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## The Run Control and Monitoring System of the CMS Experiment

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The CMS experiment at the LHC at CERN will start taking data towards the end of 2007. To configure, control and monitor the experiment during data-taking the Run Control and Monitoring System (RCMS) was developed.

This paper describes the architecture and the technology used to implement the RCMS, as well as the deployment and commissioning strategy of this online software component for the CMS experiment. The RCMS framework is based on a set of web-applications implemented with Java Servlet technology, AJAX and JSP for user interfaces, and supports MySQL and Oracle as DB back-end.

A hierarchical control structure organizes the Run Control in sub-systems. For the DAQ system a set of tools has been developed to manage the flexible generation of configurations with the goal to allow fast reconfiguration of the system, which will comprise about 4000 computing nodes in the full stage of expansion.

A crucial test was passed with RCMS being successfully used in the so called "Magnet Test & Cosmic Challenge" of CMS - a small set of sub-detectors being operated to detect cosmic muons - during 2006.

Towards the first run, RCMS will be tested in another "Cosmic Challenge" exercise with the sub-detectors, DAQ and trigger components in their final position in the underground cavern at the LHC ring.

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

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