Changes to the EGEE-III DoW for Year II – 7th April 2009

Revised following AMB 2nd April 2009

This document describes proposed changes to the EGEE-III description of work. These changes have been proposed to meet two challenges:

- Transitioning EGEE to the operating model and infrastructure proposed by the EGI Blueprint
- Extending EGEE's key functions for an additional 3 months into year III to bridge a probable gap between the currently planned end of EGEE and before the start of EGI within the currently allocated budget.

Both of these tasks are essential so that the user community that has grown to depend on EGEE will see only a gradual change and no disruption in service over the next 18 months.

Broadly, this is achieved by reviewing the tasks being undertaken by the project and considering:

- If the task is essential for EGEE, and if not could the resources be better used elsewhere on a key function?

- If the task is not being undertaken within EGI does it need to continue in EGEE year II?

- If the task is due to be undertaken by an NGI in the EGI model, could it be transitioned to an NGI in year II and allow the resources to be used elsewhere on a key function?

We define the key functions as the capabilities that need to be retained from the currently projected end of the EGEE project (30/4/10) and the projected latest start of EGI (1/8/10).

The work for the remainder of the period and some changes to the quarterly reports, are defined where necessary through changes to existing tasks with new milestones, waypoints (considered to be internal milestones with a lower review overhead) and taskforces (that need to be established with EGI).

NA1

Change to TNA1.3 (Technical Management): Each month the TMB will review the progress of the product teams operating within JRA1 and the software development of operational tools within SA1. For JRA1, the delivery of work (as defined in MJRA1.3.2), the quality of the delivered software, and the resources consumed (from PPTs) will be reviewed and feedback provided to the project. This will include reviewing any changes to the MJRA1.3.2 workplan – each product's release roadmap for node type specific patches – as reflected in Savannah. For SA1 the operations tools under development during year II that are expected to support regional deployment (see table in SA1 section) will be regularly reviewed by the TMB and expected to follow the engineering best practices used elsewhere in the project (i.e. JRA1 & SA3). This meeting will effectively constitute the formation of an EGEE only Middleware Coordination Board as envisaged by EGI for the final year of the project.

NOTE: Invite EGI representative onto the programme committee for EGEE09.

TASKFORCE PM18: Identify relevant project, technical management and project office tasks (including event organisation) that need to be transitioned to EGI. Regular meetings should start once EGI defines appropriate staff.

WAYPOINT@ PM 19: TMB reviews the 'contractual' relationship with middleware provider (i.e. prototype gLite Open Consortium) and its product teams during the first 6 months of year II.

WAYPOINT@ PM 16: AMB reviews the results of the proposals submitted in March'09 by EUMedGrid, EUChinaGrid, EUIndiaGrid and if successful transition NA5's international liaisons tasks to these new projects, and stop funding participation by members of these projects to EGEE events. RESOURCE SAVING.

MNA1.5 @ PM19: Add into the 'status of transition to a sustainable infrastructure' details on the current resource sustainability options including a review of the Grids/Clouds paper, and current cloud collaborations and experiences within EGEE (i.e., Stratus Lab, RESERVOIR, Digital Ribbon, open-source efforts) and their ability to complement the existing production infrastructure.

NA2

In year II, the dissemination activity will become focussed on communicating to the EGEE community the upcoming move to EGI.

Change to TNA2.4 (Regional Effort): The regional dissemination effort within EGI is seen as an NGI International Task. Effort should be migrated to NGI funded resources wherever possible – and this must be enforced if this effort can be used to support key functions. ESTIMATE RESOURCES SAVED.

Addition to TNA2.1 (Web pages): Provide information relating to EGEE's transition to EGI through the website and a quarterly newsletter sent out to EGEE's registered user community. This should be done initially with the EGI_DS, and the EGI transition dissemination contacts.

New MILESTONE @ PM13: Develop material with EGI_DS that explains the advantages offered by EGI for a user and a NGI (i.e. resource provider) audience. Leverage the NA2 regional effort and NA4 user communities to include the concerns of these communities to meet EAC recommendations. Disseminate material directly to these communities through NA4 and SA1 channels.

TASKFORCE PM 18: Identify relevant tasks and services that need to be transitioned to EGI during the last 6 months of the project.

NA3

As envisaged in the EGI Blueprint there will be no directly funded t-infrastructure (although the formation of a support SSC for training is under discussion) and it is expected that NGIs will support their own training by using their own national production resources). During year II we will fully integrate the GILDA t-infrastructure with the production infrastructure. This will allow training resources to have the same professional monitoring and management that the production infrastructure benefits from. The existing training VO on the production infrastructure will be enabled on the training resources that will now be part of the production infrastructure.

Therefore an NGI's decision to use a particular resource for training becomes a decision to enable (or not) a training VO onto that resource into which trainees can be assigned. The training 'VO' model will be adopted during year II with all current EGEE training resources being integrated into the same operational model as the production service. The existing t-Infrastructure resources will be obligated to minimally enable the training VO and support the training CA while sitting within the production infrastructure. Some sites which support both training and production infrastructures may take this opportunity to provide a single integrated infrastructure while still being able to provide dedicated resources when needed for training events.

Changes to TNA3.2b (t-Infrastructure): Integrate the resources within the current GILDA infrastructure into the production infrastructure using the existing training VO that already exists on the production infrastructure. NGIs can of course enable their national training VOs on their resources. RESOURCE SAVING.

NOTE – This should free up resources (some of the 72PM at INFN and 48PM at STFC) that can be used for other activities, e.g. certification, as there will be no need to develop separate infrastructure. Other production sites on EGEE are not resources at this level. Could form part of the deployment testbed in SA3 that replaces the PPS.

ISSUE – Deployment of the training CAs on production sites.

ISSUE – Access to these training resources will need to be ring fenced for training courses when required.

WAYPOINT@ PM 13: Deliver a plan to the TMB developed in conjunction with SA1 for the coordination and integration over 3 months of the t-infrastructure with the production infrastructure and the establishment of a training VO.

WAYPOINT@ MONTHLY: Report monthly to the AMB on the countries that have 1 or 0 accredited trainers, 2 trainers or 3+ trainers.

New MILESTONE @PM19: Review the integration of the t-infrastructure with the production infrastructure and the establishment and functionality of a training VO.

TASKFORCE PM13: Joint NA3 & SA1 group to migrate and integrate GILDA resources into the production infrastructure.

NA4

In preparation for EGI, NA4 will move towards the interfaces and communication structures defined in the Blueprint. Each application SSC (current NA4 application domains) and potential support SSCs (such asNA3 training support and the NA2 Business Forum) will establish a co-ordinating contact point, support contact point, middleware contact point & operations contact point. These may be different people or a single person depending on the workload contained within these areas by the SSC. These representatives of the 'new' SSCs will form the interfaces into the UFSC and other emerging proto EGI bodies within EGEE – such as for middleware and operations.

Changes to TNA4.1.3 (Direct User Support): This is a key user facing function that needs to be extended for 3 months. This can be achieved by continuing to use resources at the current rate (25%

underspend at PM8). Continue with the ticket handling for documentation and usability issues (WP1) and the documentation and review of the use cases (WP2). RESOURCE SAVINGS in WP3, WP4 & WP5.

ISSUE: Invite members of EGI onto UF5 organising committees as soon as EGI transition team is identified.

Changes to TNA4.3.1 (Management): The NA4 Steering Committee will assume the role of the User Forum Steering Committee (continuing to be chaired by the NA4 activity leader) as defined in the EGI Blueprint. The membership will be expanded to include the NA3 activity manager to ensure that any future training function (e.g. within an SSC or NGI activity coordinated through the EGI) is aligned with user requirements, a representative from the Business Forum within the NA2 management to provide input from business users and representatives from EGI when identified. Continue to provide feedback to EGI on the interactions needed between science and support SSCs and the central EGI organisation.

Changes to TNA4.3.2 (Regional Support): This activity (apart from the development and maintenance of the Application Database at GRNET) should migrate to the NGI releasing resources, generally located with the ROCs, to support extending ROC activity. The NGI must provide a contact point for NA4 communication and dissemination, and for registering regional applications in the applications database. RESOURCE SAVING.

Addition to all SDCs in TNA4.2: All SDCs will establish science gateways/portals to improve access to EGEE within their communities using existing technologies (e.g. from RESPECT). If deployment is not possible without extensive integration then the additional functionality necessary to meet the particular needs of the community must be identified.

ISSUE: Identify who supports, hosts and manages the portals/gateways.

TASKFORCE PM18: NA4 will form a taskforce with representatives of the EGI to deal with transition issues.

NA5

This activity is seen to continue in EGI as a central funded co-ordinated activity with input from the NGIs and this will be the model we will transition to in year II.

Changes to TNA5.1 (Contributions to e-IRG): Resources at INFN and GRNET will be maintained to coordinate input from the project partners. However, effort for this regional engagement must come from within the NGI. Baseline funding for next year at underspend level for this year. RESOURCE SAVING.

Changes to TNA5.3 (Standardisation): Resources at GRNET will be maintained to coordinate input from the project on standardisation issues. However, effort for this regional engagement must come from within the NGI. RESOURCE SAVING.

SA1

Changes to TSA1.1 (Grid Management): Establish a managerial equivalent of the EGI Operations Unit within this task to verify the manpower levels and operational procedures that will be used within EGI.

Changes to TSA1.3 (Support to VOs, Users & Applications): This task covers the central support of GGUS, participation in site and user training sessions, regional TPM, regional helpdesks, and user support (including dedicated LHC support). The central support of GGUS will remain as part of this task. Regional support activities (i.e. training, TPM, user support and helpdesk functions) will be expected to be supported through the NGIs, or by NGIs working together as part of a region. The dedicated LHC support team should become part of the NA4 HEP activities. Generic VO support activities should devolve to the countries active within that VO, i.e. their local NGI. RESOURCE SAVING.

Changes to TSA1.2 (PPS): The Pre-Production Service (PPS) has resources for two functions – to provide a 'Deployment Testbed' and to offer a 'Pilot Service' for major new certificated functionalities into production use with early adopter communities. With the improvements made in the certification process the deployment testbed is no longer seen as providing significant benefits in terms of user support. In addition, once released to production many regions undertake their own rollout tests before wide scale release, by running the software on production sites. It is proposed that these two stages be merged into one by having a 'rollout testbed' composed of representative sites (e.g. different batch systems) from the regions that undertake to deploy new certified software release in a timely manner. A staff member is envisaged within the EGI Blueprint for this model of operation. Note: It is envisaged that communities and sites currently interested in supporting 'Pilot' activities will also be interested in getting engaged in earlier phases of a product's development through 'Experimental' services.

Changes to TSA1.2 (Development of Operations Tools): During earlier phases of the EGEE projects operational tools were operated centrally and not deployed onto other sites. The move to NGIs has led to a need for some operational tools (summarised below) to be deployable at a regional level and potentially federated with central services.

Tool	Lead Partner	Current EGEE deployment	Expected EGI deployment architecture		Notes	Year II TMB Review
			Central	Regional		
GOCDB	STFC	Yes	Yes	Yes	Work underway to have federated architecture	Y
GGUS	KIT	Yes	Yes	No	Define interfaces between central and regional helpdesks	N
Central Monitoring	CERN	Yes	Yes	No	SAM phased out and replaced with Gridview	N
Operations Metric Portal	TBC!	No	???	???	Work to be assigned	???
Regional	CERN	Yes		Yes	Deployment	N

Tool	Institution				Notes	
Monitoring (Nagios)					underway	
Regional Monitoring (Sensors)	SRCE	Yes		Yes	Deployment underway	N
Operations Dashboard	IN2P3	Yes	Yes	No	Provide a regional view	N
Operations Portal	IN2P3	Yes	Yes	No	Provide a regional view of current CIC	N
Accounting (APEL)	STFC	Yes	Yes	Yes	Move from RGMA to ActiveMQ before working on regionalisation	Y
Accounting Portal	CESGA	Yes	Yes	No	Provide regional views	N
Messaging	CERN	Yes	Yes	Yes		Y
Information System Monitoring	ASGC	Yes	Yes	No	Possibly integrate with BDII	

Comment [J5]: To be checked with SA1!

As some of these tools are now going to be deployed outside of their development environment it is vital that the experiences learnt elsewhere in the project (i.e. JRA1 and SA3) on software development, testing and certification are applied here. Progress on the operations tools that are being actively developed during year II for a regional deployment will be required to use best practices used elsewhere within the project, and will be monitored by the TMB

WAYPOINT@ MONTHLY: Report to the AMB each month on the number of sites in each country that have signed a SLAs.

WAYPOINT @ PM13 (with SA3): Revise the software release and deployment procedure that uses a 'rollout testbed' as opposed to the Deployment Testbed in the current PPS.

WAYPOINT@ PM 13 (with NA4 & JRA1): Define for the TMB an API to support operations, application and potentially middleware (e.g. FTS, L&B) messaging requirements that can be supported by the MQ system, can be wrapped to provide a compatibility library for existing RGMA users (if needed) and satisfies current and short term needs of the broader EGEE development community.

WAYPOINT @ PM15: Deliver to the TMB a document describing the current readiness of the Operations Tools (the NGI Global tasks) for redeployment into other environments including pointers to any downloads sites, source code repository, support mechanisms, documentation, test deployments by others, etc.

WAYPOINT @ PM 16: Report to the TMB on the removal of RGMA from the operations infrastructure and replaced it with ActiveMQ. NB: all operations tools will use a single messaging infrastructure to simplify support burdens.

New MILESTONE @ PM 16: Document the software and human interfaces currently being used by central operations to integrate with the NGIs reviewing all operational documents for alignment with the EGI model, revising where necessary. Including the GGUS interface to regional help desks.

WAYPOINT @ PM17: Full deployment of the work from the Operations Automation Team.

New MILESTONE @ PM19: Review all SA1 process, policy and procedures and update as required to ensure it captures current practices and reflects the coming EGI model.

Addition to MSA1.11 @ PM 20 (TSA1.4 Security): Ensure JSPG review and update all policy documents where needed so that they are ready for the EGI in addition to integration between national and international Grid infrastructures.

Addition to the QR: Define a reporting template (taken from the current QR) where each country directly reports its SA1 related activity including the country report metrics (including national and international resource use). The SA1 QR will become the direct assembly of these reports with minimal editing. The reason for this change is for the NGIs to establish reporting activity of their international and global NGI tasks, and to regularly review the expanding metrics automation work.

NOTE – Examine how saved resources could provide additional effort for the metrics automation team.

TASKFORCE PM18: Work with EGI to define hand over of tasks.

SA2

This activity is seen to continue in EGI as part of the networking function within NGIs and this is the model we will transition to in year II.

Change to TSA2.1 (ENOC): In preparation for the EGI model establish and operate the ENSC (EGI Networking Support centre) by migrating from the current ENOC. This will include defining the operational tasks that can need to take place as global tasks (by EGI) and the contributions that need to come from NGIs to operate this centre - allowing the rotation of this role amongst interested NGIs (e.g. current SA2 participants) to verify operational procedures and build experience. This will include making available any software code related to the networking function in a simple package with sufficient documentation and installation support.

Addition to MSA2.3.2: Document the availability of all source code for networking operations and support through pointers to the relevant source code repositories or package so that the software can be built by groups other than their development groups. Establish the operational procedures for the EGI and NGI operators of the ENSC and its integration into existing EGEE and future EGI infrastructures.

TASKFORCE PM 18: Work with EGI to handover operations tasks.

SA3

In year II a proportion of central SA3 certification and integration resources will be assigned to the existing engineering teams and their clusters of competence to form integrated product teams. The

product teams will be ***completely*** responsible for delivering to state certified working deployable production quality software to operations by balancing the allocation of work (engineering, testing, and certification) within the team. A team will be established (equivalent in size and role to the EGI MU) to undertake central tasks – such as verification, identifying areas for further process automation, and the remaining integration work that does not fall into a clear product team (e.g. components from external software providers) or cuts across product teams (e.g. UI).

Product teams will be encouraged to establish direct contact with relevant and representative customers (deployers of the software and end-users of the software) through the relevant support function so that feedback can be given to early prototypes, the hosting of 'experimental services' and the eventual deployment of 'pilot services'. These collaborations can be used to supplement the dedicated resources (currently provided by SA3 & the PPS) with resources contributed by NGIs as described in the EGI Blueprint.

Changes to TSA3.5 (Activity Management): Establish a managerial equivalent of the EGI Middleware Unit within this task to verify the manpower levels and operational procedures that will be used within EGI. This will include managerial input from JRA1 and resources from TSA3.1.

WAYPOINT@ PM 13: Review for the TMB all the certification tasks undertaken for each component are clearly documented so that they can be undertaken by the clusters of competence.

WAYPOINT@ PM13: Review the current and generate any additional documentation as needed to support the product teams in their certification tasks including how to make an internal release between product teams, how to compose a new product release, and how to release a new node type into production.

WATYPOINT @ PM 13: Define the base development environment (the client/SDK environment) that will be used by ***all*** developers to develop/build/test against and the procedures (with JRA1 if needed) that they should be following to do so correctly. A mechanism for defining the SDK will be agreed by SA3 and JRA1, and proposed to the TMB for their approval.

WAYPOINT@ PM 15: Review the current test coverage and develop a prioritised plan with JRA1 to expand the test coverage.

Add to MSA3.4.2@ PM 20: Review all process and certification documentation to ensure that it reflects current processes and lessons learnt from product team system.

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JRA1

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In preparation for EGI and gLite's inclusion in UMD we will be establishing the 'gLite Open Consortium' during EGEE year II. For the whole of year II the project will establish a technical and managerial 'customer' relationships between the project and the individual product teams that would exist within the proposed gLite Open Consortium. The outputs from these product teams will be integrated using a common build system and release structure to manage the release process. The gLite Open Consortium will agree a set of tools, environments and processes to manage their internal development and testing.

The new product groups would use local resources for developer testing. For larger scale testing and certification resources we expect resources to be allocated from NGIs as described within the EGI model. A common minimal build and test methodology will be established. It is **not** acceptable that the implementation of these changes and the use of a consistent development methodology and release process can be vetoed or ignored by *any* individual developer.

Changes to TJRA1.1 (Middleware Engineering): The existing clusters of competence will be enlarged with additional resources from SA3 so that these product teams are responsible for the whole delivery of the software. The product team are defined below (to be inserted!).

The goals for the second year will be developed in DJRA1.1 (due PM11) to include:

- To propose **clear** suggestions on error codes/messages (including for authorization) including a strategy to manage backward compatibility for review by the TMB.

- Engineering work to review, rationalise and reduce the dependency between difference software components. This will reduce the interdependencies between different product teams.

- Work to review the current documentation and ensure that all public APIs and CLIs.

- Engineering work to fixing error codes and error messages so that they reflect the best practice endorsed by the TMB.

- Engineering work to meet the priorities defined by the TMB such as the porting of gLite to the platforms defined by the TMB, support for IPv6, ...

- Ensure that all software components can produce separate client and server binary packages for deployment.

- Ensure all source code has the correct copyright and license notice and that source distributions include appropriate top-level LICENSE file and inventory of any licenses required for any dependent libraries provided with the distribution.

- An assessment as to if the work needs to be done before the end of the project as it has a clear need for operational effectiveness or a specific user community. Can components go into a 'critical fixes only' mode?

These goals for year II will be developed within MJRA1.3.2 which will include relevant prioritised work items for each product team to achieve these goals. The work items will be scheduled for each product team and grouped around their releases of particular node types. This move to a coordinated and scheduled releases of patches grouped around node types will reduce the workload on SA3 and resulting in better use of our limited resources.

WAYPOINT @ PM 13 (with SA3): To review the current software process and its supporting tools (e.g. ETICS, CVS, Savannah) in order to define which tools will be used for the remainder of the project and form the basis of the initial toolset used by the gLite Open Consortium.

WAYPOINT @ PM 15: Enhance the JRA1 website (Twiki) through the year II workplan so that it becomes a clearly useful resource for any developer (external to gLite consoritum) wishing to build upon gLite. This should include CLEAR links to the source code repository(s), issue trackers, documentation, etc.

New MILESTONE @ PM18: Establish a legal entity for the gLite Open Consortium.

New MILESTONE @ PM18: Establish gLite Open Consortium a website (www.glite.org?) referencing the partners within the consortium and the work of the consortium. The list of components in the consortium may diverge from those on the production infrastructure - the current definition of gLite.

TASKFORCE PM 18: From PM 18 work with the UMD partners to establish a website (UMD.org) referencing the software envisaged to be in UMD from the many software providers including the gLite Open Consortium.

TASKFORCE PM 18: SA3/JRA1: Prepare plans for the end of the project, in conjunction with the other software providers within EGI, for the current gLite.org website to become 'UMD.org' (for example) and to provide pointers to other software providers, and for gLite.org to become the gLite Open Consortium (JRA1) website.

New MILESTONE @ PM 19: Review all process and technical documentation to ensure that it reflects current practices being used within the gLite Open Consortium

Addition to QR: Define a template that will be used by each product team to report on its activities. These will be assembled by the activity leader.