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GILDA training infrastructure: present successes and future triumphs

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GILDA is a very successful initiative, led by INFN, aiming to provide a special production-quality Grid infrastructure (t-Infrastructure) for higher education, training and dissemination purposes. Since its earlier phases, EGEE adopted GILDA as its t-Infrastructure, providing many scientific and humanistic communities with a fully fledged virtual laboratory where to “learn and try”. GILDA has officially been adopted as the default t-Infrastructure by other projects such as EELA and EELA-2, EPIKH,EUAsiaGrid, EUChinaGrid, EUMEDGRID/EUMEDGRID-Support, SAGrid, the UNESCO/HP Brain Gain Initiative.

Detailed analysis

The main operational activity of GILDA is to manage its infrastructure which provides users with several central services such as Workload Management System, VOMS server, User Interfaces, Information Indexes, Data and Metadata Catalogs, and a series of Computing Elements and Storage Elements for a total of more than 280 CPU cores and about 10 TB of storage. Another key component of GILDA is its Certification Authority, which is able to release X.509 certificates both to hosts/services and users. Host certificates are valid for one year, while user certificates have a default 15-day lifetime. During tutorials “generic-certificates” can also be created “on demand” and stored in a shared user area, ready to be accessed by trainers during the events. GILDA can offer free technical support to new pilot grid infrastructures, cloning itself locally and sharing the best practices and common policies in e-Infrastructure set-up and management.

Conclusions and Future Work

In EGI, there will be no directly funded t-infrastructures and NGIs will support their own training by using their own national production resources. Both the present status and the next-future perspectives represented by the CUE project (if approved) will be presented.

Impact

The main objective of this oral contribution is to present the activities carried out since the last EGEE User Forum in Europe and in the rest of the world (Asia, Africa and Latin America). In the last almost six years, GILDA has been used in more than 400 tutorials and induction courses all over the world and thousands of people have been trained on installing, using and exploiting gLite as well as other middleware. We report on the state-of-the-art of training in each continent and the impact which has been seen in several science domains. The relocable/clonable model which is GILDA’s most important strength has favored the creation and fast deployment of local training infrastructures to support research institutions, universities and industrial communities.

Keywords

Grid Computing, training, dissemination, user and application porting support

URL for further information

<https://gilda.ct.infn.it>

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