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The development of a new conditions database prototype for ATLAS RUN3 within the CREST project

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The CREST project for a new conditions database prototype for Run3 (intended to be used for production in Run 4) is focused on improvement of Athena based access, metadata management and, in particular, global tag management. The project addresses evolution of the data storage design and conditions data access optimization, enhancing the caching capabilities of the system in the context of physics data processing inside the ATLAS distributed computing infrastructure. The CREST architecture is designed as a client server model, with the storage backend implemented in a relational database. The data access was realized with a pure REST API with JSON support. The new C++ client access library provides an HTTP query interface. A tool to convert the existing conditions data (stored in Oracle and accessible via the COOL API) into the new CREST system using a custom JSON format has also been implemented. Preliminary data migration has been done to allow testing data retrieval from Athena and the process of validation of the server and client functionalities is in progress.

Summary

Primary authors: FORMICA, Andrea (CERN); ROE, Shaun (CERN); ALEXANDROV, Evgeny (JINR); MINEEV, Mikhail (JINR)

Presenter: MINEEV, Mikhail (JINR)

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