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On demand Web-Based Configuration-Driven Bug-Patch Track and Build System

Wednesday 9 May 2007 17:30 (20 minutes)

Describe the scientific/technical community and the scientific/technical activity using (planning to use) the EGEE infrastructure. A high-level description is needed (neither a detailed specialist report nor a list of references).

Software deployment are difficult processes when people are located in different sites and involved in developing several software components subject to frequent changes and improvements. Therefore, it is extremely important to setup a local daily build system in order to allow each site Release Menager to handle the whole project and to better collaborate with the central Release Manager. In addition, by setting up this system, Testers are able to verify the latest functionalities.

Report on the experience (or the proposed activity). It would be very important to mention key services which are essential for the success of your activity on the EGEE infrastructure.

We already had experienced having to setup the local build system in the INFN INFN National Centre for Telematics and Computer Science (CNAF) in order to support developers involved Grid projects, such as DataGrid, EGEE I and EGEE II. Goldrake officially started in 2005 when the build system used in DataGrid project was integrated with a Web Application. In 2006 it was extended with simple monitor checking. During these years our experience with Goldrake has been focused on evaluating and improving Goldrake's applicability to various system, and testbeds, as well as Goldrake's functionality in automating the software development process. The system is used by the Release Managers and Testers of the Italian (IT) team that is a group of developers collaborating in the middleware JRA1 of EGEE II project. The IT team has the responsibility of some components that belong to the subsystem controlled by different teams and fully manages other subsystems.

With a forward look to future evolution, discuss the issues you have encountered (or that you expect) in using the EGEE infrastructure. Wherever possible, point out the experience limitations (both in terms of existing services or missing functionality)

As stressed by the previous points, the setting up of a local build system is extremely important for the success of the Grid software deployment. Goldrake is currently a backup of the gLite sytem. In order to continuously allow this goal we plan to extend the current Goldrake to support the ETICS system, being the new official build, configuration, integration and testing system used by EGEE II project.

Describe the added value of the Grid for the scientific/technical activity you (plan to) do on the Grid. This should include the scale of the activity and of the potential user community and the relevance for other scientific or business applications

The local build system we have planned, called Goldrake, is an automatic build system able to store in a database information related to bugs, patches and tags in order to trace the whole history of a candidate release in order to monitor the whole life of a project. The clear advantage here is given by the introducing of a database organized to collect information about a specific software project, improving the cross-activities within the co-workers taken part in the project, and providing useful information in case of build and test problems. Goldrake is an automatic and on demand web-based configuration-driven remote build system, able to interact with different type of build system, such as gLite, and to support several build mechanisms such as ant and autotool. It allows the site Release Managers to be in harness with Developers and Testers, but in particular to be reactive respect to the central Release Menager, whose activity represents the success of the software deployment.

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