



Contribution ID: 233

Type: oral presentation

## dCache, LCG Storage Element and enhanced use cases

*Wednesday 29 September 2004 16:50 (20 minutes)*

The dCache software system has been designed to manage a huge amount of individual disk storage nodes and let them appear under a single file system root. Beside a variety of other features, it supports the GridFtp dialect, implements the Storage Resource Manager interface (SRM V1) and can be linked against the CERN GFAL software layer. These abilities makes dCache a perfect Storage Element in the context of LCG and possibly future grid initiatives as well.

During the last year, dCache has been deployed at dozens of Tier-I and Tier-II centers for the CMS and CDF experiments in the US and Europe, including Fermilab, Brookhaven, San Diego, Karlsruhe and CERN. The largest implementation, the CDF system at FERMI, provides 150 TeraBytes of disk space and delivers up to 50 TeraBytes/day to its clients.

Sites using the LCG dCache distribution are more or less operating the cache as black box and little knowledge is available about customization and enhanced features.

This presentation is therefor intended to make non dCache users curious and enable dCache users to better integrate dCache into their site specific environment. Beside many other topics, paper will touch on the possibility of dCache to closely cooperate with tertiary storage systems, like Enstore, Tsm and HPSS. It will describe the way dCache can be configured to attach different pool nodes to different user groups but let them all use the same set of fall back pools. We will explain how dCache takes care of dataset replication, either by configuration or by automatic detection of data access hot spots. Finally we will report on ongoing development plans.

**Primary author:** FUHRMANN, P. (DESY)

**Presenter:** FUHRMANN, P. (DESY)

**Session Classification:** Computer Fabrics

**Track Classification:** Track 6 - Computer Fabrics