

A Validation System for Data Preservation in HEP

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Preserving data from past experiments and preserving the ability to perform analysis with old data is of growing importance in many domains of science, including High Energy Physics (HEP). A study group on this issue, DPHEP, has been established in this field to provide guidelines and a structure for international collaboration on data preservation projects in HEP.

This contribution presents a framework that allows experimentalists to validate their software against a previously defined set of tests in an automated way. The framework has been designed with a special focus for longevity, as it makes use of open protocols, has a modular design and is based on simple communication mechanisms. On the fabrics side, tests are carried out in a virtual environment using a cloud infrastructure. Within the framework, it is easy to run validation tests on different hardware platforms, or different major or minor versions of operating systems. Experts from IT or the experiments can automatically detect failures in the test procedure by the help of reporting tools. Hence, appropriate actions can be taken in a timely manner. The design and important implementation aspects of the framework are shown and first experiences from early-bird-users will be presented.

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