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DCS Data Viewer, a Application that Access ATLAS DCS Historical Data.

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The ATLAS experiment at CERN is one of the four Large Hadron Collider ex- periments. The Detector Control System (DCS) of ATLAS is responsible for the supervision of the detector equipment, the reading of operational parame- ters, the propagation of the alarms and the archiving of important operational data in a relational database. DCS Data Viewer (DDV) is an application that provides access to the ATLAS DCS historical data through a web interface. Its design is structured using a client-server architecture. The pythonic server connects to the DB and fetches the data by using optimized SQL requests. It communicates with the outside world, by accepting HTTP requests and it can be used stand alone. The client is an AJAX interactive web application devel- oped under the Google Web Toolkit (GWT) framework. Its web interface is user friendly, platform and browser independent. The selection of metadata is done via a column-tree view or with a powerful search engine. The final visualization of the data is done using java applets or java script applications as plugins. The default output is a value-over-time chart, but other types of outputs like tables, ascii or ROOT files are supported too. Excessive access or malicious use of the database is prevented by a dedicated protection mechanism, allowing the expo- sure of the tool to hundreds of inexperienced users. The current configuration of the client and of the outputs can be saved in an XML file. Protection against web security attacks is foreseen and authentication constrains have been taken into account, allowing the exposure of the tool to hundreds of users world wide. Due to its flexible interface and its generic and modular approach, DDV could be easily used for other experiment control systems.

Student? Enter 'yes'. See http://goo.gl/MVv53

yes

Summary

A web application for the visualization of ATLAS data.

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