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The LHCb Data Acquisition during LHC Run 1

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The LHCb Data Acquisition system reads data from over 300 read-out boards and distributes them to more than 1500 event-filter servers. It uses a simple push-protocol over Gigabit Ethernet. After filtering, the data is consolidated into files for permanent storage using a SAN-based storage system.

Since the beginning of data-taking many lessons have been learned and the reliability and robustness of the system has been greatly improved. We report on these changes and improvements, their motivation and how we intend to develop the system for Run 2. We also will report on how we try to optimise the usage of CPU resources during the running of the LHC ("deferred triggering") and the implications on the data acquisition.

Primary author: SCHWEMMER, Rainer (CERN)

Co-authors: ZVYAGIN, Alexander (Fakultaet fuer Physik-Ludwig-Maximilians-Univ. Muenchen); JOST, Beat (CERN); HAEN, Christophe (Univ. Blaise Pascal Clermont-Fe. II (FR)); GASPAR, Clara (CERN); BONACCORSI, Enrico (CERN); , Eric van Herwijnen (CERN); ALESSIO, Federico (CERN); LIU, Guoming (CERN); BRARDA, Loic (CERN); FRANK, Markus (CERN); CHEBBI, Mohamed (CERN); NEUFELD, Niko (CERN); JACOBSSON, Richard (CERN); SUBBLIAH, Vijay Kartik (CERN)

Presenter: SCHWEMMER, Rainer (CERN)

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