

Changelog (first-revision)

1) Xrootd -> XRootD

➔ Fixed everywhere within the draft. 😊

2) WLCG group ???

➔ Indeed, I was referring to the grid 😊

3) A focus on the development workflow for this API is given. The client API is put into use in terms of the command line interface that is supports, by testing the file copying feature.

Not sure what's the meaning of this ? Some like: 'We discuss the development process for the new API. ' would be more understandable The declarative API is not used in the xrdcp implementation, it is used to implement an Erasure Coding plug-in for the client.

➔ I've adjusted the abstract accordingly. Should be fine now 🤔

4) then scientific community -> the scientific community

➔ Fixed 😊

5) plus features like staging data from tape. -> and in addition features like staging data from tape

➔ Indeed, went too far with the copy-paste procedure 😊

6) Even though LHC has proven to be able moving data at the necessary throughput [2], only by adopting a so-called federated regional storage using Xrootd will be able to avoid any potential latency issues for physicists when accessing the data and the eventual complexity of the tools involved.

➔ The phrase was removed from draft.

➔ I was trying to emphasize the fact that LHC has enough bandwidth to move data at a rate that assures there are no lags/issues when physicists try to access it. Clearly not my best attempt for that 🤔

6_1) LHC is an accelerator it's not moving data, maybe you mean WLCG, however I would probably drop the first part of the sentence and go for something like:

'Adopting a so-called federated regional storage using XRootD will allow to provide high quality access to the data for physicists in terms of latency and workflow complexity.'

However as I said I'm not sure I understood correctly what you meant in this sentence it might be this is off.

➔ Went with the removal of paragraph as mentioned in 6 🤔

7) 'This could be possible through the hierarchical deployment of redirectors that allow site discovery that have available data in real-time.' -> 'This is possible through the hierarchical deployment of redirectors that allow real-time discovery of sites that are hosting the data.'

➔ Adoption of this phrase was successful ✅

7_1) Although, Xrootd supported multi-storage deployments for a long time, the addition of a feature which allowed its proper functionality within a global, multi-site environment was in fact the core idea of AAA. -> it is unclear what is the enabling feature here please elaborate ;-)

➔ Something along the line: “While XRootd supported multi-storage deployments before, the novel idea of AAA was to extend and improve this XRootd functionality to seamlessly function in a global, multi-site environment.” I believe the current phrasing mentions that 😊

8) a technology developed in-house and built on top of Xrootd framework, with some additional features. -> drop the ‘with some additional features’

➔ Dropped

9) Experiments within LHC (e.g. ATLAS, CMS, LHCb, ALICE) but also smaller experiments (e.g. AMS) have EOS as a native solution for data storage/access for the users

The LHC experiments (e.g. ATLAS, CMS, LHCb, ALICE) and also other smaller experiments hosted at CERN (e.g. AMS), including their user communities, use EOS for data storage and access.

➔ Adoption of this phrase was successful ✓

10) ‘This induces a lot of extra-time (overhead) that can lead to a relatively slow progress into tackling the actual tasks which have to be performed by the physicist with the required data.’ -> ‘This introduces significant overhead and as a result slows down the process of tackling the actual tasks which have to be performed by the physicists with the required data.’

➔ Adoption of this phrase was successful ✓

11) ‘The change between the local analysis and Grid analysis is removed within a federated storage system and on top of that, data can be accessed independent on the location, which also reduces the latency between data request and data access.’

➔ To be honest, now that I read it a couple of times, I’m also clueless. Dropped from the draft.

12) the whole ‘B. Client-sideXrootd’ paragraph is to be removed as this refers to XrdClient which is the old deprecated client, that has been removed from production for 5 years.

➔ Removed

13) ‘(each synchronous call has been implemented into the corresponding asynchronous version of it).’ Actually it is the other way around each synchronous call has been implemented in terms of its asynchronous counterpart

➔ Adjusted accordingly 😊

14) ‘XrdCl is flexible, meaning that it can be configured using a configuration file with environment variables or a default utility’
or a default utility -> or directly from the C++ API.

➔ Adjusted accordingly 😊

15) 'In fact, the server could make an authentication request to the client (when the connection between client and server is being established). ' -> In fact, the client authenticates (on server request) during the xrootd hand-shake that happens when the connection is being established.

➔ Adoption of this phrase was successful ✅

16) 'Before you begin to format your paper, first write and save the content as a separate text file. Complete all content and organizational editing before formatting. Please note sections A-D below for more information on proofreading, spelling and grammar.'

➔ Oops. That was a placeholder which I was moving around for keeping a decent document shape, as Word can be mildly infuriating when it comes to text placement. It should be gone from the draft now 😞

17) A. ThenewXrootdclient

I would drop this section as this has been described numerous times and is irrelevant for the paper

➔ Dropped entirely

18) The XrdCl event-loop the description on how the event-loop works is not correct, also the corresponding figure is incorrect (Fig. 4) This needs to be rewritten.

➔ Future of the section is uncertain 😓

19) also figure 5 doesn't make much sense

➔ Figure was replaced

20) V. XRDCP-TESTINGTHECOMMANDLINEINTERFACE This paragraph is also irrelevant for the paper I would drop it.

➔ Removed from the draft. Replaced with the Erasure Coding info and listing from presentation (citation for the presentation not included yet). Not sure how to properly reference it 😞

🔧 Upcoming fixes:

➔ Regarding the event-loop section (re-design of the entire section):

- re-do the figure for it 💪
- add proper explanation of the concept behind it 💪

➔ Add more information (or even some diagrams/images) for the Erasure Coding process. 💪