

WLCG space accounting in the SRM-less world

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The WLCG computing infrastructure provides distributed storage capacity hosted at the geographically dispersed computing sites.

In order to effectively organize storage and processing of the LHC data, the LHC experiments require a reliable and complete overview of the storage capacity in terms of the occupied and free space, the storage shares allocated to different computing activities, and the possibility to detect “dark” data that occupies space while being unknown to the experiment’s file catalog. The task of the WLCG space accounting activity is to provide such an overview and to assist LHC experiments and WLCG operations to manage storage space and to understand future requirements.

Several space accounting solutions which have been developed by the LHC experiments are currently based on Storage Resource Manager (SRM). In the coming years SRM becomes an optional service for sites which do not provide tape storage. Moreover, already now some of the storage implementations do not provide an SRM interface. Therefore, the next generation of the space accounting systems should not be based on SRM. In order to enable possibility for exposing storage topology and space accounting information the Storage Resource Reporting proposal has been agreed between LHC experiments, sites and storage providers. This contribution describes the WLCG storage resource accounting system which is being developed based on Storage Resource Reporting proposal.

Authors: ANDREEVA, Julia (CERN); Mr CHRISTIDIS, Dimitrios (University of Patras (GR)); DI GIROLAMO, Alessandro (CERN); KEEBLE, Oliver (CERN)

Presenter: ANDREEVA, Julia (CERN)

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