0	0	0
6-UIIP NASB	1,6	2,5	9.655	3.186
7A-ETH ZURICH	2,4	1,3	10.791	3.561
7B-UZH	1,6	0,1	899	297
7C-SWITCH	2,3	0,9	12.367	4.081
8-UCY	4,0	3,4	29.587	9.764
9-CESNET	16,7	14,7	109.070	42.899
10B-KIT-G	19,0	21,0	186.614	74.311
10C-DESY	2,2	2,6	22.799	7.524
10D-JUELICH	3,3	1,1	9.929	3.607
10E-BADW	3,0	0	0	0
10G-FRAUNHOFER	4,3	1,0	8.673	2.862
10H-LUH	1,6	0	0	0
11-UOBL ETF	4,4	0	0	0
12A-CSIC	11,5	8,7	67.931	26.239

12B-FCTSG	7,1	7,0	54.796	20.124
12C-CIEMAT	3,9	0	0	0
12D-UPVLC	4,0	2,1	16.451	5.429
12E-IFAE	2,9	3,3	25.521	8.422
12F-RED.ES	3,3	0	0	0
12G-UNIZAR-I3A	3,3	9,0	70.434	23.243
12H-UAB	2,5	0	0	0
13-CSC	9,4	8,3	85.774	32.238
14A-CNRS	27,8	37,5	324.157	111.306
14B-CEA	5,4	4,1	35.132	11.594
Partner	**Committed PM**	**Worked PM Funded**	**Eligible Cost Estimate**	**Estimated Funding**
14C-HealthGrid	3,7	5,1	44.453	16.042
15-GRENA	1,6	0,5	1.318	435
16A-GRNET	18,2	3,6	27.589	9.104
16B-AUTH	1,6	0	0	0
16C-CTI	0,8	0	0	0
16D-FORTH	0,8	0	0	0
16E-IASA	1,6	5,0	38.682	19.341
16F-ICCS	0,8	0	0	0
16G-UI	0,5	0	0	0
16H-UP	0,6	0	0	0
17-SRCE	6,2	6,7	33.429	12.040
18A-MTA KFKI	4,4	4,7	18.375	6.064
18B-BME	2,3	1,2	6.703	2.212
18C-MTA SZTAKI	2,3	2,4	14.335	4.731
19-TCD	8,6	10,5	101.800	34.781
20-IUCC	2,6	3,0	38.444	12.687
21A-INFN	38,1	36,8	271.323	98.300
21B-GARR	1,5	0,8	5.909	2.954
21C-INAF	2,5	0	0	0
21D-UNIPG	0,8	2,7	20.241	8.096
21E-SPACI	2,3	1,3	9.652	3.861
22-VU	3,6	3,0	25.145	8.298
23-RENAM	1,6	1,4	4.050	1.337
24-UOM	4,4	0,6	1.405	464
25-UKIM	4,4	3,7	14.629	4.827
26A-FOM	6,4	4,4	45.312	19.940
26B-SARA	8,2	4,7	48.585	20.333
27A-SIGMA	2,9	0	0	0
27B-UIO	2,2	0	0	0
27C-URA	1,9	0	0	0
28A-CYFRONET	9,4	14,9	127.704	44.417
28B-UWAR	1,6	0	0	0
28C-ICBP	2,5	0,7	5.666	1.870
28D-POLITECHNIKA WROCLAWSKA	1,2	0	0	0
29-LIP	15,1	0	0	0

30-IPB	8,9	9,2	50.113	16.537
31-ARNES	4,8	0	0	0
31B-JSI	4,3	0	0	0
32-UI SAV	10,1	8,0	63.883	21.519
33-TUBITAK ULAKBIM	11,1	13,3	93.833	30.965
34A-STFC	16,9	14,6	149.753	62.806
34B-UE	1,4	2,5	25.549	12.774
34C-UG	3,9	6,8	70.023	23.108
34D-IMPERIAL	3,9	6,7	68.398	22.571
34E-MANCHESTER	3,9	4,8	49.072	16.194
35-CERN	33,4	25,5	366.594	149.928
36-UCPH	8,6	1,1	12.028	3.969
Partner	Committed PM	Worked PM Funded	Eligible Cost Estimate	Estimated Funding
37-EMBL	3,7	0	0	0
38A-KTH	2,9	1,8	20.338	10.025
38B-LIU	3,4	2,5	28.812	9.508
38C-UMEA	2,8	2,5	28.812	9.508
39-IMCS-UL	4,4	0,8	6.104	2.014
40A-E-ARENA	1,3	1,9	7.694	2.539
40B-SINP MSU	1,3	0	0	0
40C-JINR	0,8	0	0	0
40D-RRCKI	0,8	0	0	0
40F-ITEP	0,8	0	0	0
40G-PNPI	0,8	0	0	0
41-NORDUNET	0,4	0	0	0
51A-ICI	1,9	1,2	7.416	2.447
51C-UPB	0,8	0	0	0
51D-UVDT	0,6	0	0	0
51E-UTC	0,6	0	0	0
51H-INCAS	0,2	0	0	0
51J-UB	0,1	0	0	0
Total:	523,4	370,9	3.212.320	1.234.760

6.3. Issues and mitigation

6.3.1.1. Issue 1: Staffing

A particular issue during PQ1 were the staffing levels at EGI.eu. Due to the late establishment of this new organisation the recruited staff had not all taken up their position, and indeed not all the staff had been appointed.

Mitigation: A second round of advertisement has taken place during PQ1 and staff recruited from those positions will come into place during PQ2. A further round of advertising will take place in PQ2 for the remaining positions.

6.4. Plans for the next quarter

PQ2 will see the first meeting of the Collaboration Board and the Project Administrative Committee at the EGI Technical Forum. It is expected that the grant agreement and consortium agreement will be finalised and signed.

7. PROJECT METRICS

Metrics for PQ1 will be provided in PQ2

8. ANNEX A1: DISSEMINATINO AND USE

8.1. Main Project and Activity Meetings

Date	Location	Title	Participants	Outcome (Short report & Indico URL)
1-2.06.2010	Amsterdam, the Netherlands	EGI ROD Forum	19	First F2F meeting of the people involved in the Regional Operator on Duty activities of the NGI's. 51 visitors, most NGI's were present. https://www.egi.eu/indico/conferenceDisplay.py?confId=29
2-4.06.2010	Amsterdam, the Netherlands	EGI-InSPIRE SA1 kickoff meeting	26	https://www.egi.eu/indico/conferenceDisplay.py?confId=43
10.06.2010	Amsterdam	EGI Task Leaders meeting	22	https://www.egi.eu/indico/conferenceTimeTable.py?confId=41
28.06.2010	On-Line	SA1 Grid operations meeting	20	
12.07.2010	On-Line	SA1 Grid operations meeting	20	

8.2. Conferences/Workshops Organised

Date	Location	Title	Participants	Outcome (Short report & Indico URL)
13-14.04.10	Hamburg, Germany	Security tasks transition from EGEE to EGI		Collaboration in security incident handling within EGI/NGI-DE.
17-21.05.10	Catania (Italy)	Workshop CCR-INFN GRID 2010	6	Discussion on operational issues: deployment, monitoring, site plans, accounting and other NGI issues, general information on grid and project topics, other: http://agenda.infn.it/conferenceDisplay.py?confId=2488
18-19.05.10	Amsterdam, the Netherlands	SPG meeting		Complete "glossary of terms" document, development of a standard security policy framework for future use in EGI
24-27.05.10	Braga, Portugal	IBERGRID 2010	38	LIP supported the IBERGRID 2010 conference held in Braga (Portugal), and organized by the Minho University. This conference enhances the main achievements and activities at the light of the IBERGRID agreement, in several areas such as grid computing, applications, supercomputing and networking. More information in http://www.ibergrid.eu/2010/index.html
27-28.05.10	Amsterdam, the Netherlands	TAGPMA meeting		http://indico.rnp.br/conferenceDisplay.py?confId=83

Date	Location	Title	Participants	Outcome (Short report & Indico URL)
31.05.10	Brussels	DCI Interactions closed meeting	5	Discussed goals of possible interests in bilateral interactions; plans for a common deliverable
01-02.06.10	Amsterdam	NGI-DE operations meeting		Discussion on NGI-DE collaboration issues and channels (like wiki, mail list); NGI-DE ROD shift management.
01.06.10	Brussels	Engaging European DCIs together		Presentations on EU-related DCI activities, discussion on visions and possible interactions
02.06.10	Vilnius, Lithuania	TNC2010		http://tnc2010.terena.org/schedule/sessions/show.php?sess_id=26
20-25.06.10	Sozopol, Bulgaria	Special Session "HPC Grid Applications" , AMiTANS	2	Presentations of Grid applications http://2010.eac4amitans.org/6.html

8.3. Other Conferences/Workshops Attended

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
02-07.05.10	Vienna	Scientific Gateways and Visualization ” session in the Earth & Space Science Informatics (ESSI) at the European Geosciences Union General Assembly (EGU)	50 - 80	Set of abstracts - http://meetingorganizer.copernicus.org/EGU2010/session/2677

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
02-07.05.10	Vienna	Semantic Interoperability, Knowledge and Ontologies" session in the Earth & Space Science Informatics (ESSI) at the European Geosciences Union General Assembly (EGU)	50 - 80	Set of abstracts - http://meetingorganizer.copernicus.org/EGU2010/session/1919
03-07.05.10	Mainz, Germany	JAX 2010 Java conference		Training in Java programming.
10-14.05.10	IAA - Granada - Spain	Grid Avanzado y paralelizacion	1	Advanced grid usage Parallel programming models
11-05.10	Karlsruhe, Germany	DECH Meeting	7	Clarification of future cooperation between Germany and Switzerland
21-21.05.10	Porto, Portugal	"GRID, PaaS for e-science"	1	Presentation given at 2nd CloudViews 2010 conference. Event URL at http://2010.cloudviews.org/site/?page_id=8. Presentation URL at http://www.slideshare.net/pcalcada/jorge-gomes-4315800
26-28.05.10	CERN, Geneva, Switzerland	EMI Kickoff	2 (SA1 & NA2)	EGI/Grid-Ireland will exploit some of the technology outcomes of this FP7 project
31.05.10	PARIS	Technical workshop of French NGI	84	Internal organization of France-Grille http://indico.in2p3.fr/conferenceTimeTable.py?confId=3782
31.5-3.6.10	Hamburg	International Super Computing Conference		EGI hosted a booth at the exhibition.
08.06.10	Amsterdam, Netherlands	EGI Council	2	
08.06.10	IOCCP-BAS, Sofia, Bulgaria	Bulgarian Grid infrastructure		Workshop organized by EGI-InSPIRE partner IOCCP-BAS, http://madara.orgchm.bas.bg/bg/wp-content/uploads/2010/05/Program_260510.pdf
14-15.06.10	Paris, France	StratusLab Kickoff Meeting	2	Some EGI partners and Grid-Ireland will exploit some of the technology outcomes of this FP7 project.

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
16-18.06.10	Madrid	eIRG Meeting	2	Plans and roadmaps for the mid and long term future
16-18.06.10	Amsterdam, Netherlands	Workshop on Evolution of WLCG data and storage management	2	Discussion and brainstorming for setting up the roadmap on how to evolve data management for the LHC in the next years. http://indico.cern.ch/conferenceTimeTable.py?confId=92416#all.detailed
16-18.06.10	Amsterdam, the Netherlands	WLCG Data Access and Management Jamboree	100	http://indico.cern.ch/conferenceDisplay.py?confId=92416
18-19.06.2010	Amsterdam	WLCG JSPG	1	
21.06.10	Sozopol, Bulgaria	Efficient Gridification of Environmental Protection Applications with QoS		http://2010.eac4amitans.org/resources/gurov1.pdf
21.06.10	Sozopol, Bulgaria	Sensitivity Studies of a Large-scale Air Pollution Model in Grid Environment	1	http://2010.eac4amitans.org/resources/real+prog+AMiTaNS$2710.pdf
20-22.06.10	Chicago	OGF 29	1	http://www.ogf.org/OGF29/
23.6.10	Karlsruhe, Germany	TAB ROC DECH Meeting	1	
27.06. 10	Amsterdam	T1 storage jamboree		Participation in a joined xrootd and dCache storage management project meeting.
28.06.10	Paris	Life Science VRC meeting		
28.06.10	Paris	HealthGrid 2010		
28.6.-3.7.10	Dubna, Russia	Distributed Computing and Grid-technologies in Science and Education" (Grid'2010)	2	Two presentations given, site status report and presentation of tool for central administration of a grid site

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
28-29.06.10	Barcelona, Spain	LHC Optical Private Network meeting	2	Working group to discuss and plan networking issues related to LHC data transfers. http://indico.cern.ch/conferenceDisplay.py?confId=88698
06.07.10	LYON	LCG-FR-TECH / SA1-FR Monitoring	6	Set-up Assessment and set-up of high availability mechanism of Nagios installation in France http://indico.in2p3.fr/conferenceDisplay.py?confId=4033
6-9.07.10	IFIC – Valencia – Spain	Curso Grid y e-Ciencia 2010	~20	Improvements on the use of the Grid. (general course) Presentation of IFISC grid activities (http://indico.ific.uv.es/indico/materialDisplay.py?contribId=24&sessionId=0&materialId=slides&confId=317)
04-07.07.10	Lisboa, Portugal	"Computação em LHC / CERN em GRID mundial"	2	Presentation on "Ciência 2010", a Government event joining all the Portuguese Associated Research Laboratories. Presentation not available under WWW.Program available in http://www.ciencia2010.pt/programa/detalhado.pdf. Event web page under http://www.ciencia2010.pt/
04-07.07.10	Lisboa, Portugal	"Cloud Computing: Da implementação às aplicações Científicas"	1	Presentation on "Ciência 2010", a Government event joining all the Portuguese Associated Research Laboratories. Presentation not available under WWW.Program available in http://www.ciencia2010.pt/programa/detalhado.pdf. Event web page under http://www.ciencia2010.pt/
07-09.07.10	Prague	International Conference on Digital Networked Technologies		Presentation with the title "A Toolkit for Application Deployment".
7-9.07.10	Imperial College, London	WLCG Collaboration Workshop	150	http://indico.cern.ch/conferenceOtherViews.py?view=standard&confId=82919 Feedback from experiments on the performance of the WLCG Grid infrastructure and vice versa; plans for next year. http://indico.cern.ch/conferenceOtherViews.py?view=standard&confId=82919
8.07.10	Valencia	7th International Grid and e-Science School	1	
10-12.07.10	ITU, Istanbul	BASARIM 2010	2	TR-Grid and National HPC Infrastructure http://www.basarim.itu.edu.tr

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
14. -18.7.10	Lecce, Italy	Pierre Auger Observatory Workshop	1	http://indico.nucleares.unam.mx/conferenceDisplay.py?confId=225 discussion about problems of mass production on grid (WMS performance, Auger db scalability, production jobs priorities)
15.07.10	Dublin, Ireland	HEAnet Networks Requirements Workshop	2	Addressing the future network requirements of HEAnet clients. Geoff Quigley presented the grid community requirements, with a focus on data movement and storage.
12-15.07.10	Geneva	ATLAS Software Workshop	1	Exchanging experience in testing, operation, application development, etc.
19.07.10	Madrid	OpenNebula Technology Days	1	http://www.opennebula.org/community:otd_0710 OpenNebula technology is used by the Grid-Ireland Ops Centre in testing middleware prior to full national rollout.
19-20.07.10	DESY Zeuthen, Germany	ATLAS Germany Computing Meeting		Discussion on increased use of the Tier1 for ATLAS user analysis.
	Amsterdam	Tape archive in WLCG		Discussion of common interests (Definition of Archives, Development tape vs. disk, Monitoring, data throughput, data quality, Tape WIKI site, Team up with storage working group).

8.4. Publications

Publication title	Journal / Proceedings title	Journal references *Volume number* *Issue* *Pages from - to*	Authors *1.* *2.* *3.* *Et al?*
WP4 (SA1) IPP-BAS			
Ultra-Fast Carrier Transport Simulation on the Grid. Quasi-Random Approach	in: Scalable Computing: Practice and Experience (SCPE), Scientific International Journal for Parallel and Distibuted Computing,	Vol. 11, no.2, June, 2010, pp.137-147, ISSN 1895-1767.	E. Atanassov T. Gurov A. Karaivanova
WP4 (SA1) KIT-G			
The DESY Grid Infrastructure	Particle Physics 2009. Highlights and Annual Report, DESY.	ISBN 978-3-935702-45-4. pp. 48-49	A. Gellrich
Multicores in Cloud Computing: Research Challenges for Applications	Journal of Computer	Vol.5, No. 6, June 2010. pp. 958-964	L. Wang, J. Tao, G. von Laszewski, and H. Marten
A Toolkit for Application Deployment on the Grid	Proceedings of the second International Conference on Networked Digital	July 2010. ISBN 978-3-642-14291-8. pp. 503-508	J. Tao and H. Marten

Publication title	Journal / Proceedings title	Journal references *Volume number* *Issue* *Pages from - to*	Authors *1.* *2.* *3.* *Et al?*
	Technologies		
WP4 (SA1) CSIC			
Ibergrid Transition to EGI	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 19-23	J. López Cacheiro, G. Borges et al
Provisioning of Grid Middleware for EGI in the framework of EGI	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 24-35	M. David, G. Borges et al
The road to Production: SGE Integration Process with CREAM-CE	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp.71-79	E. Freire, A. Simón et al
Contribution of the Iberian Grid Resources to the Production of Simulated Physics Events for the ATLAS experiment	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 165-176	M. Kaci, G. Amorós et al
The LHC Tier1 at PIC, lessons learned.	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pg. 508.	E. Acción et al.
The CMS Iberian Computing Sites performance in the advent of the LHC era.	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 177.	E. Acción et al.
Contribution of the Iberian Grid Resources to the Production of Simulated Physics Events for the ATLAS experiment.	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 165.	X. Espinal et al.
EGI.eu: The European Grid Initiative	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 5-15	I. Campos
Parallel Job Support in the Spanish NGI	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 60-70	Enol Fernandez
Virtualization and Networking Mirroring to deliver High Availability to Grid Services	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN 978-84-9745-549-7, pp. 440-451	Alvaro Lopez Pablo Orviz
The Metrics Portal: A tool to get statistics about EGEE operations	Proceedings of the 4th Iberian Grid	Ed.: Netbiblo ISBN 978-84-9745-549-7,	A. Simón, E. Freire, et al.

Publication title	Journal / Proceedings title	Journal references *Volume number* *Issue* *Pages from - to*	Authors *1.* *2.* *3.* *Et al?*
	Infrastructure Conference	pp. 48-59	
Operational Experience Running the CIEMAT Grid Site	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 189-200	Antonio Delgado Peris, Nicanor Colino Arriero, Juan Jose Rodriguez Vazquez, et al.
The CMS Iberian Computing Sites Performance in the Advent of the LHC Era	Proceedings of the 4th Iberian Grid Infrastructure Conference	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 177-188	Josep Flix, F.J. Rodriguez Calonge, Jose M Hernandez, et al.
WP4 (SA1) TCD			
The Grid-Ireland National Grid Infrastructure.	IBERGRID 4th Iberian Grid Infrastructure Conference proceedings	pp 19-23	John Walsh, Brian Coghlan
WP4 (SA1) RENAM			
MD-GRID NGI: Current State and Perspectives of Grid Technologies Development in Moldova	Proceedings of the 4th International Conference "Distributed Computing and Grid-technologies in Science and Education"	Distributed Computing and Grid-Technologies in Science and education: Book f Abstracts of the 4th international Conference. Dubna, June 28-July 3, 2010, Dubna, JINR, 2010, pp. 173-174	1.G.V. Secrieru 2 A.A. Altuhov 3. P.P. Bogatencov 4. E.V. Vasiucova
WP4 (SA1) LIP			
Ibergrid Transition to EGI	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 19-23	Javier Lopez Cacheiro, Gonçalo Borges et al (including authors from LIP)
Provisioning of Grid Middleware for EGI in the framework of EGI	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 24-35	Mario David, Gonçalo Borges et al (including authors from LIP)
The road to Production: SGE Integration Process with CREAM-CE	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 71-79	Esteban freire García, Álvaro Simón García et al (including authors from LIP)
Contribution of the Iberian Grid Resources to the Production of Simulated Physics Events for the ATLAS experiment	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 165-176	Mohammed Kaci, Gabriel Amorós et al (including authors from LIP)
The CMS Iberian Computing Sites performance	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 177-188	E. Accion, N. Almeida et al (including authors from LIP)

Publication title	Journal / Proceedings title	Journal references *Volume number* *Issue* *Pages from - to*	Authors *1.* *2.* *3.* *Et al?*
Portuguese Tier-2 readiness	4th Iberian Grid Infrastructure conference proceedings	Ed.: Netbiblo ISBN: 978-84-9745-549-7 Pages: 201-211	Goncalo Borges, Gaspar Barreira et al (including authors from LIP)