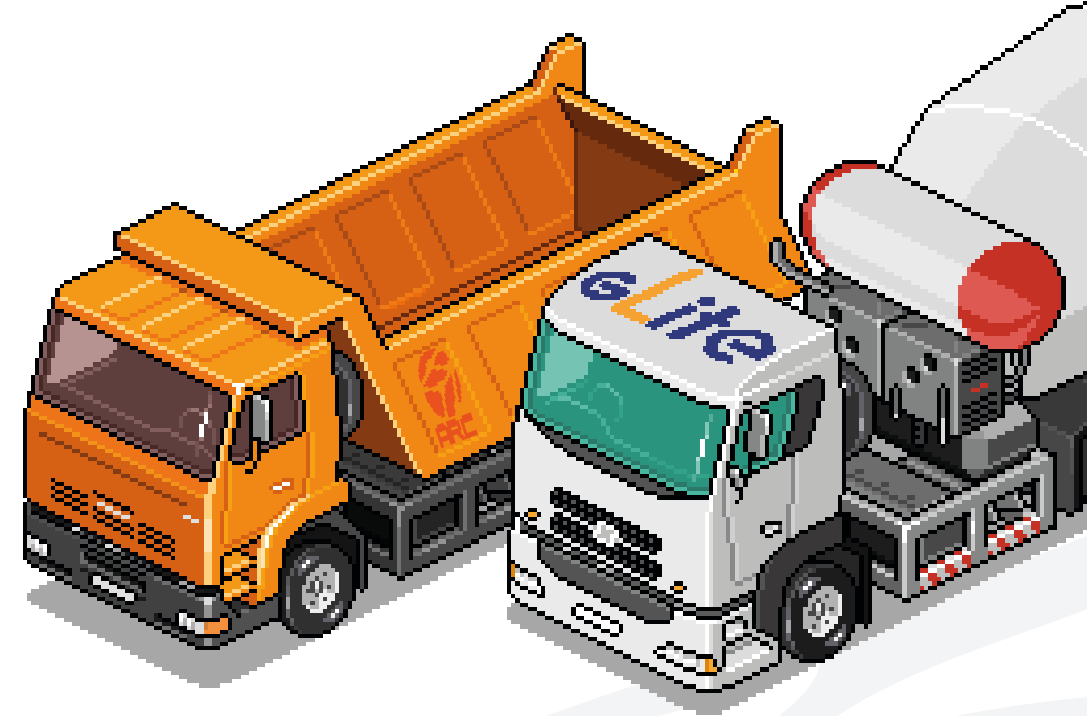


# EMI DATA LIBRARY

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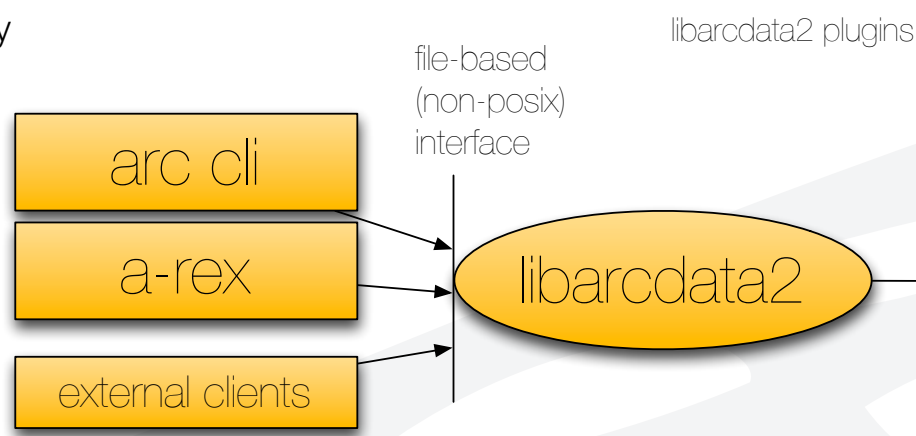
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## ARC AND GLITE JOIN FORCES TO WORK ON THE UNIFIED EMI DATA LIBRARY



### ARC

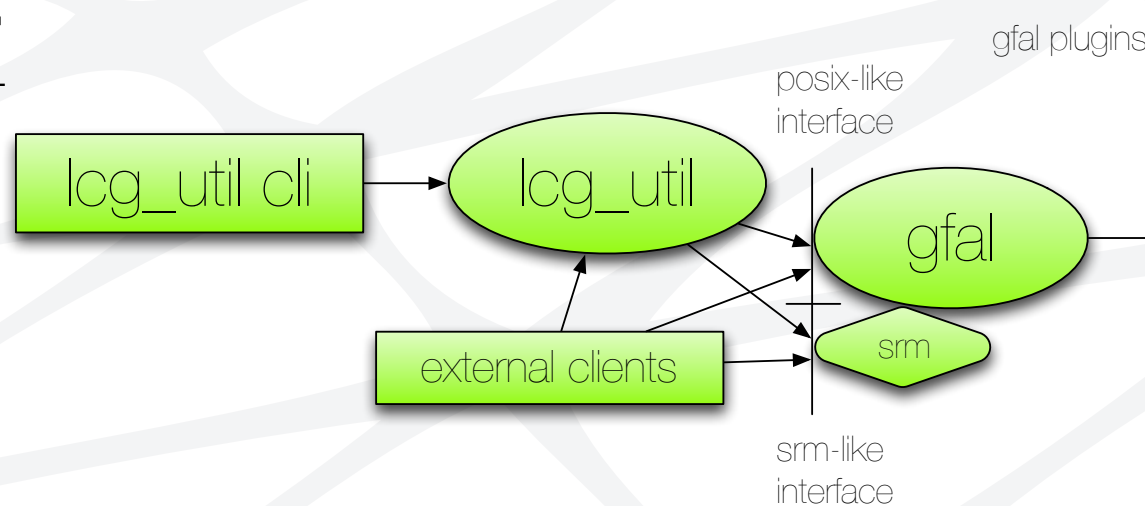
- file-based data-moving library – *libarcdata2*
- provides higher-level operations to read and write files
- pluggable architecture – supports data transfer protocols through plugins
- plugins for LFC and SRM operations
- supports space tokens



- automatic buffer handling and checksumming
- automatic copying from one location to the other
- configurable number of retries – re-resolving replicas and handling file caching
- libarcdata2 is used by the arc command tools, the ARC CE and external clients to upload and download files
- written in C++

### GLITE

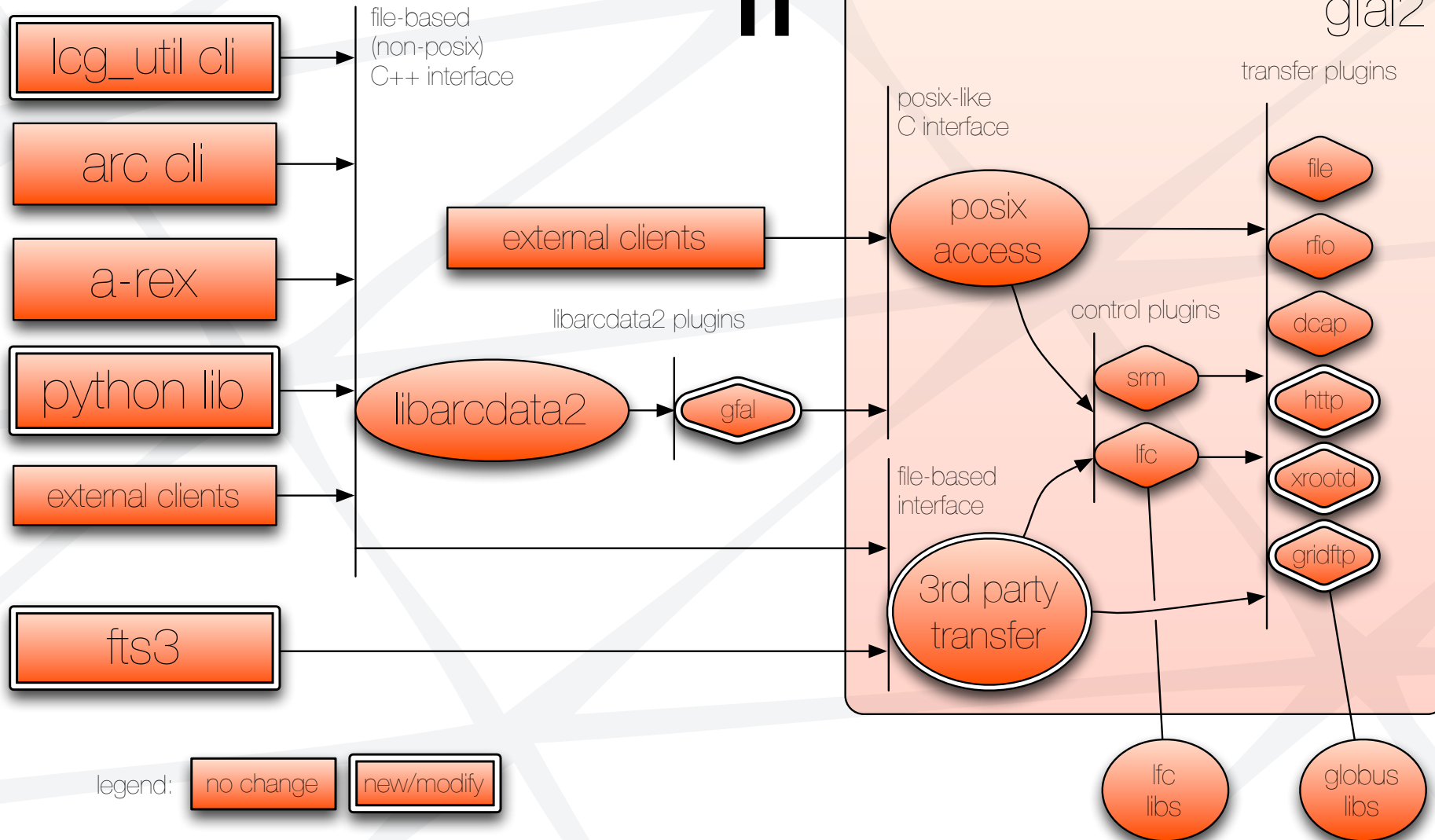
- posix-like data access through GFAL
- pluggable architecture – supports data transfer protocols through plugins
- plugin for LFC interaction – resolves logical names to TURLs
- GFAL's SRM interface supports space tokens



- lcg\_util library provides higher-level file operations using GFAL for file access
- lcg\_util command line tools are thin wrappers to lcg\_util library
- provides python API
- several external clients (e.g. experiments software) use GFAL and lcg\_util libraries
- written in C

### EMI

- ✓ posix-like interface from GFAL2
- ✓ higher-level file-based interface from libarcdata2
- ✓ adds transfer interface to GFAL2 for initiation and monitoring of 3rd-party transfers
- ✓ libarcdata2 will use GFAL2 through plugin
- ✓ for platforms where GFAL2 plugin is available no other plugins will be needed
- ✓ external clients requiring posix-based byte-wise data access can use GFAL2 directly
- ✓ file-based data moving clients (e.g. lcg\_util CLI, ARC CLI and ARC CE) can use libarcdata2



- ✓ FTS3 and parts of the lcg\_utils and ARC CLIs will use the 3rd-party transfer interface of GFAL2 – lcg\_util library can be removed
- ✓ python library will be created to replace the needed functionality of the lcg\_util python API.
- ✓ all plugins are moved under GFAL2 though some plugins are file-based and not posix – allows posix access without needing to know physical file locations
- ✓ e.g. HTTP and xrootd TURLs may be returned from SRM plugin and the corresponding plugins need to be available in GFAL2

legend: no change new/modify

Feb'12 Jun'12 Jul'12 Sep'12 Dec'12 Apr'13  
 GFAL2 prototype in EMI2 FTS3 prototype demo EMI\_datalib prototype ready lcg\_util CLI and python API using EMI\_datalib EMI\_datalib ready for beta testing Production-ready EMI\_datalib

PROTOTYPE

PRODUCTION

EMI2



TESTING

EMI3

WE DELIVER. TOGETHER.

