

CMS Grid Submission Portal

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We present a Web portal for CMS Grid submission and management. Grid portals can deliver complex grid solutions to users without the need to download, install and maintain specialized software, or worrying about setting up site-specific components. The goal is to reduce the complexity of the user grid experience and to bring the full power of the grid to physicists engaged in LHC analysis through a standard web GUI.

We describe how the portal exploits standard, off-the-shelf commodity software together with existing grid infrastructures in order to facilitate job submission and monitoring. Currently users are exposed to different flavors of grid middleware and the installation and maintenance of CMS and Grid specific software is still very complex for most physicists. The goal of the CMS grid submission portal is to hide and integrate the complex infrastructure details that can hinder a user's ability to do science. A rich AJAX user interface provides users the functionality to create, submit, share and monitor grid submissions. The grid portal is built on J2EE architecture employing enterprise technologies powered by JBoss application server. This technology has been used for many years in industry to provide enterprise class application deployments. The architecture is comprised of three tiers; presentation, business logic and data persistence. The presentation layer currently consists of a Java Server Faces web interface developed with Netbeans Visual Web Page development tools. The business logic layer provides interfaces to existing grid infrastructure such as VOMS, Globus, CRAB and CRABSERVER.

This paper describes these developments, work in progress and plans for future enhancements.

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