

EGEE-III, NA4, Application porting support group

Workplan

Change log:

v1.0 Gergely Sipos prepared first draft, 26/05/08

v.1.1 Frederic Schaer added CEA person effort, 28/05/08

v1.2 Ignacio Martin Llorente added UCM contribution, 28/05/08

v1.3 Isabel Campos Plasencia added CSIC contribution and comments, 28/05/08

v2.0 Gergely Sipos merged 1.x versions into v2.0, 30/05/08

Introduction

The third phase of the EGEE project started on the 1st of May 2008, flagging application porting as one of the key support activities. In order to provide high quality porting service a geographically distributed Application Porting Group has been set up. The group is coordinated by MTA SZTAKI GASuC team from Budapest and there is allocated manpower from six other partners from Europe, Asia and Australia: UCM (Spain), INFN (Italy), ASGC (Taiwan), CEA (France), CSIC (Spain), UM (Australia).

Porting Support group provides assistance for new and experienced grid users who wish to port applications to the EGEE Grid. Experts from the porting team work closely with application owners to understand their requirements and to identify suitable approaches and tools for the porting process. Intensive workshops and personalized training events organized by the team ensure that new applications benefit from the EGEE Grid as soon as possible. The group's focus is on the porting of legacy programs that are typically used on a single or on some parallel computer and now require larger capacities that can be collected from EGEE, or the program needs to be shared by a distributed user community thus must be ported to a grid platform.

Members of the application porting group

(copied from <https://edms.cern.ch/document/910178/1>)

Partner	Name	Email	Pm
SZTAKI	Gergely Sipos	sipos@sztaki.hu	13
SZTAKI	Gabor Hermann	ghermann@sztaki.hu	18
SZTAKI	Timea Nagy Gellai	ngt@sztaki.hu	24
SZTAKI	Agnes Jancso	jancso@sztaki.hu	24

SZTAKI	Peter Kacsuk	kacsuk@sztaki.hu	7
SZTAKI	Robert Lovas	lovas@sztaki.hu	6
SZTAKI	Miklos Kozlovsky	m.kozlovsky@sztaki.hu	6
SZTAKI	Zsolt Nemeth	zsnemeth@sztaki.hu	6
SZTAKI	Sandor Acs	acs@sztaki.hu	1
SZTAKI	Persons to be hired in future		21
INFN	Valeria Ardizzone	Valeria.Ardizzone@ct.infn.it	12
INFN	Giuseppe La Rocca	Giuseppe.Larocca@ct.infn.it	12
INFN	Giuseppe Platania	giuseppe.platania@ct.infn.it	4
INFN	Roberto Barbera	roberto.barbera@ct.infn.it	3
INFN	Giuseppe Andronico	giuseppe.andronico@ct.infn.it	5
INFN	Piergiorgio Cerello	cerello@to.infn.it	6
CSIC	Isabel Campos	iscampos@ifca.unican.es	8
CSIC	Alvaro Lopez	aloga@ifca.unican.es	2
CEA	Frederic Schaer	frederic.schaer@cea.fr	11
UCM	New engineer to be hired june 1st		23
UCM	Jose Herrera Sanz	jherrera@fdi.ucm.es	23
UCM	Ignacio Martin Llorente	llorente@dacya.ucm.es	2
TOTAL			237

Subtasks

1. Setting up working environment and defining policies:

The subtask develops the policies for the porting support process and sets up the infrastructure which can be used during the porting itself. This task runs from the start of the project. The policies should assure that support is provided in a standardised and measurable way at every partner. The primary responsibility of the porting activity is to provide technical consultancy for users who wish to port legacy applications to the EGEE Grid. The policy should define the documents and forms that porting members should use to interact with clients and to report about the support activity to the project. Most of the porting centers provided porting services already in the previous phases of the EGEE project. This subtask analyses the support processes that are used by the partners and harmonizes those to make sure that the support activity is provided in similar way and at equal quality at every porting group member. Organizing the work of the support centers according to a common policy will help better collaboration among centers, between centers and clients and will help the preparation of reports. Tasks performed within this subtask are:

- Setting up a new VO which can be used for application porting and which is supportive towards all the services of gLite and tools included in the RESPECT program.

- Identify and / or setting up collaborative work environment: document server, wiki server, email list
- Define work policy, develop related documents and forms:
 - Application identification and description form: to be filled out by application owner at the beginning of the support process
 - Porting guide - technical recommendation (document template): to be used by porting members as a template to produce the technical analysis and porting recommendation for an application.
 - Porting support evaluation form: to be filled out by the owner of the application at the end of the support process to evaluate the support service.
 - Request form for financial support to visit porting center: form to be filled out by those clients who wish to visit a porting support center to get face-to-face support for the porting. Financial support for the visit can be given from the “community bootstrapping” fund.

Duration: Months 1-3,

Total effort: 5 PMs

Participants: From SZTAKI

- **Gergely Sipos with 2PM**
- **Agnes Jancso with 2PM**
- **Isabel Campos from CSIC with 0,2 PM**
- **Ignacio M. Llorente from UCM with 0.2PM**
- **Frederic Schaer from CEA with 0.2PM**

2. Porting support:

This subtask involves the technical analysis work that is provided for clients as part of porting support. The analysis uses the information collected from client with forms, face-to-face and/or telephone interviews. Based on the collected information the technical analysis of the porting problem is carried out and a technical analysis document is produced. Earlier experiences show that before such a document can be prepared the porting support team must test and evaluate ideas if they are new and have not been used before. This testing action also belongs to this subtask.

Most of the effort which is allocated to Application porting in NA4 will be spent on this subtask. The actual effort that is required to perform this task highly depends on the number of clients, on the number and type of applications that the support group will have to work with. Despite the actual porting must be performed by the owner of the application based on the technical analysis document, it is expected that many application owner will ask for support from the porting group to perform the porting as well.

It is expected that clients will ask for porting support from institutes they know, requests will work on personal contacts. However, to increase the equal distribution of work the webpage of the Application Porting Group (www.lpds.sztaki.hu/gasuc) will be updated in a way that the client can have a clear understanding of local expertise that exist at the different centers and will be able to contact any of them directly. Clients who do not know about application tools and concepts at all will be advised to contact SZTAKI. In such situations SZTAKI will make an initial evaluation of the porting problem to figure out which tools would be candidates for the porting and would route the request to them.

Centres that are contacted directly can serve such clients if they can, but need to report about the application and the porting progress to SZTAKI to make sure the effort is included in periodic reports and will contribute to overall metrics.

It is expected that most of the applications the porting groups will work with require high level tools (mostly tools from the RESPECT program). Most of the RESPECT tools are developed and supported by members of the porting group so primary support for these tools can be provided within the network. The current RESPECT tools, special solutions and their affiliation to porting centres is the following:

- GridWay metascheduler: UCM
- P-GRADE Portal: SZTAKI
- GANGA: No primary affiliation. Involvement of GANGA Group from CERN is needed. The GANGA group operates a porting group for the High Energy Physics cluster and they their expressed their support to applications coming outside of this domain.
- DIANE: Same as GANGA as the tools are developed and supported by the same group.
- i2glogin: CSIC
- GReIC: no dedicated porting center yet, as the tool has been added to the RESPECT programme recently. Negotiation with the tool developer community is needed to find out if they are able to support users in application porting, or alternatively expertise about the tool must be developed at one of the porting centres.
- MPI: CSIC

The subtask will be measured with the following metrics. The data will be collected from centres by the coordinator. Centres are responsible for collecting information from clients that is necessary to produce metrics:

- Number of ported applications per porting center
 - Scientific domain the application originates from
 - Who is the owner of the application (Member of the EGEE-III project or member of FP7 project receiving fund for application porting or person/community not directly founded to port application to EGEE)
 - Technology and tool used for the porting
- Number of publications written from ported results (scientific significance)
- Number of ported / number of rejected applications

- Reasons of rejection
- Man days (weeks?) spent with porting
 - At porting center
 - At client
- Client satisfaction
 - Satisfaction with the porting service
 - Satisfaction with EGEE grid
 - Suggestions for improvement
 - Suggestions for improvement
 - Level & quality of Grid application vs original expectations

Duration: Months 1-24,

Total effort: XXX PMs

Participants: From every partner

- SZTAKI
 - **Gergely Sipos (2PM): advisor on gLite command line tools, P-GRADE Portal, GANGA and GridWay. Write technical specifications for porting persons.**
 - **Gabor Hermann (16PM): support person and expert on porting with P-GRADE Portal.**
 - **Timea Nagy Gellei (22PM): support person and expert on porting with gLite command line tools, APIs and scripting.**
 - **Agnes Jancso (18PM): writing reports and technical documentation for porting clients.**
 - **Peter Kacsuk (5PM): support person and expert on porting with P-GRADE Portal.**
 - **Robert Lovas (6PM): support person and expert on porting with gLite command line tools and APIs.**
 - **Miklos Kozlovszky (4PM): support person and expert on porting with gLite command line tools. Write technical specifications for porting persons.**
 - **Zsolt Nemeth (3PM): support person and expert on porting with P-GRADE Portal.**
 - **Sandor Acs (1PM): System administrator, responsible for local infrastructure at SZTAKI that is necessary to access services of the EGEE grid.**
 - **Akos Balasko (19PM): support person and expert on MPI, web/grid portal development and EGEE command line tools.**
- UCM
 - **Ignacio M. Llorente (1PM): advisor on GridWay. Write technical specifications for porting persons.**
 - **José Herrera (21PM): support person and expert on GridWay APIs (C and Java DRMAA bindings) and scripting (Perl, Python and Ruby DRMAA bindings).**

- **New engineer (20PM): support person and expert on GridWay command line tools. System administrator, responsible for local infrastructure at UCM that is necessary to access services of the EGEE grid**
- **CSIC**
 - **Isabel Campos (5,8PM): expert on MPI applications and porting of MPI applications to Grid infrastructures. In cooperation with VO managers group, established the conditions that a VO should fulfil, at the site support level, in order to guarantee that generic MPI applications run. This task requires to get in contact with site admins via SA1 and VO managers.**
 - **Alvaro Lopez (1PM): support person and expert on MPI middleware support.**
- **CEA**
 - **Frederic Schaer (2PM): supporting those clients who need to set up new VOs for the application before or after it is ported to EGEE.**

3. Training, self-training:

Providing training on high level tools and reusable application examples for those who will perform the actual porting work is often required in a porting project and it is typically critical for the success of the collaboration. In this task members of the application porting group will prepare training materials strongly related to application porting and can be offered for clients of the porting activity. The materials should be reusable not only in porting project, but also by the training activity of EGEE, e.g. in “EGEE Application Developer Courses” (<http://wiki.nesc.ac.uk/read/egee-na3-etf?EtfAppDev>).

The team will interact closely with the core middleware developers and with the application services developers to stay abreast of the current capabilities of the middleware, problems, and third-party services that work well with the EGEE software stack. Although most of the tools currently included in the RESPECT program are developed by members of the porting group thus knowledge is available in the group, in the future this will probably change and building up competence on additional RESPECT tools will be necessary.

Interaction on resource allocation and VO management is also required. This will be conducted through the VO management group (CEA is involved in both) and through the Resource Allocation Group which includes partner from SZTAKI, CEA and from the SA1 activity.

Duration: Months 1-24,
Total effort: XXX PMs
Participants:

Participants:

- **SZTAKI**
 - **Gergely Sipos (2PM): learning about new capabilities of gLite and new tools of the RESPECT program, primary interface to NA3.**
 - **Gabor Hermann (2PM): preparing reports on P-GRADE Portal based porting case studies.**
 - **Timea Nagy Gellei (2PM): preparing reports on gLite based porting case studies, learning new capabilities of gLite.**
 - **Peter Kacsuk (1PM): learning new capabilities of gLite and new tools of the RESPECT program.**
 - **Miklos Kozlovsky (1PM): learning new capabilities of gLite and new tools of the RESPECT program.**
 - **Akos Balasko (2PM): learning latest developments of MPI, SDJ and other advanced features of gLite.**
- **CSIC:**
 - **Alvaro Lopez (2PM): support documentation in the context of the RESPECT program for: MPI-START and I2GLOGIN. Document MPI support.**
- **UCM:**
 - **Ignacio M. Llorente (0.8PM): learning new capabilities of gLite and new tools of the RESPECT program.**
 - **José Herrera (2PM): learning new capabilities of gLite and new tools of the RESPECT program.**
 - **New engineer (2PM): preparing reports on GridWay based porting case studies, learning new capabilities of gLite and new tools of the RESPECT program.**
- **CEA:**
 - **Frederic Schaer: providing help and documentation for VO related issues of application porting.**

4. Dissemination and PR:

The success of the activity is highly depends on the level of dissemination performed to reach potential clients. A separate subtask is allocated for dissemination and PR activities. The subtask will run during the whole duration of the project and people being involved in this subtask will collaborate with NA2 to reach communities who would be potential clients of the application porting activity. Specific actions to be performed within this subtask are:

- Assuring continuous presence of the application porting group at events organized by EGEE
- Preparing dissemination material about the porting activity and placing them on Web pages maintained by EGEE and EGEE partners
- Supporting other projects who wish to use gLite, reaching out to new communities with the help of NA2.

- Maintenance of the Grid Application Support Center webpage which serves as a central webpage for clients of the application porting activity. (www.lpds.szta.hu/gasuc). Adding case studies, success stories, technical tips and recommendations for gLite grid application developers. In the long run the content could become the basis for a gLite user community portal which would be useful to keep gLite users together in the EGI/NGI era.

Duration: Months 1-24,

Total effort: 8PMs

Participants:

SZTA:

- **Gergely Sipos with 1PM: preparation of content**
- **Agnes Jancso with 3PM: preparation and sending out content**
- **Zsolt Nemeth with 3PM: web master**

CSIC: Collaboration with EUFORIA and DORII, both user communities oriented projects and outreach to new communities as NA2 partners.

- **Isabel Campos with 2PM: establishing the link with porting activities in related projects in FP7 like DORII and EUFORIA; preparation of contents for dissemination.**

UCM

- **New engineer (1PM): preparation of content, attendance to EGEE events**

5. Management:

In this subtask the coordinator of the application porting group will perform the overall coordination, which will include the following actions:

- Defining roadmap for the porting activity
- Monitoring of progress of the porting activity against the plans
- Monitor those services of the NA4 VO that are critical for Application Porting, report problems to operators, TCG and JRA1
- Collecting input for periodic reports from partners, producing reports for NA4 activity management
- Representing the support group in NA4 Steering Committee and at project level

Duration: Months 1-24,

Total effort: 9 PMs

Participants:

- **Gergely Sipos with 6PM (activity coordinator)**
- **Miklos Kozlovszky with 1PM (deputy activity coordinator)**
- **Peter Kacsuk with 1PM**
- **Agnes Jancso with 1 PM**

