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Results of the LHCb experiment Data Challenge 2004

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The LHCb experiment performed its latest Data Challenge (DC) in May-July 2004. The main goal was to demonstrate the ability of the LHCb grid system to carry out massive production and efficient distributed analysis of the simulation data.

The LHCb production system called DIRAC provided all the necessary services for the DC: Production and Bookkeeping Databases, File catalogs, Workload and Data Management systems, Monitoring and Accounting tools. It allowed to combine in a consistent way resources of more than 20 LHCb production sites as well as the LCG2 grid resources. 200M events constituting 90 TB of data were produced and stored in 6 Tier 1 centers. The subsequent analysis was carried out at CERN as well as in all the Tier 1 centers to where preselected datasets were distributed. The GANGA User Interface was used to assist users in preparation of their analysis jobs and running them on the local and remote computing resources.

We will present the DC results, the experience gained utilising DIRAC and LCG2 grids as well as further developments necessary to achieve the scalability level of the real running LHCb experiment.

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