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PREFACE TO SPECIAL SECTION ON IBERGRID

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Since May 2010 the distributed computing resource centers and technical teams of Spain and Portugal started to operate under the umbrella of Ibergrid in the framework of the European Grid Initiative (EGI). This period has been both very active and productive for the research and the technical teams involved in the operations, middleware development and support to user communities of the Iberian research area.

This volume intends to be a selection of the most outstanding developments from the Iberian Grid infrastructure researchers in 2011.

The operation of the European Grid is a common endeavor that keeps the most skilled teams of Ibergrid busy in the duties of performing not only the local operations, but also the global coordination tasks with EGI. The pro-activity of Ibergrid in the operational setup of the new EGI framework at the Operations Management Board is widely acknowledged by the whole collaboration. Ibergrid is also involved in the development of automated tools to facilitate the operation of the EGI infrastructure.

The next year will focus on the consolidation of the Universal Middleware Distribution (UMD) as the software distribution for EGI. Setting up of the system for definition of software quality criteria and software verification are the tasks to which the Ibergrid teams have been dedicating more effort during the past year. The software provisioning activity in EGI, which includes also the coordination of the middleware rollout, is another of the tasks developed within Ibergrid.

The Ibergrid research teams are also involved in the development of middleware in the framework of the European Middleware Initiative (EMI), and are participating at a high level in the current efforts towards the provision of services in cloud mode. In this last area, while it is relatively well understood how virtualization techniques can be used to deploy computing resources, quite some effort is still needed to develop a model of scientific user support based on the cloud paradigm. There are several contributions in these volume addressing current problems and prospective solutions.

Concerning support to user communities, the past year has also been the first year of operations and data taking of the LHC. The analysis of the first LHC data had a remarkable impact in the usage numbers of the infrastructure, which has grown from about 34 millions of hours in kSI2K, to nearly 65 millions, i.e. an increment of nearly a 100% in the usage of the LHC dedicated hardware in Spain and Portugal. The operation of the LHC in the 2011 will imply the production of about 50 times more data than in 2010; therefore the usage numbers are expected to strongly increase again in the upcoming months.

For more generic user communities, researchers from the Iberian area are among the most active ones of the EGI area in the areas of computational chemistry, astroparticle physics and fusion. The consolidation of usage in areas other than support to the LHC is very good news, and an important step forward towards the sustainability of the Grid infrastructure in Europe.

In order to support this growing usage, during the first year of operations in the framework of EGI a model of user support has been developed. This model, which adopts the global scheme of services to virtual organizations developed at the European level for EGI, is also described in several contributions in this volume.

We are confident that the operational, middleware developments and user support tools will serve in the future as framework to provide an efficient support for the scientist in the Iberian research area. The possibility of accessing efficiently computing resources, will certainly translate in the success of research projects relying on the usage of such distributed infrastructure.



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