



Roadmap

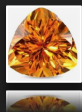


***Dr. Andreas J. Peters,
Elvin Alin Sindrilaru***

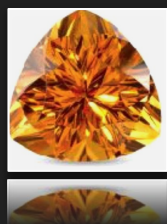
For the EOS Project

15 March 2024

EOS⁴ EOL



- Support stopped end of last year as planned!



4.8

June 2020

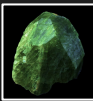
December 2020

DONE

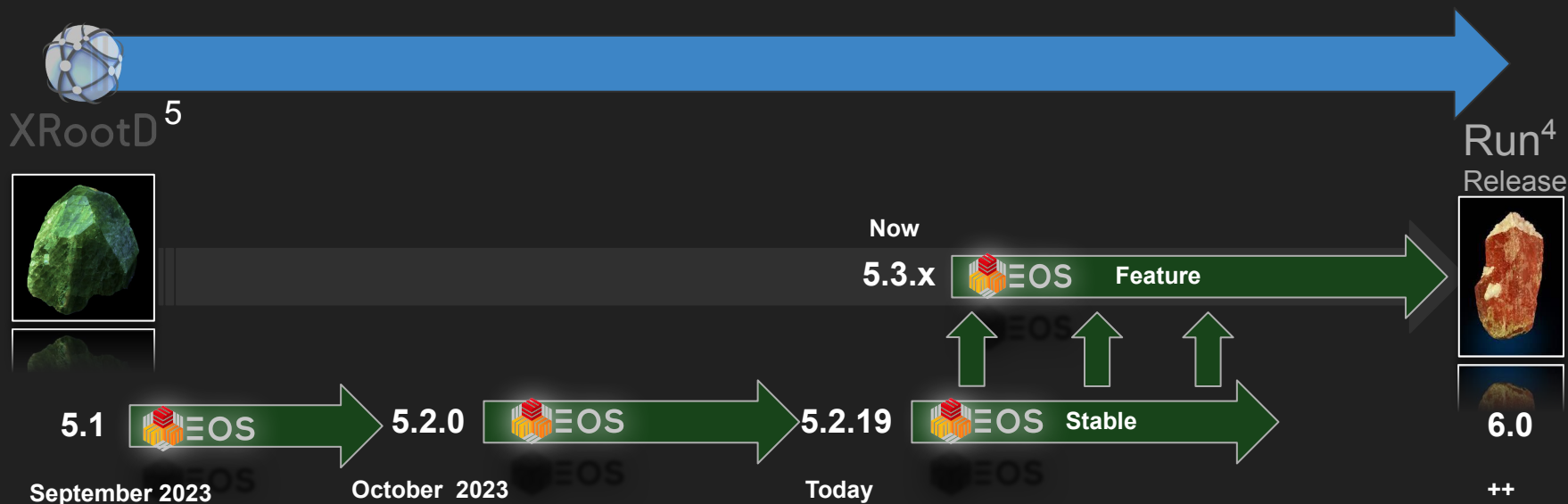
EOL

31.12. 2023

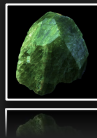
EOS⁵ Release Planning



- EOS⁵ was available since mid 2021
- We don't need a major version release this year
 - No XRootD⁶ currently planned



EOS 5.2 Release



• What we wanted to drop ...

- libmicrohttpd
- LevelDB file meta data
- Old FSCK reporting
- Old Balancer
- Transfer Queues/Multiplexer
- MQ Daemon
- Internal HTTP browser JS



• What we wanted to target ...

- HA without MQ
- MGM Latency Reduction (replacing global mutexes with local mutexes)
- FLAT Scheduler
- REST API MGM
- ~~Merge SHARE API and permission system homogenisation~~
- ~~Possibly move to TPC processes instead of in-MGM multithreading with XrdGl~~
- FUSE Performance
- ~~FST Gateway IO & scheduling for shared backends~~
- ~~EC Updates (when XRootD range clone/copy on write functionality is available)~~



EOS 5.3 Feature Release



- **Pending Merges**
 - QClient Improvements
 - Share ACLs
 - Global IO Shaping
 - Remote ZIP Support
- **What is still in progress ...**
 - HA last mile
 - MGM Latency Reduction
 - FLAT Scheduler
- **What is considered ...**
 - SFTP protocol in XRootD
 - OIDC in XRootD
 - S3 in EOS
 - FSCK last mile
 - Direct IO in EC - Copy-on-Write in EC

EOS ^{Run 4} Directions



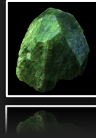
- **MGM Performance Strategy**

- Further improve performance for single MGM by $O(1)$
- Flatten meta-data ops JITTER using local locking
 - If this fails, we might go for branching MGMs (multi MGMs)
 - Investigate usability of read-only MGMs with active cache invalidation

- **Data Format Evaluations**

- Study/Adapt future RNTuple format with erasure coding - IT Project has been setup for 2024
- Study what range of file sizes are sustainable

EOS ^{General} Improvements



- **Documentation**
 - Document missing components
- **YOU tell us what you need!**
 - We discuss weekly what we need at CERN, but sometimes you need something else!
 - Continue to use the Community Forum, JIRA, SNOW - it is very appreciated
- **YOU contribute**
 - Every contribution is welcome - code, configuration, documentation, ideas!
 - GIT Merge Requests, Mattermost, Emails aso.

EOS Workshop Closing



- A **big thank you** to all participants for making the EOS workshop a success with a diverse program and many interesting contributions
 - This year the agenda was very condensed, we will try to have a little bit more time for the next workshop
- We hope this event was **useful** to you ... **see you next time!**



