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CRAB (CMS Remote Anaysis Builder)

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Starting from 2007 the CMS experiment will produce several Pbytes of data each year, to be distributed over many computing centers located in many different countries. The CMS computing model defines how the data are to be distributed such that CMS physicists can access them in an efficient manner in order to perform their physics analyses. CRAB (CMS Remote Analysis Builder) is a specific tool, designed and developed by the CMS collaboration, that facilitates access to the distributed data in a very transparent way. The tool's main feature is the possibility of distributing and parallelizing the local CMS batch data analysis processes over different Grid environments without any specific knowledge of the underlying computational infrastructures. More specifically CRAB allows the transparent usage of WLCG, gLite and OSG middleware. CRAB interacts with both the local user environment, with CMS Data Management services and with the Grid middleware. CRAB has been in production and in routine use by end-users since Spring 2004. It has been extensively used during studies to prepare the Physics Technical Design Report (PTDR) and in the analysis of reconstructed event samples generated during the Computing Software and Analysis Challenge (CSA06). This involved generating thousands of jobs per day at peak rates. In this work we discuss the current implementation of CRAB, experience with using it in production and plans for improvements in the immediate future.

Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

CMS Offline Computing

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