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Status of Environment and
User Related Application Support in the First Year

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1 Introduction

1.1 Executive Summary

The *Environment and User Related Application Services* Work Package (WP6) has two major complementary objectives: first, to maintain and improve the applications environment; and second, to provide support to users in the applications area.

To achieve the first objective, a software layer has been defined and deployed since the beginning of the 'DEISA1' project. It is named the *DEISA Common Production Environment* (DCPE), which is one of the major features in DEISA. It defines a coherent set of software, accessible on the various sites of the infrastructure, and it also offers a common interface to the users, which is independent of the target platform employed. Further, to permanently check the availability of the software included in the DCPE, a monitoring framework has been deployed and is actively maintained to provide a complete view of the status of the software availability on the different platforms integrated in the infrastructure. The tasks T6.1 and T6.2 are those related to these activities.

Concerning the second main objective, the support provided to the users is based on the usage of a Help Desk service, which manages the requests for information or assistance. According to the experience gained from 'DEISA1', in which the support provided to users was managed on a local basis, we have defined a completely new procedure to have it *locally supported but centrally managed*. The key tool used to manage this service is the *DEISA Trouble Ticket System* (DTTS), which is also heavily used internally by staff members, and is maintained by the Operations Service Activity (WP3). Further, to complement the user support activities outside the classical management of the requests sent to the Help Desk, special efforts are made to promote the various DEISA middleware and to help users to efficiently use the DEISA hardware and software infrastructure, offering dedicated advanced application production assistance. In addition, support is also provided by the traditional way of documentation related to all the DEISA services accessible to the users. The user documentation is updated when required and, of course, created when new user services are provided. The tasks T6.3, T6.5 and T6.4 are those related to these activities, respectively.

This document gives a detailed overview of all the work achieved or currently undertaken in this Work Package during the reporting period, for the five different tasks mentioned.

This document is publicly available.

1.2 References and Applicable Documents

- [1] Description of Work (Annex I of the Grant Agreement)
- [2] DEISA web pages: <http://www.deisa.eu>
- [3] Deliverable DEISA2-D1.1: Initial Report on Management
- [4] DEISA2-D3-1.1: WP3 deliverable: Initial Report on Operations and Quality Plan
- [5] DEISA2-D3-1.2: WP3 deliverable: Status of Operations in the First Year
- [6] DEISA2-D6.1: WP6 deliverable: Initial Report on Environment and User Related Application Support

- [7] DESHL (*DEISA Services for the Heterogeneous management Layer*)
<http://forge.nesc.ac.uk/projects/deisa-jra7/>
- [8] Globus Toolkit: <http://www.globus.org/toolkit>
- [9] INCA (Test Harness and Reporting Framework): <http://inca.sdsc.edu/>
- [10] Modules: <http://modules.sourceforge.net/>
- [11] Request Tracker: <http://www.bestpractical.com/rt>
- [12] TeraGrid: <http://www.teragrid.org/>
- [13] UNICORE (UNiform Interface to COmputing REsources):
<http://unicore.sourceforge.net/>

1.3 Document Amendment Procedure

This document is prepared according to the guidelines defined by the management of DEISA2. These rules can be found in section 2.7 of the deliverable DEISA2-D1.1 [3].

1.4 List of Acronyms and Abbreviations

ATaskF	Applications Task Force
BSCW	Basic Support for Cooperative Work
DART	DEISA Accounting Report Tool
DATS	DEISA Applications Test Suite
DCPE	DEISA Common Production Environment
DEC	DEISA Executive Committee
DECI	DEISA Extreme Computing Initiative
DEISA	Distributed European Infrastructure for Supercomputing Applications
DESHL	DEISA Services for the Heterogeneous Management Layer
DLLTS	DEISA LoadLeveler Test Suite
DoW	Description of Work
DTTS	DEISA Trouble Ticket System
GridFTP	File Transfer Protocol in Grid Computing Networks
gsi-SSH	Globus Security Infrastructure Secure Shell
PI	Principal Investigator
SDSC	San Diego Supercomputer Center
SSH	Secure Shell
UNICORE	UNiform Interface to COmputing REsources

2 Management of the Environment and User Related Application Service

2.1 Introduction

As stated in the general introduction in the previous section, the activities in this Work Package are divided in five different tasks. In this Section we explain how these tasks are managed and what are the special relationships established with some of the other Work Packages.

Nearly all partners are involved in the same manner: 12 PM of contributed effort from each partner, except IDRIS, with 24 PM as the coordinator of the Work Package, EPCC with 16 PM, and ECMWF with 2 PM.

It must also be emphasized that there is a strong relationship between this Work Package (especially its tasks T6.1, T6.2 and T6.3) and task T3.5 (User-Related Services) of Work Package 3 (Operations).

2.2 Management organisation

2.2.1 WP6 Tasks

Each of the five tasks defined inside this Work Package has a dedicated Task Leader, under the responsibility of the Work Package leader. Each Task Leader is in charge of:

- the specific management of his task,
- the definition of the work,
- monitoring the progress against the initial objectives,
- reporting progress and any problems and/or difficulties encountered.

The responsibilities are the following:

- T6.1 – Evolution of the DEISA Common Production Environment: IDRIS
- T6.2 – Monitoring of Applications availability: LRZ
- T6.3 – Help Desk: SARA
- T6.4 – User Documentation: EPCC
- T6.5 – Advanced Application Production Assistance: CSC

2.2.2 Relationships with the other Work Packages

This Work Package (WP6) has a strong connection with several others. The strongest relationship is with the Operations Work Package (WP3), which is in charge of all the operational aspects of the infrastructure. It is obvious that all the operational services of DEISA in WP3 directly concern and impact the users, thus they have strong relevance for WP6. This concerns all the subtasks of the operational services and especially the User-Related Services (T3.5). Thus, the same person was chosen to be the Task Leader for T3.5 and Work Package Leader for WP6, to ensure the closest possible relationship.

But strong connections also exist with other Work Packages: WP2, for the documentation (maintenance of the tools to manage and publish the documents) and training activities in

particular; WP4, for the work on technologies which can potentially become operational services accessible to the users; WP5, for the enabling of applications which will become applications for production mode operation, using both the dedicated user environment and user support; and WP7, in charge of the coordination of the projects of the *DEISA Extreme Computing Initiative* (DECI).

2.2.3 Organisation of videoconferences and face to face meetings

Monthly videoconferences (on the first Friday of each month) are set up to discuss the status of the activities, as well as any current problems and the planned work and events. Minutes are written after each of these videoconferences, summarizing the main points discussed and the actions planned, as well as the status of the actions decided during preceding videoconferences. Additionally, special videoconferences are organized when needed between the Work Package manager and the Task Leaders to discuss the coordination of the different tasks or to prepare special events.

Concerning the face to face meetings: it was agreed with WP3 and WP4, as reported in the deliverable D6.1 [6], to hold joint WP3/WP4/WP6 meetings. After the first meeting, held in mid-July 2008, a new one was organized during the reporting period, at the end of November 2008. Then there was also a dedicated WP3/WP4/WP6 session during a half day of the annual All-Hands meeting at the end of March. According to the opinions received, there was a general agreement among the staff members that this is a very good opportunity, allowing us to enforce the cooperation and the exchanges between the three Work Packages, and between all the people working within them.

Concerning the mailing lists: it was decided to not split the WP6 list, creating a dedicated list for each task, but rather to keep only one list to allow each member of the working group to fully follow what happens in all the tasks. Otherwise, for the reasons explained in the deliverable D6.1 [6], the WP6 mailing list was aliased to the T3.5 mailing list, because the activities in this subtask (*User-Related Services*) of the *Operating the Infrastructure* Work Package (WP3) are very deeply linked.

2.3 Videoconferences and meetings

Six monthly videoconferences were set-up during the reporting period, on November 7th, December 5th, January 9th, February 6th, March 6th and April 3rd. Detailed minutes of the discussions and action lists are available on the internal BSCW server.

Further, most WP6 members have participated in the joint WP3/WP4/WP6 meeting in Bologna (Italy) on November 27-28, 2008.

It should also be noticed that several members of WP6 have participated in the PRACE All-Hands meeting in FZJ (Jülich, Germany) on February 12-13, 2009.

3 Evolution of the DEISA Common Production Environment

The unified *DEISA Common Production Environment* (DCPE) defines a coherent set of software accessible on the various sites of the infrastructure, offering a common interface to the users, independent of the target platform employed. Naturally, the level of coherence is not the same everywhere in the infrastructure, ranging from very high inside each subgroup of homogeneous computers to a lower level across the other subgroups.

The main components of the DCPE are:

- for each computer architecture, a coherent set of software packages which are divided into six subsets: environment, shells, compilers, libraries, tools and applications. Each set is referred to as a *Software Stack*;
- a uniform interface to access the software, provided by the *Modules* tool [10], according to the decision made in ‘DEISA1’ in 2004.

The management of the *Modules* tool itself is done inside WP3 (task T3.5a *Maintaining the Modules Framework*) – see the deliverable D3-1.2 [5]. The task T6.1 is itself in charge of the development and maintenance of the dedicated environment built using this tool, based on a set of scripts, called *modulefiles*, to interface with each software package included in the *Software Stacks*.

3.1 The Software Stacks

Concerning the *Software Stacks*, it has become clear from our experience that our initial definition was not flexible enough and that the evolution, in such a rigid context, was problematic. In our original design, all sites with the same computer hardware and the same operating system must keep a very strong synchronization between their *Software Stacks*. But, in practice, such constraints appeared to be too rigid to be fulfilled and we found several problems, described in the previous deliverable D6.1 [6], which prohibited us to reach these objectives.

This is why a proposal was submitted to the *DEISA Executive Committee* (DEC), which was approved at the end of October 2008, to relax various constraints and to define different categories of software (*core*, *core architecture dependent* and *optional*), with different constraints, from high to low.

3.2 The renewed Modules environment

As explained in the deliverable D6.1 [6], we used our four years of experience in DEISA to get the feedback and opinion of all the partners and, after a rather long process that started at the end of 2007, we agreed upon some changes and improvements in the *Modules* environment itself. This has concerned our choice to now support our own enhanced version of the *Modules* tool itself, as previously stated, and to simplify and improve our environment.

For the description of the main enhancements, refer to the deliverable D6.1 [6]. It should be noted that, after the agreement in the first half of 2008 on the changes to the design and user interface of our Modules environment, the user interface was frozen until the end of 2009. This was to permit a possible new step of revision and enhancement at that moment, to guarantee a long period of stability to the users. Updates to the Software Stacks will be undertaken when required, but the user interface will remain unchanged.

It is also interesting to add that, according to some discussions during the last few months on the dedicated mailing list for the *Modules* tool, it appears that several other organizations have decided to manage their own flavour of this tool, like us, to circumvent the associated maintenance problems and to introduce some new features. There was also recently an announcement from the *Texas Advanced Computing Center* (TACC) who, for the same reasons of dissatisfaction with the two available flavours of this tool, has decided to rewrite a new version, from scratch, using the Lua language. Currently, this version implements only a subset of the Tcl version that we use, but a preliminary evaluation of it is nevertheless planned, to locate any potential interest for us for the mid-term future.

During the reported period, the deployment of the renewed environment was achieved on the few systems which had yet to deploy it. Further, since this time, this renewed environment has undergone some necessary minor updates.

4 Monitoring of Applications Availability

INCA [9], a monitoring application developed by the *San Diego Supercomputer Center*, initially for the TeraGrid project [12], is used for collecting information about the state of DEISA's computing infrastructure. INCA was initially deployed in the DEISA project in early 2005, and since then the monitoring infrastructure underwent considerable improvements. Starting in the second half of 2007, the number of infrastructure components monitored was expanded beyond those named in the *DEISA Common Production Environment* (DCPE). Currently, in addition to the DCPE, DEISA Middleware and LDAP services are also being monitored by INCA. Particular attention is given to the *core* services; however, *additional* and *optional* services are also monitored, where the classification of *core*, *additional* and *optional* services are given in deliverable D3-1.2 [5].

A number of updates and new features were implemented during the past six months of the reporting period. We are constantly working on improving quality and functionality of INCA reporters, which are scripts that are used to validate specific functionality of the computing infrastructure. Several DCPE reporters, as well as many middleware reporters, were updated based on feedback received from members of other Work Packages, especially WP3. This allowed us to adjust functionality of the reporters to the current state of the infrastructure. Additional information about changes in the monitoring infrastructure can be found in WP3 deliverable D3-1.2 [5], sections 2.3.1 and 3.6.5.

At the beginning of the DEISA2 project the majority of INCA tests were running on a daily basis. This was not convenient since, especially in case of middleware, reporter test results were often not correlated with the actual status. Several changes were proposed by members of WP6 in order to improve the situation. It was proposed to limit execution of DCPE reporters to weekdays only since several partners could not run the tests on weekends due to local policies. As already mentioned, execution frequency of middleware reporters was insufficient. Therefore it was suggested to execute middleware and LDAP reporters hourly in the time period between 7:00 and 19:00 CET. These changes were implemented after receiving an agreement from members of WP3. In production, several exceptions have been made, in particular some reporters run only once a day, as a higher frequency is not useful. Implementation of the new execution schedule helped us to improve quality of monitoring information and greatly reduce the time required for detection of new problems.

Several new features available in the latest INCA release (2.4) are not yet used in production mode but have been investigated. One of the most interesting is the so-called *Batch API*, which allows the implementation of reliable tests that submit jobs to local batch systems, which are able to wait until the required CPU resources are available rather than to fail for an irrelevant reason. Currently the API is being thoroughly tested and, as soon as the test phase is finished, this feature will be brought in production.

5 Help Desk

The main objective of T6.3 is the continuation and consolidation of the *Help Desk Service* as set up in 'DEISA1'. During the previous reporting period (see the deliverable D6.1 [6]), we discussed the refinement and improvement of the *User Support Service* as was practiced in 'DEISA1', leading to a proposal that was presented to the *DEISA Executive Committee* (DEC) in October 2008.

This proposal was accepted by DEC and in the current reporting period (PM07-PM12) we implemented all the improvements described in that document into a production quality *DEISA Help Desk Service* and we made this service available to all DEISA users. The main improvements are:

- Using the DEISA Trouble Ticket System (DTTS) to register the user problems
- Providing a web interface for users to enter their problems directly into the DTTS
- Setting up a revolving Help Desk Duty to process new problem entries in the DTTS and monitor the progress of the solution of these problems
- Providing a central Help Desk e-mail address to ease the communication between Help Desk staff and users

The main objective, following the new procedure, is to have the Help Desk Service *locally supported but centrally managed*.

5.1 DEISA Trouble Ticket System

At the core of the *Help Desk Service* is the *DEISA Trouble Ticket System* (DTTS), which is used for registering the incoming problem reports and requests from DEISA users and for tracking the progress of solving these issues. The DTTS is based on the *Request Tracker* (RT) [11] public domain tool, deeply customized to be adapted to the DEISA needs (see deliverables D3-1.1 [4] and D3-1.2 [5]).

The DTTS was already in use for some time, predominantly utilised by Operations (WP3), to register and track internal problems.

The interface to the DTTS, as used by DEISA staff, contains many features which have no relevance for DEISA users, therefore a new web interface, with only restricted functionality, was developed especially for the DEISA users. The interface allows the DEISA users only to create new tickets (see Figure 1) and update and track the progress of their own tickets (see Figure 2): they cannot see nor update tickets that they have not created.

Figure 1 – Web form to create a ticket for a user’s problem

#	Subject	Status	Requestors	Owner
129	INCA DCPE errors	resolved	carles.fenoy@bsc.es	wimr@sara.nl
131	IO to DEISA_HOME very slow for SARA users	resolved	wimr@sara.nl	ingeborg.weidl@rzg.mpg.de
133	Unable to access DART accounting data at LRZ	resolved	wimr@sara.nl	anton.frank@lrz.de

Figure 2 – Web form to display the closed tickets belonging to a user

5.2 User documentation

The *User Support* section of the DEISA Primer has been updated to reflect the changes in the *User Support Service* and the new functionality of the *Help Desk Service* (see Section 8 of the Primer: <http://www.deisa.eu/usersupport/primer/access-to-the-user-support>). The new DEISA Primer was published at the end of February 2009 (see Section 6).

5.3 Introduction of the *Help Desk Service*

In the second half of February, the new interface was made available to all DEISA users. It is accessible directly at <http://tts.deisa.eu/UserSupport> and via the main DEISA webpage (<http://www.deisa.eu>).

It was decided that the new *Help Desk Service* would not be actively promoted to the existing DEISA Users (DECI-2007 projects), as most of these users are nearly finished with projects. However, for the new DEISA Users (DECI-2008 projects) who will execute their projects in 2009, the *Help Desk Service* will be actively promoted.

5.4 *Help desk Duty*

To provide a *Help Desk Service* of high quality it is important that users who report a problem receive a quick acknowledgement of the reception of their report and that the problem is solved as quickly as possible. To this end the *Help Desk Duty* (HdD) was introduced. This constitutes another step on the path of establishing a truly integrated European Infrastructure for High Performance Computing. The HdD is a weekly duty that is performed by each DEISA partner in turn. The implementation of the HdD is an operational matter. Therefore implementation details can be found in section 3.6.6. of the D3-1.2 deliverable [5].

The tasks defined for the HdD are:

- to inspect the *General* queue of the DTTS several times a day and to redirect incoming tickets to the proper site queue,
- to assign the most relevant keyword to each ticket from the list of the seven predefined keywords,
- to verify that the site that is responsible for solving the User problem has accepted the ticket,
- to check that User tickets are handled and solved in a timely fashion.

6 User Documentation

The first version of the user documentation, namely the *DEISA Primer*, was released in February 2005, and was updated six times, around twice a year. This process is, of course, an absolute requirement and will be continued during all the life of DEISA2.

However, two major changes have been introduced: the single user document has been split into multiple documents, and a document management and publication tool, namely Plone, has been introduced. These two changes are now discussed in detail.

6.1 Subdividing the DEISA Primer

The DEISA Primer had become quite large and unwieldy: including new material in this single massive document became unmanageable and the size of the document was dissuasive for users.

Thus it was decided to split the documentation in various different documents, keeping only a light Primer, and introducing a number of dedicated manuals that are devoted to each of the main services.

The light Primer now describes the organization of the project, the hardware infrastructure, the procedures to access it, access to accounting information, the organization of the file systems and data management, a DCPE overview, job submission, access to local documentation and to DEISA User Support, and finally a DEISA glossary (see Figure 3).

The screenshot shows the DEISA website interface. At the top, there is a search bar and a navigation menu with items like 'About', 'Infrastructure & Services', 'Science & Projects', 'User Support', 'News & Press', 'Publications', 'References', and 'Staff'. Below the navigation, a breadcrumb trail reads 'You are here: Home → User Support → Primer → 2. Access to the DEISA infrastructure'. The main content area is titled '2. Access to the DEISA infrastructure' and contains three sub-sections: '2.1 Acceptable Use Policy', '2.2 Becoming a DEISA User', and '2.3 Getting access to DEISA'. A 'contents' sidebar on the right lists the sub-sections with links. The 'See also' section at the bottom includes links to '5th DECI call' and 'Infrastructure & Services'.

Figure 3 – A page of the on-line Primer

The new dedicated manuals are devoted to UNICORE [13], DESHL [7], a more detailed description of the DCPE, the DART, data transfer with GridFTP [8], interactive access, and batch systems. Each of these manuals contains both the presentation of the service and only the relevant technical details (see Figure 4 for such an example). For each new DEISA service, classified either as core, additional or optional (see deliverable D3-1.2 [5]), new documentation will be introduced whenever relevant.

Figure 4 – A page of the on-line *DEISA Accounting Report Tool* manual

6.2 Plone

The Plone tool is now employed to both manage and publish the user documentation.

Before the introduction of the Plone tool, DEISA staff had to juggle with multiple versions of the same Word document, with numerous drafts and working copies, as well as those coming from different levels of reviewing. This was not efficient and required many painful manual merges of different inputs. Now, using Plone, we have a single version of each document, centrally stored, which are, by default, the versions that are on-line at www.deisa.eu.

Furthermore, the standard editor integrated inside Plone, namely Kupu, is simple, responsive and effective to employ (see Figure 5). But, in case of future extended needs, it would always be possible to use other editors, which can also be plug-in inside the Plone framework.

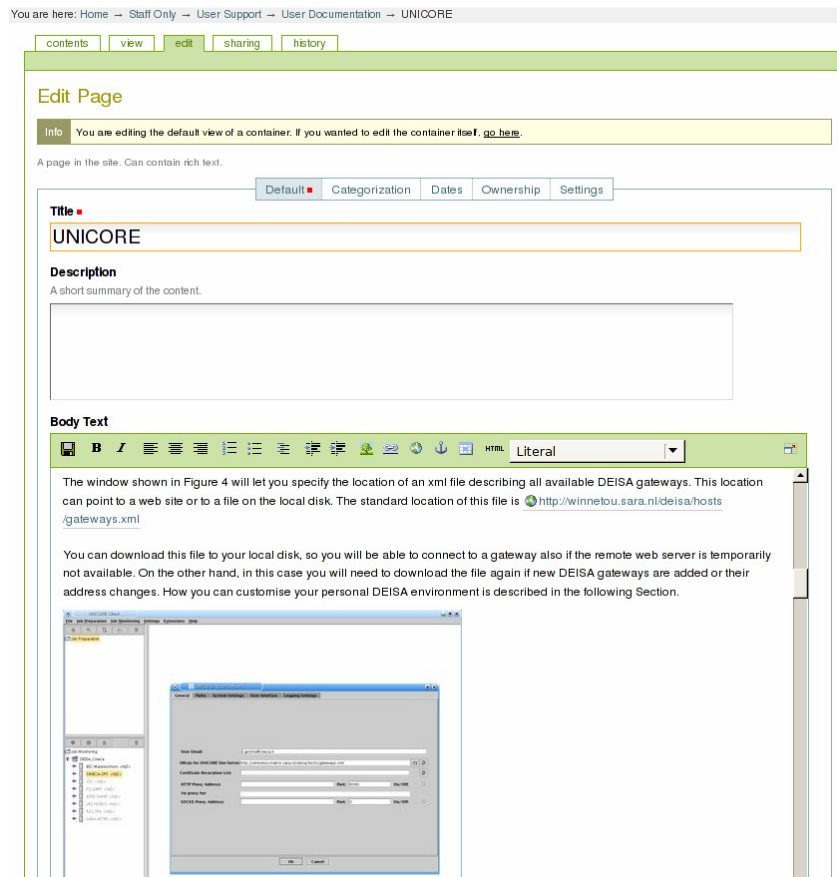


Figure 5 – Example of usage of the Kupu editor under Plone to update the working copy of a document

And, perhaps most importantly, once a document has been updated, the document can be published on-line immediately.

The printed (PDF) version of the user documents remains an issue, however. The generation of them is an important goal for us but there are some non trivial technical issues and we are currently evaluating an open source and a commercial solution, as several dedicated plug-ins for the PDF conversion process are available inside the Plone framework.

6.3 Current status and future work

At the beginning of the year, a massive task was successfully undertaken by a combination of DEISA staff from both WP6 and WP2 to import the existing documentation from within the Word format into the Plone tool. This was a substantial but a one-time only task. The new set of user documentation went live on the 10th of February, 2009. The new light Primer is available on-line, along with the new dedicated manuals for UNICORE, DESHL, the DCPE, the DART, data transfer with GridFTP, and interactive access for gsi-SSH.

Since the 16th of March, 2009, the website, and hence the user documentation along with the Plone tool, have been moved to a more powerful server than before, making the process of keeping the user documentation up-to-date simple. The new website has been tested with Internet Explorer 7, Firefox, Opera and Konqueror. Editorial control is defined within our LDAP, and access is managed via Certificates.

In the near future, we will augment the interactive access document with information on the few DEISA platforms that cannot support gsi-SSH and require SSH to be employed, as well as to release the initial version of the batch systems manual.

Over the course of DEISA2, we will endeavour to keep all the documentation up-to-date, making changes if and when any technical change occurs, no matter how small. This is now possible thanks to the introduction of the Plone tool.

7 Advanced Application Production Assistance

The main objective of the task T6.5 is to enhance the usage of DEISA services, middleware, and tools like UNICORE [13] and DESHL [7], to give assistance on procedures for data exploration and data analysis, and to give support in data handling. The resources allocated for the task are used for coordination.

The decision recently made on DEISA services and products offered to user projects and the classification of maintenance levels to *core*, *additional* and *optional* (see deliverable D3-1.2 [5]) affects also this assistance, which has, among its possible interventions, to define priorities according to this classification.

7.1 DECI Projects

Since the manpower resources for this task are quite limited, it was concluded that they would be best used if a limited number of projects would be selected for the advanced application production assistance.

During the first year of DEISA2, the DECI-2008 projects were assessed in this task based on the technical evaluations by WP7. These technical evaluations are based on the data collected before the possible acceptance of the DECI projects. The results were collected and summarized, and their analysis show that most DECI projects will not have special needs other than an easy access to the computational resources of DEISA.

However, a critical view of our procedure stressed that this analysis does not always reflect the real needs of the user projects, because the users were not really aware of the possibilities. To improve the situation regarding this aspect for the next *DECI Calls for Proposals*, we have decided:

- Firstly, to make significant modifications in the proposal and technical evaluation forms. These forms have been updated and have been used for the recent DECI-2009 call for proposals launched this spring. For future modifications, the classification of the DEISA services and tools available to the users, recently decided as explained above, will greatly help. It will allow us to define priorities in the choices of the projects to which to provide such advanced assistance, according to this classification (which will be of course not frozen and subject to revision according to the evolution of the needs and requests of the users).
- Secondly, to be more proactive than initially planned, contacting not only the projects for which the possible benefit of such advanced assistance was obvious, but a larger selection of the DECI-2008 projects.
- Thirdly, to better advertise the possibility of this advanced assistance. This would also make scientists aware of advanced assistance when they will write their proposals, offering the possibility to emphasize any special needs in this direction.

One of the most relevant criteria for the advanced application production assistance seemed to be the amount of data storage. For instance, if we consider the DECI-2008 projects which require more than 20 TB of data storage, we find that 8 projects might benefit from a dedicated assistance for data handling: ChESS, DINUSINA, Fcool2, GBBP, HALO,

Musiprol, Nf1, and SeBaSim. Otherwise, UNICORE or DESHL were required by the projects SoMQuark, HPQCD and Nf1.

The actual assistance is performed by the Home and Execution site staff of the DECI projects.

7.2 Virtual Communities

The first Virtual Communities in 2008, EFDA, EUFORIA, and VIROLAB were assessed for their needs. EFDA and EUFORIA are communities that need essentially intensive computing resources using conventional tools. In contrast, on behalf of VIROLAB, DEISA investigated for the possible utilization of AHE (*Applications Hosting Environment*) at RZG and EPCC. The AHE is developed by RealityGrid. For an SC08 demonstration, DEISA ported the AHE to the Power6 at RZG, where it utilised HARC (*Highly-Available Robust Co-scheduler*) and UNICORE6. However, as these tools were not available in production mode on the DEISA infrastructure in 2008, the VIROLAB users employed interactive access to their various execution sites.

The new Virtual Communities, progressively starting throughout 2009, will be assessed for their needs, and special care will be taken to ensure that they will have the assistance and tools they require. This work has only started recently.