

EGI - European Grid Initiative

Towards a sustainable production grid infrastructure

www.eu-egi.org

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Dear Colleague,

Let me inform you, as one of key players in the area of Grid computing, supercomputing, and distributed computing, about the latest developments of the **European Grid Initiative (EGI)**.

The EGI Design Project (EGI_DS)¹ represents an effort to establish a sustainable Grid infrastructure in Europe, which requires a new model for the collaboration between the **National Grid Initiatives (NGIs)** and the future **EGI organisation**. Driven by the needs of the research community, EGI will enable the next leap in research infrastructures, thereby supporting collaborative scientific discoveries in the European Research Area (ERA).

As a first step towards this goal, we need to **identify the potential actors in this new Grid environment**, and **collect their requirements in the form of use cases of Grid deployment and usage**. This includes typical practices, daily experiences, common situations encountered when using Grids, as well as wishes and expectations of the role, functions and properties of the future Grid infrastructure.

We ask you to send us one or more use cases that you believe are relevant to this goal. In the following pages, we provide a template and some guidelines which may help you in constructing your use cases, assuming you don't have any already prepared. The template can be used as an illustration of the information that we are looking for, however, it is not mandatory if its structure does not match your view on the topic. Free-form use case descriptions are welcome.

Please send us your input via email to usecase@eu-egi.org by **Friday, 21 September 2007**, so we can present a comprehensive set of use cases during the upcoming EGI Workshop on Tuesday, 02 October 2007.

If you have any other questions or remarks on the above, please do not hesitate to contact us at the same address, or for any other generic question at contact@eu-egi.org.

Yours sincerely,



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(on behalf of EGI_DS)



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¹ The EGI_DS project is expected to start on the 1st of September. The preparatory work before the official start of project is co-funded by the EGEE-II project

I. Template

Use Case title: The title of the use case

Example.: Create Virtual Organisation (VO)

Short description: A short description of the Use Case

Example: A multi-national well organised application community wants to create a VO that will be able to operate on the new EGI-NGIs environment.

Actors involved: The envisaged actors involved.

VO coordinator, VO operator, NGI operator, (possible future scenario: EGI operator?)

Related Requirement: The related requirement posed by the corresponding actor.

A new community needs to quickly and easily join the Grid

Pre-conditions: (optional) Conditions that need to be in place before the use case takes place

The community needs to be already organised as a multi-national team

The community in some cases (depending on national policies) needs to bring resources in the national infrastructure

Steps: The actual steps required, so that the use case can be materialised.

- 1.
- 2.
- 3.
- ..

Post-conditions (optional): Conditions after the use case takes place

The VO is created and supported by X NGIs and the EGI central pool of resources.

Project(s) involved (optional): The projects involved in the use case (if applicable)

Middleware (optional): The middleware packages involved in the use case (if applicable)

Application(s) (optional): The applications involved in the use case (if applicable)

II. Guidelines

These guidelines are given to help you focus on the kind of questions that are relevant to a future NGI-EGI scenario, and to provide a context for the construction of use cases.

Use Case Areas

In relation to the main actors involved in a Grid infrastructure, we identify three corresponding use case areas. Under each, we give some questions that can guide the construction of a use case. Some questions might be applicable to more than one type of use case.

I. **Infrastructure**-oriented use cases:

In what manner does an infrastructure provider/operator currently share its computational resources or data storage capacities? What are its current responsibilities and what kind of control does it have over its resources? What issues have arisen in this particular use case context, and how can the NGI-EGI environment address these issues?

If you are a resource provider, tell us about your view on how best to collaborate within the international community. How do you imagine the incorporation of grid research (grid middleware development) into the forming sustainable infrastructure? Would you expect grid research to be completely independent, interconnected within projects or rather subsumed (to some extent) under the responsibilities of EGI?

II. **Application**-oriented use cases:

What is the typical process a new application community goes through when interested in doing research on the Grid? How are VOs typically created or identified now, and how should they be in the new NGI-EGI environment? How to adapt a generic middleware service towards specific research group requirements? Is there an effort to develop tailored middleware services for specific research users groups? Are my applications already available on the grid?

III. **End user**-oriented use cases:

What are the required prerequisites to become a user? How to join the global infrastructure available? Which is the official registration procedure? Should I connect through the corresponding national Grid activity or go through a global registration pointer? Is the Grid certificate for authentication included in the registration procedure?

What are the main obstacles for you to use Grids comfortably on a daily basis - latency during job submission? Non-intuitive work with certificates? Non functional middleware services? Any other hassle?

Ultimately we are interested in your opinions on how you imagine the future of grid environments, such as:

- What are the main concepts required for seamless cooperation between already established worldwide grid infrastructures and local national grid activities?
- For which cornerstone services should the emerging EGI be responsible?
- What kind of interactions among different national/global grid initiatives should be drafted and foreseen?

For all use cases, a useful question to try to answer is “what kind of problems have you been forced to solve, did you solve it and how, and how could it be solved within the NGI-EGI environment?”