

# EMI\_datalib



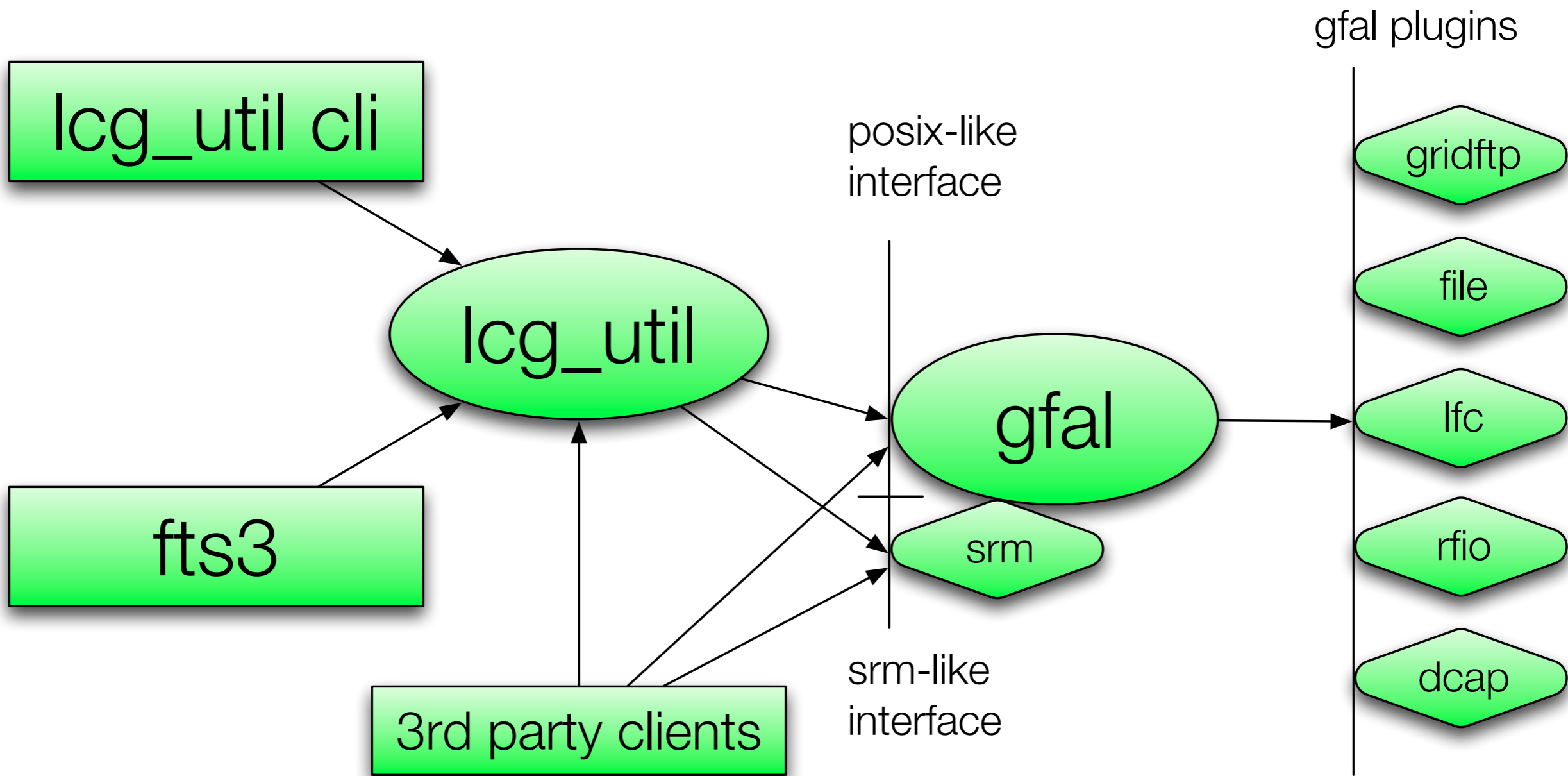
## consolidating ARC and gLite data libraries

Jon Kerr Nilsen, Univ. of Oslo

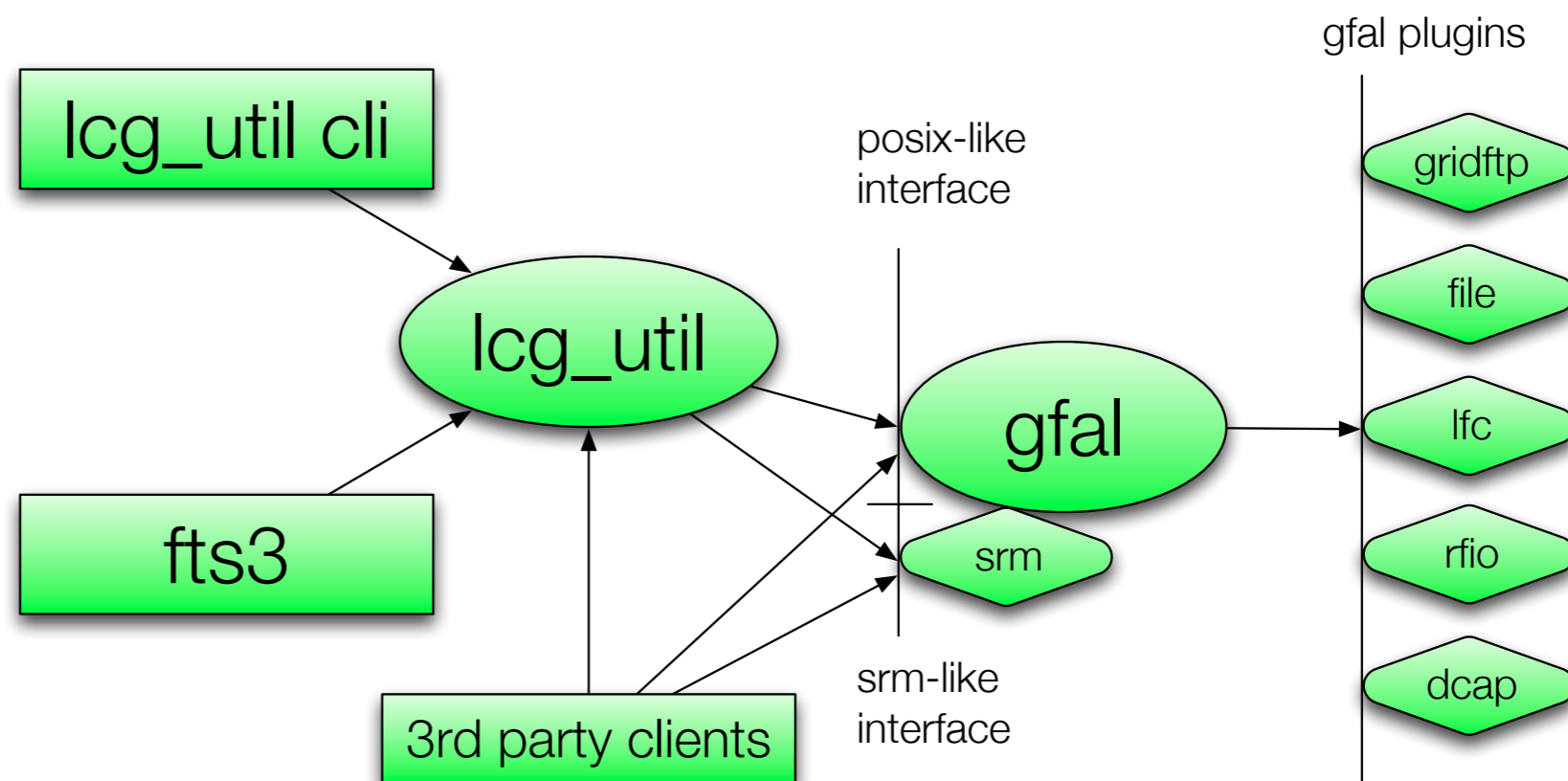
EMI AHM, Padova Oct. 2011

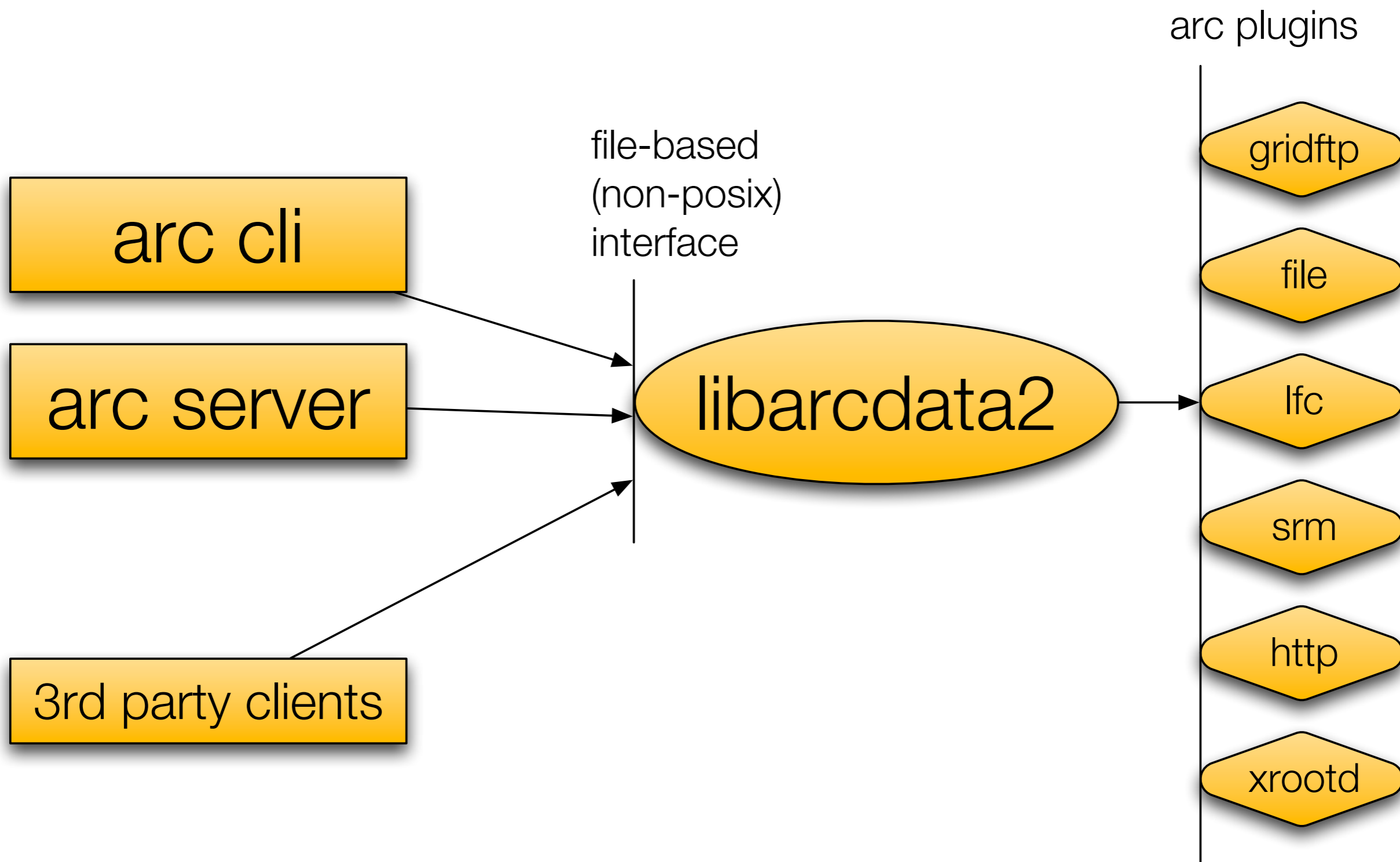
EMI is partially funded by the European Commission under Grant Agreement RI-261611

- What we have
  - lcg\_util/GFAL
  - ARC data tools/libarcdata
- What we've done
  - meetings
  - presentations
- What we'll make
  - EMI\_datalib
  - Pros and cons
- Way forward
  - Expected obstacles
  - Expected timeline

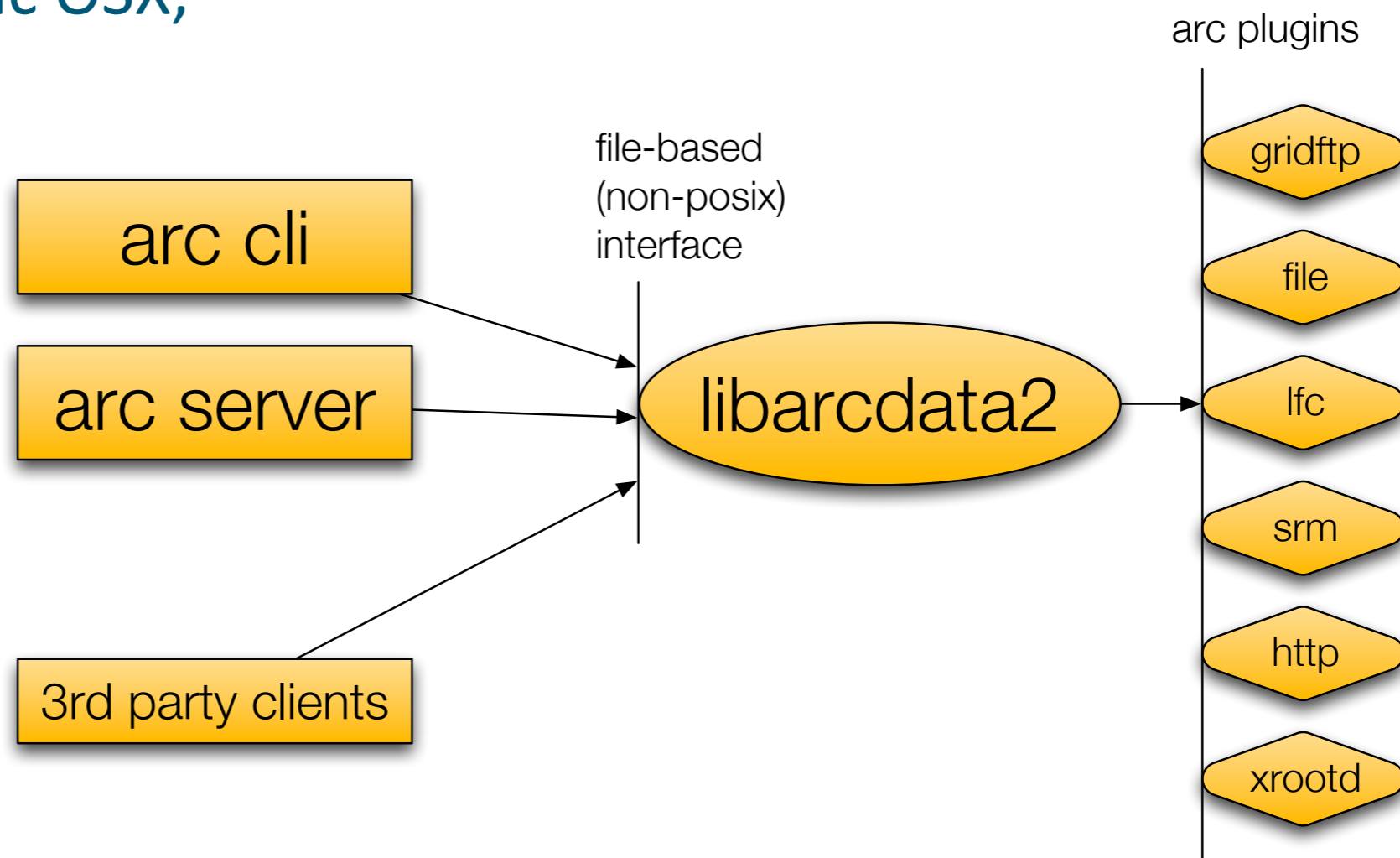


- POSIX-like interface (GFAL)
- Protocols handled in plugins
- Higher-level file operations through lcg\_util
- Support for SL5
- Written in C
- Will be used in FTS3





- File based interface (libarcdata2)
- Protocols handled by plugins
- Lacks third-party transfer
- Support for Linux, Mac OSX, Windows
- Written in C++
- Used by ARC CE



- EMI\_datalib task force
  - Jon, Zsolt, Michail (replaced Ricardo) , Zsombor, David

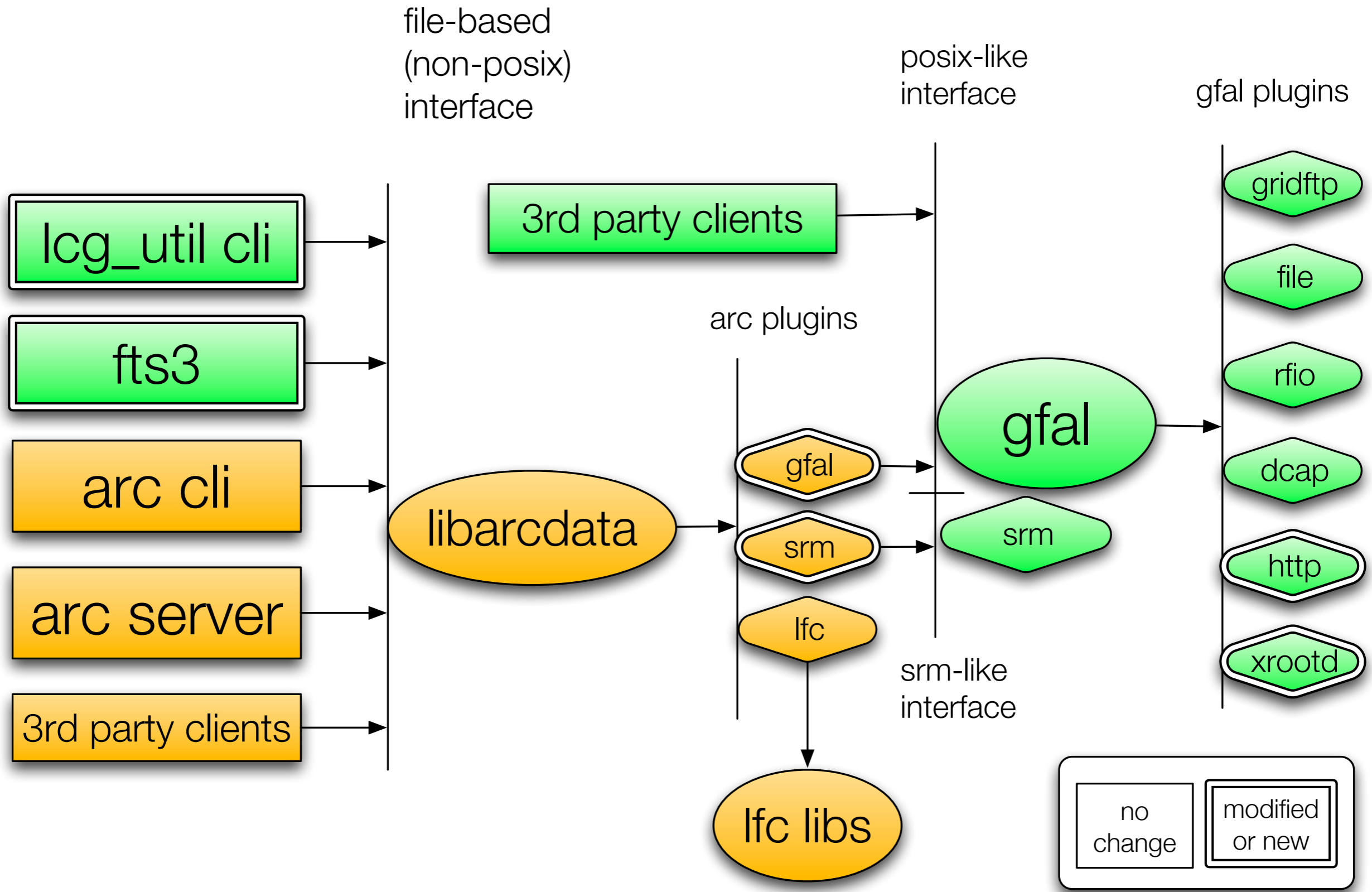
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- Two telcons, two F2Fs @ CERN
  - CERN data and ARC DM present at all meetings
  - F2Fs very constructive - much progress was made
    - Stuffing a bunch of expert into a small room for a day *can* give results



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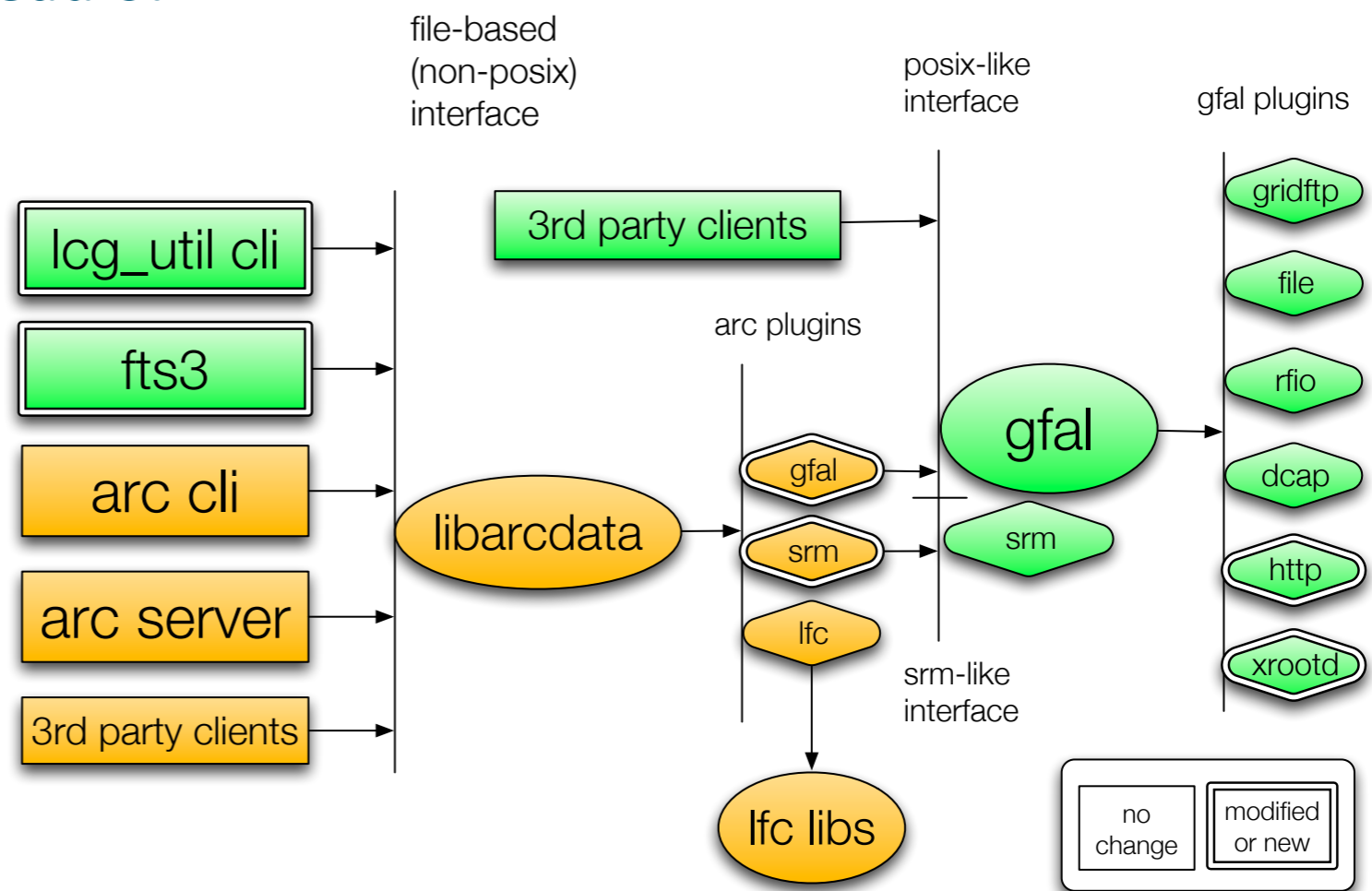
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- Working session this afternoon
  - Aim to finalize plan → **now** is a good time for input



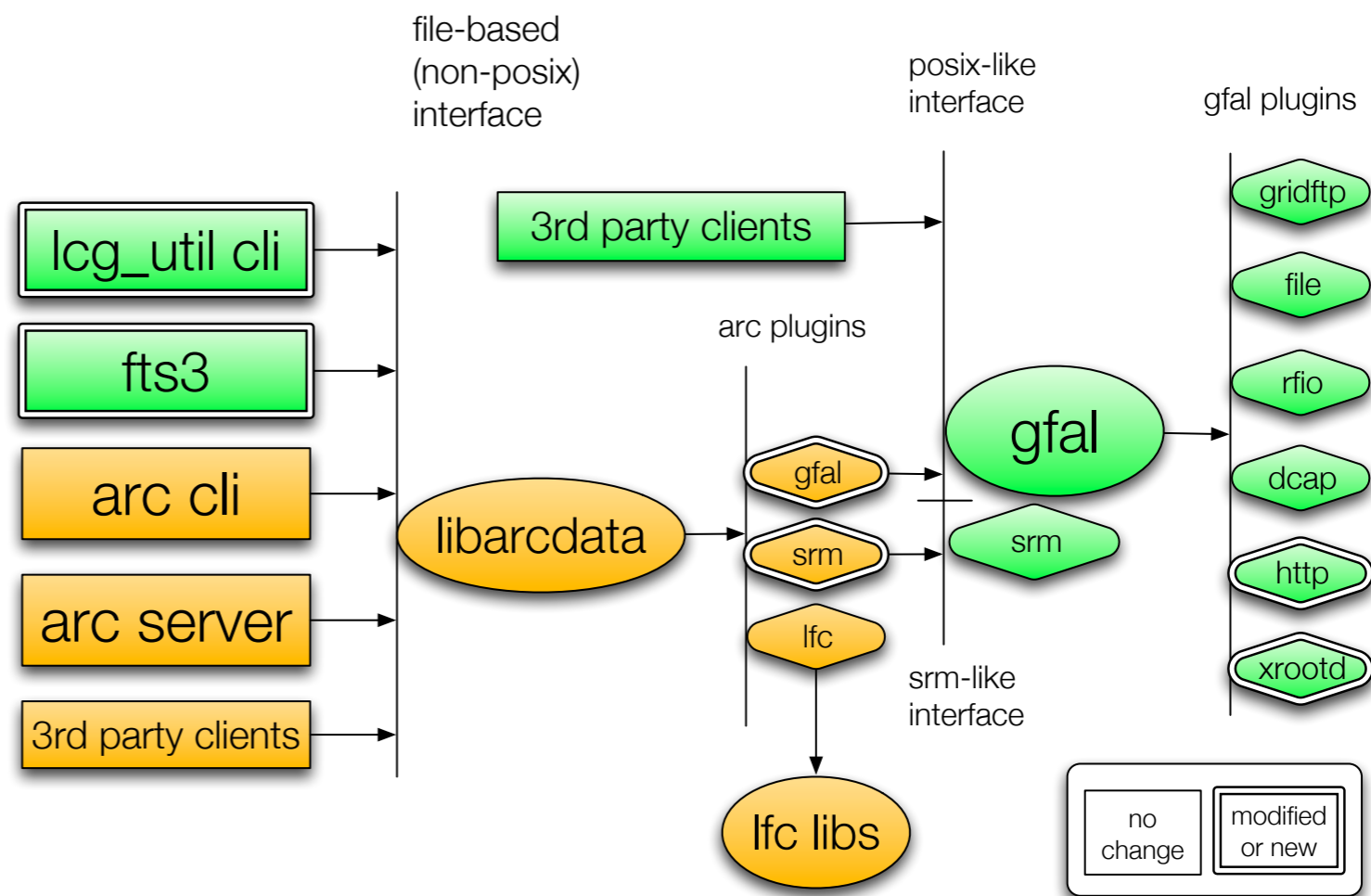
## •Why?

- One set of file transfer plugins instead of two
- One set of control plugins instead of two
- Both file-based and POSIX in same library
- GFAL gets http and xrootd, ARC gets third-party transfer
- Clear division of components
- CLIs unchanged – no change for existing users

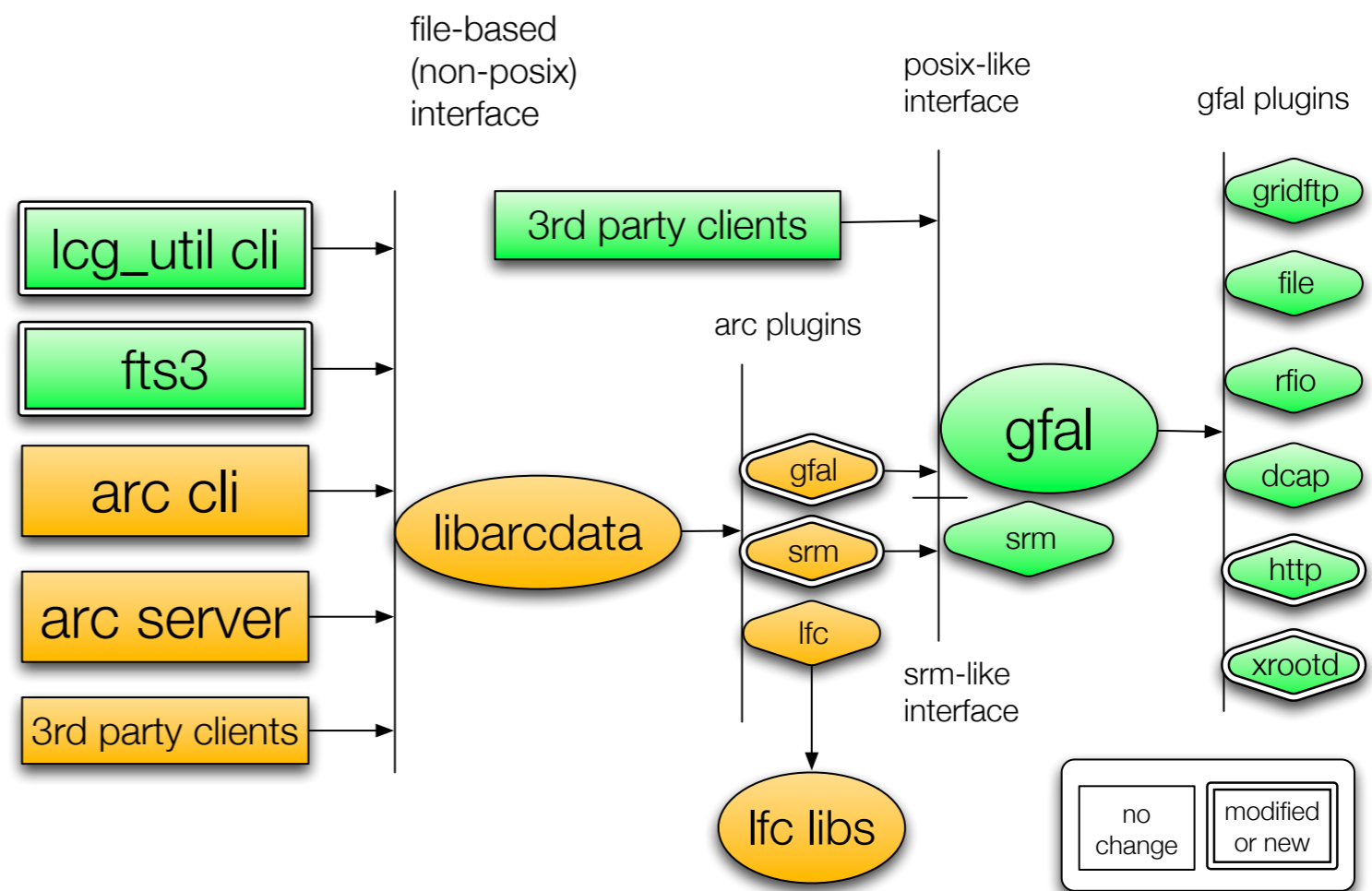


- Why not?

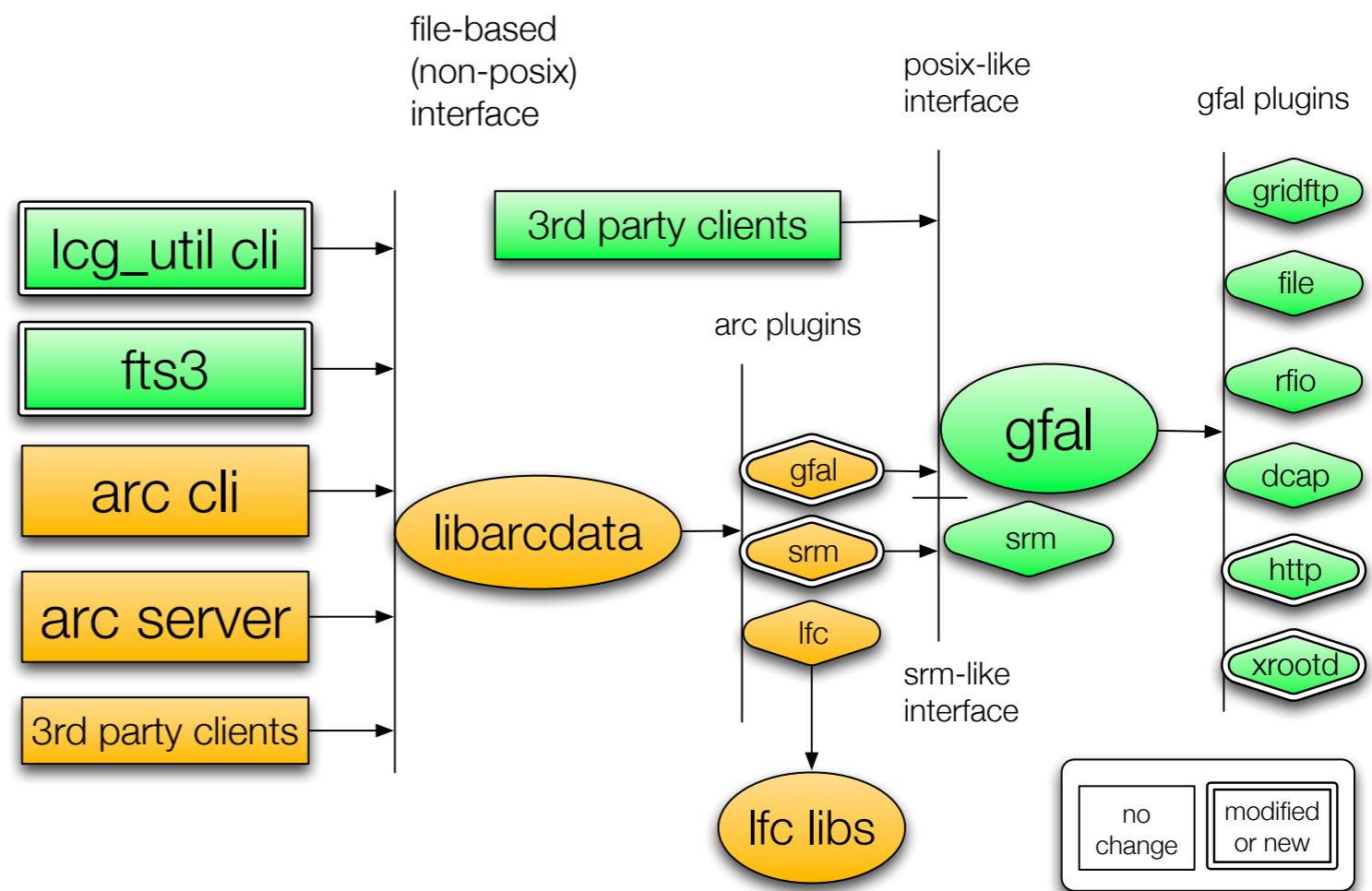
- All development moved to consolidation – no new features in old version
- Users will need to do more radical changes to get new features
- Not a radical reduction of code base compared to the effort needed for consolidation



- What will be phased out?
  - lcg-utils library
  - libarcdata plugins
    - file, gridftp, srm, http

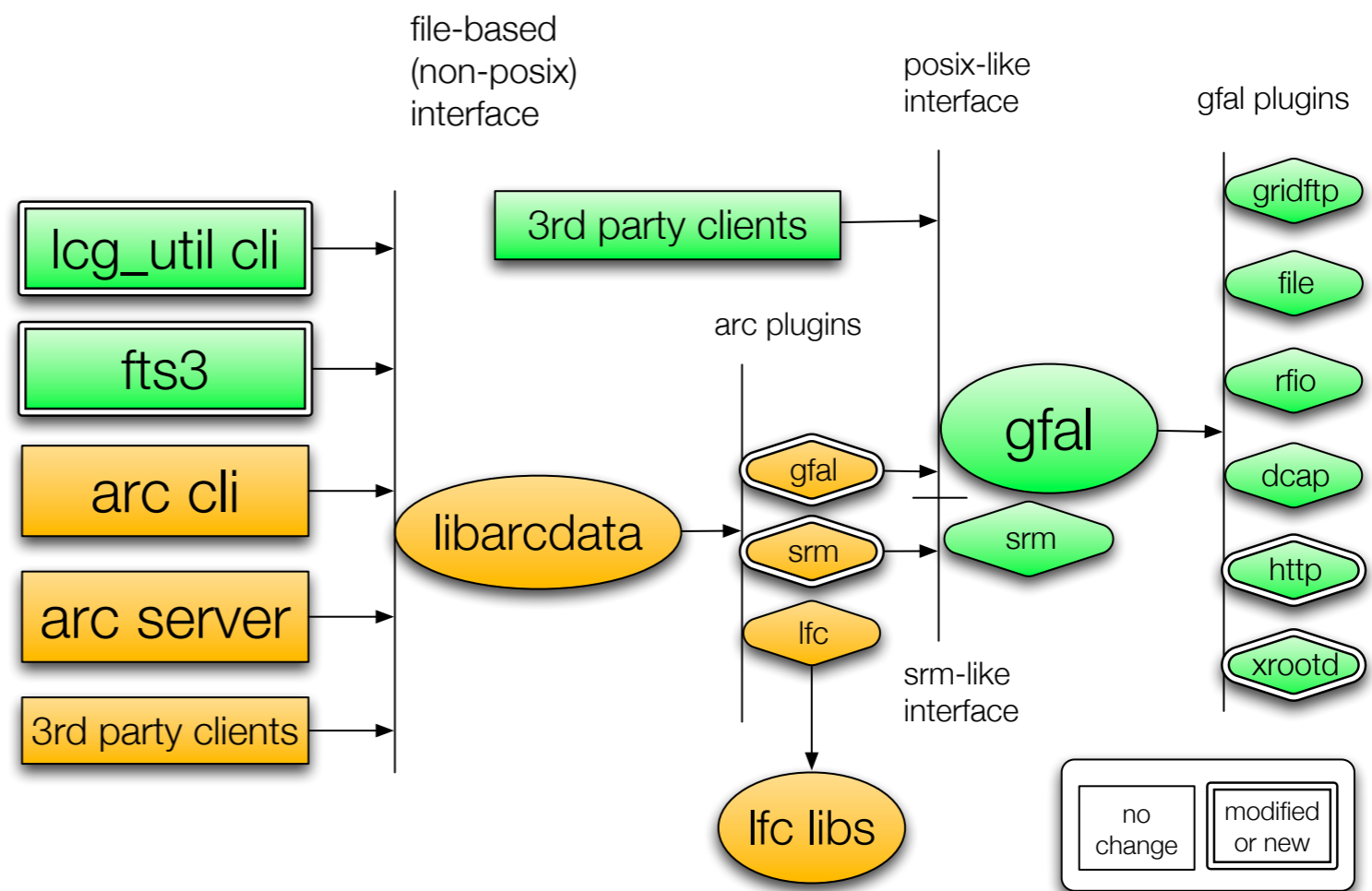


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  - GFAL plugin for ARC
  - http and xrootd plugins for GFAL

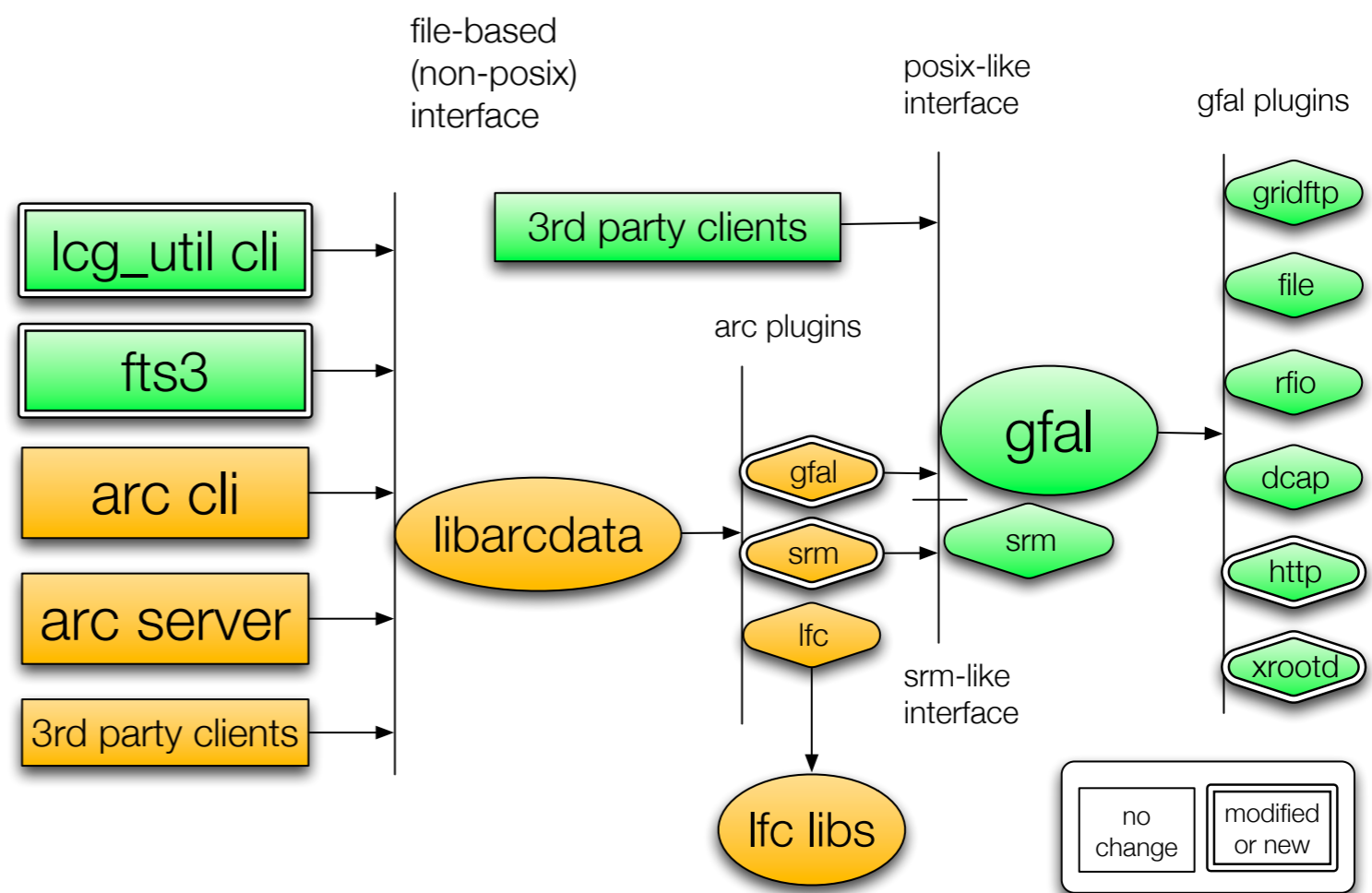




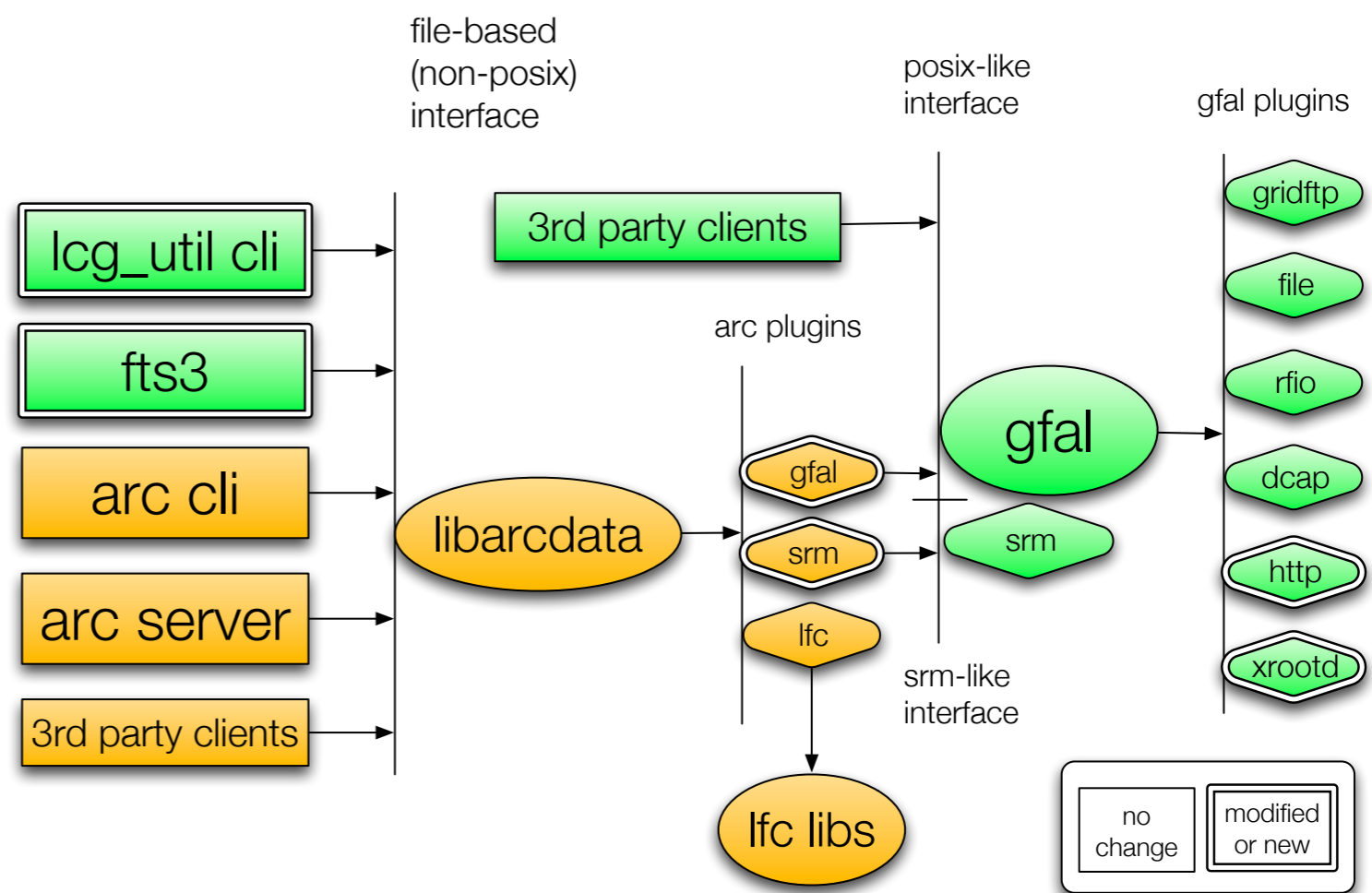
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  - The ARC SRM plugin (to use GFAL)



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- Who will maintain the new stuff?



- More pro's than con's
- Seems to be more to gain than to lose
- Packaging, dependencies and environment variables may need some ironing
- OS support may need some thinking
- gLite and ARC will have to pull together – an achievement on its own :)



- October 2011: Deliver consolidation plan in EMI
  - Draft exists - main ideas ready
- December 2011: Finish prototype implementation
  - Prototype should be ready for EMI-2
  - Merging two data access libraries in 2 months - delays may occur
  - Initial work already started
- 2012: Testing
  - Lots of testing needed to arrive to production ready code
  - Affected components: FTS and ARC CE
  - Any testing help appreciated!
- December 2012: Finish migration to EMI\_datalib



Thank you!

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