Chapter XXIV
Grid INFN Virtual Laboratory for Dissemination Activities (GILDA)

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ABSTRACT

The Grid INFN Virtual Laboratory for Dissemination Activities (GILDA) is a fully working Grid test-bed devoted to training and dissemination activities. Open to anyone who wants to have its first hand experience with grid systems, GILDA has been adopted as the official training tool by several Grid projects around the world. All services, tools and materials produced in the past tutorials can be freely used by anyone who wants to learn and teach grid technology. Additionally, through a set of applications ported on its Grid Infrastructure, developers can identify components and learn by examples how to “gridify” their applications. This work presents the main features of such training-Infrastructure.

INTRODUCTION

Launched in 2004 by the Italian National Institute for Nuclear Physics (INFN), GILDA (the Grid INFN virtual Laboratory for Dissemination Activities) is a fully working Grid test-bed devoted to dissemination activities. This infrastructure is open to anyone who wants to have a first hand experience with grid systems. Actually, GILDA can be an important tool for at least three main user categories:

- **Grid newcomers:** People willing to start learning how to use a grid infrastructure;
- **Grid application developers:** Through a set of applications ported on GILDA,
developers can identify components and learn by examples how to “gridify” their applications;

- **Tutors:** GILDA has been developed keeping training in mind. Thus, all services, tools and materials produced in the past tutorials can be freely used by anyone who wants to teach grid technology.

Indeed, GILDA has been adopted as the official training tool by several Grid projects, such as EGEE, EELA, EU-IndiaGRID, EUMEDGRID, EUChinaGRID, ICEAGE, and several others, becoming a “de facto” standard training-Infrastructure (hereafter t-infrastructure) in Europe and in several other parts of the world for a dissemination of Grid Computing.

The GILDA objectives can be summarized as follows:

- To raise awareness of Grid Computing benefits
- To provide customized formats for dissemination events, according to the skills of attendants
- To facilitate appropriate free on-line content and services for training purposes
- To encourage the use of a complete t-Infrastructure by new communities

This article aims at presenting an overview of GILDA facilities as well as to invite the reader to try such t-infrastructure.

**BACKGROUND**

Computational and storage limitations are key issues for organizations that depend on computation-intensive applications. Such organizations are frequently affected by market pressures to reduce deployment time and maintenance costs. Hence, they may be looking for ways to improve the effectiveness of their infrastructure or their business processes through transformation, or seeking opportunities for innovation that will benefit the business. Grid is not the answer by itself, but in many of these cases, it can certainly play an important role, allowing immediate productivity and benefits and giving more choice and control on how to purchase and leverage IT power for competitive advantage. The grid vision is to expand parallel and distributed computation, providing a virtualization of heterogeneous compute and data resources, supporting security policy based resource allocation and prioritization. The grid is ideal for any applications requiring excellent performance and scalability for their compute-intensive processes (e.g. Monte Carlo simulation, engineering CAD simulations, protein modeling, 3D rendering, archaeology investigation etc.).

In this context, the GILDA Project was born with the aim of offering a one-of-a-kind service for those interested in testing the grid, using gLite (2007) and the EGEE infrastructure with their own systems. GILDA offers either basic experiences through the “Try the Grid” walkthrough in minutes or intensive and in-depth training by helping users willing to develop applications to port them into a Grid environment.

**DISSEMINATION INSTRUMENTS**

The main objectives of GILDA activity are to encourage and help new and existing communities, to support them for improvement or migration of their applications to the Grid infrastructure, to accelerate the adoption of grid technologies, and to increase the satisfaction of those currently using the Grid service throw the communities’ feedback. Training activities are a key component of the knowledge dissemination process, ensuring that all users fully understand the characteristics of the offered grid services and that they have enough expertise to properly use the available grid infrastructure. In order to accomplish the main objectives, several dissemination instruments
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