Contribution ID: **71**   Type: **Parallel Talk**

The ALICE Online Data Quality Monitoring

Thursday, February 25, 2010 2:00 PM (25 minutes)

ALICE (A Large Ion Collider Experiment) is the detector designed to study the physics of strongly interacting matter and the quark-gluon plasma in Heavy-Ion collisions at the CERN Large Hadron Collider (LHC).

The online Data Quality Monitoring (DQM) is a critical element of the data acquisition's software chain. It intends to provide shifters with precise and complete information to quickly identify and overcome problems, and as a consequence to ensure acquisition of high quality data. DQM typically involves the online gathering, the analysis by user-defined algorithms and the visualization of monitored data.

This paper describes the final design of ALICE's DQM framework called AMORE (Automatic MOnitoRing Environment), as well as its latest and coming features like the integration with the offline analysis and reconstruction framework, a better use of multi-core processors by a parallelization effort, and its interface with the eLogBook.
The concurrent collection and analysis of data in an online environment requires the framework to be highly efficient, robust and scalable. We will describe what has been implemented to achieve these goals and the benchmarks we carried on to ensure appropriate performance.

We finally review the wide range of usages people make of this framework, from the basic monitoring of a single sub-detector to the most complex ones within the High Level Trigger farm or using the Prompt Reconstruction and we describe the various ways of accessing the monitoring results. We conclude with our experience, before and after the LHC restart, when monitoring the data quality in a real-world and challenging environment.

Primary authors: TELESCA, Adriana (CERN); Mr VON HALLER, Barthelemy (CERN); CHAPELAND, Sylvain (CERN)

Co-authors: Mr SOÓS, Csaba (CERN); RODRIGUEZ NAVARRO, David (CERN); Mr COSTA, Filipo (CERN); Mr CARENA, Franco (CERN); Mr SIMONETTI, Giuseppe (CERN); Mrs MAKHLYUEVA, Irina (CERN); Mr FRAUMAN, Marc (CERN); Mr RADEMAKERS-DI ROSA, Ornella (CERN); Mr VANDE VYVRE, Pierre (CERN); Mr DIVIÀ, Roberto (CERN); Mr FUCHS, Ulrich (CERN); Mr CHIBANTE BARROSO, Vasco (CERN); Mrs CARENA, Wisla (CERN)

Presenter: Mr VON HALLER, Barthelemy (CERN)

Session Classification: Thursday, 25 February - Computing Technology for Physics Research

Track Classification: Computing Technology for Physics Research