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## **GFAL 2.0 Evolutions & GFAL-File system introduction**

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The Grid File Access Library ( GFAL ) is a library designed for a universal and simple access to grid storage systems. Re-designed and re-written completely, the 2.0 version of GFAL provides a complete abstraction of the complexity and heterogeneity of the grid storage systems ( DPM, LFC, Dcache, Storm, arc, ... ) and of the data management protocols ( RFIO, gsidcap, LFN, dcap, SRM, Http/webdav, gridFTP ) by a simpler, faster, more reliable and more consistent POSIX API.

GFAL 2.0 is not only an improvement of the GFAL 1.0's reliability, several new functionalities have been developed like the extended attributes management, the runtime configuration setter/getter, a new scalable plugin system, new operations and new protocol (http/webdav) support and the GFAL FUSE module.

GFAL 2.0 is delivered with gfalFS ( GFAL 2.0 FUSE module ), a new tool that provides a Virtual File System common to all the grid storage systems ( Dcache, DPM, , WebDAV server ), allowing a user to mount these resources.

In this paper I analyse in detail the new functionality and the new possibilities brought by GFAL 2.0 and gfalFS, like the new plugin system for the support of the new protocols , the new error report system, the old issues corrected, the new development-kit provided. A comparison of the performance benefit/loss of the GFAL 2.0/gfalFS vs the other existing tools on the different storage systems is explained. More details are presented as well on the GFAL 2.X future improvements and possibilities.

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