XRootD Transfers Monitoring

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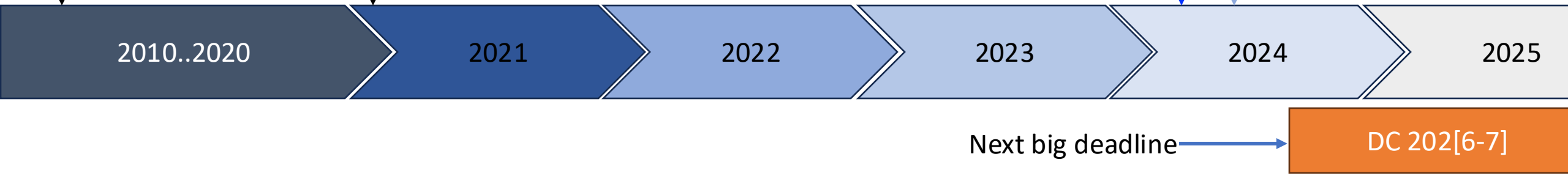
(on behalf of WLCG monitoring task force)

Introduction/Disclaimer

- Cover the status of the XRootD transfers Monitoring for WLCG
  - We are in convoluted times of change
- Talk provided from the Monitoring perspective
  - I’m not an XrootD nor dCache expert by any means
- Special focus on the IP version identification

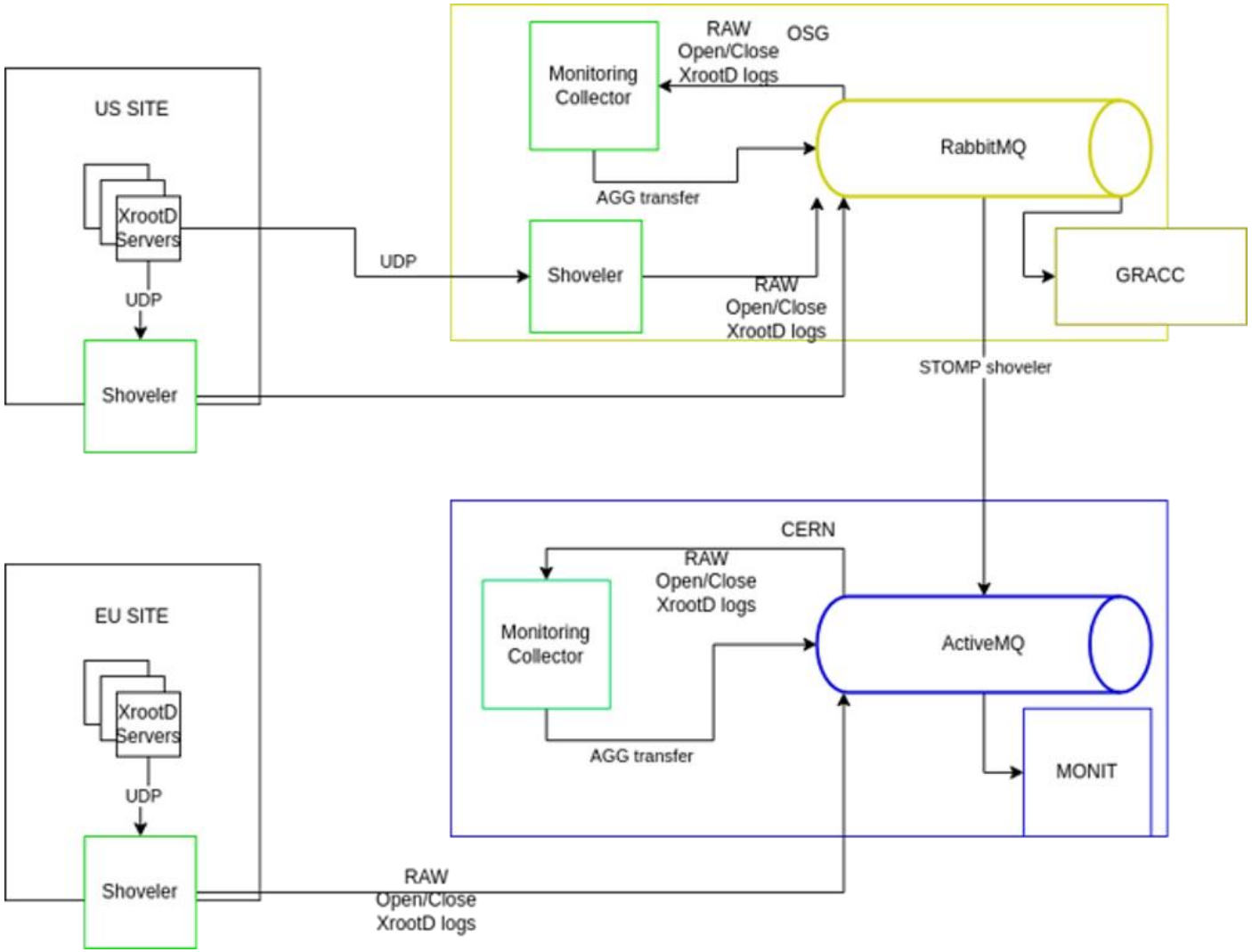
The Long Story Short

- XRootD Monitoring performed by GLED + Monalisa
  - GLED flow was identified as unreliable
- Work on the NextGeneration flow started around 2021
  - CERN EOS servers and FNAL dCache fully integrated for DC2024
  - Integration of few other sites started but it's "paused"
- GLED flows stopped in 2024



Next big deadline → DC 202[6-7]

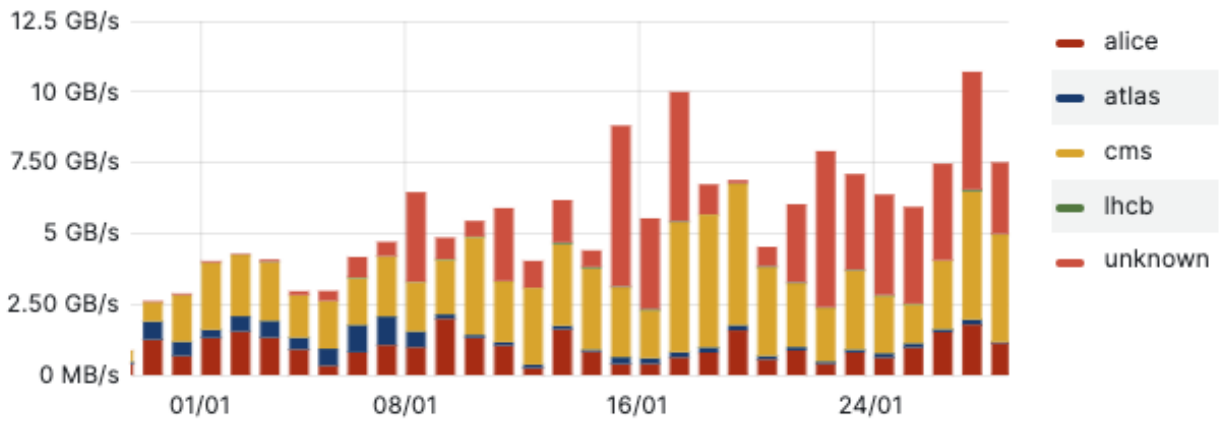
NG XRootD Monitoring Architecture



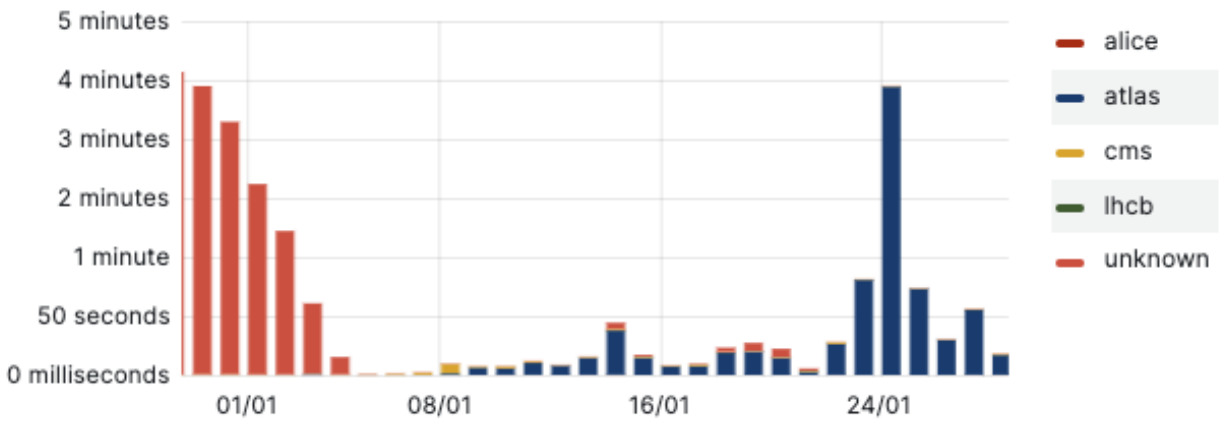
Next Generation

[Link to Dashboard]

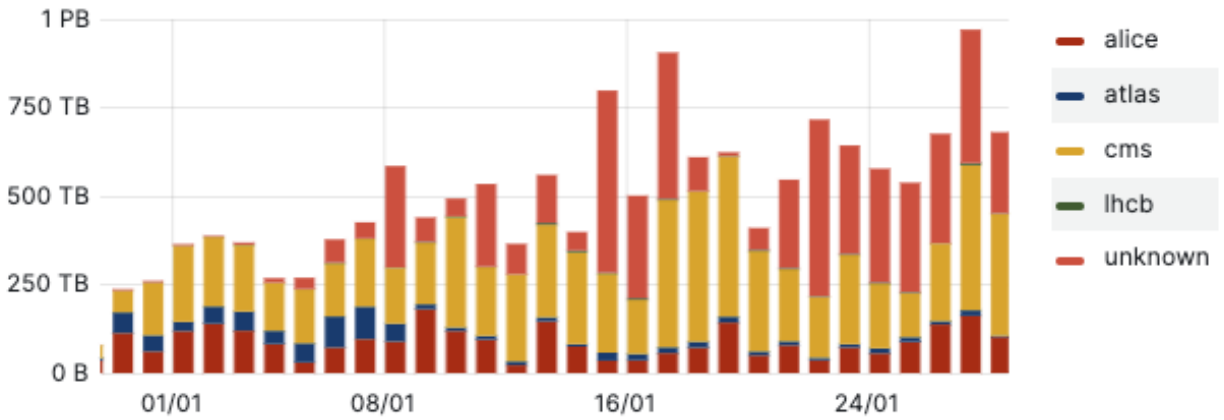
Transfer Throughput



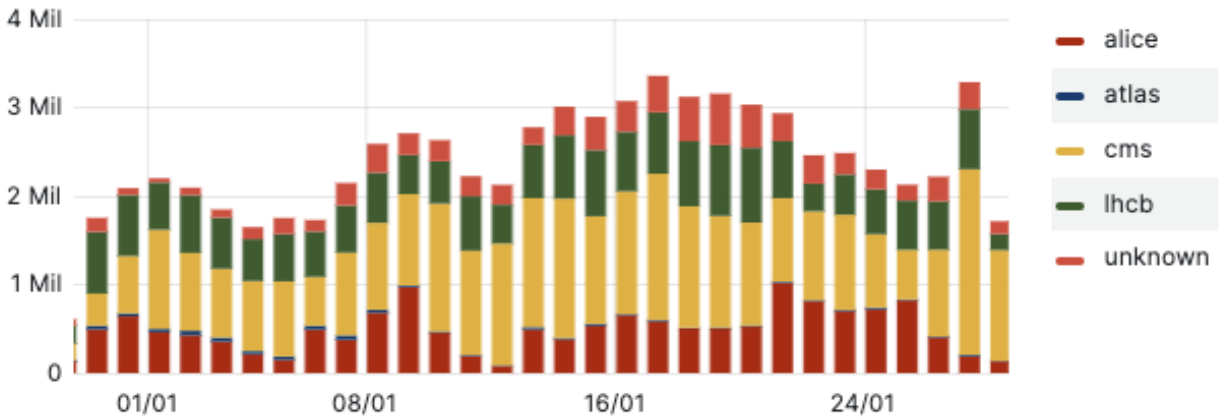
Average Operation Time



Transferred Volume



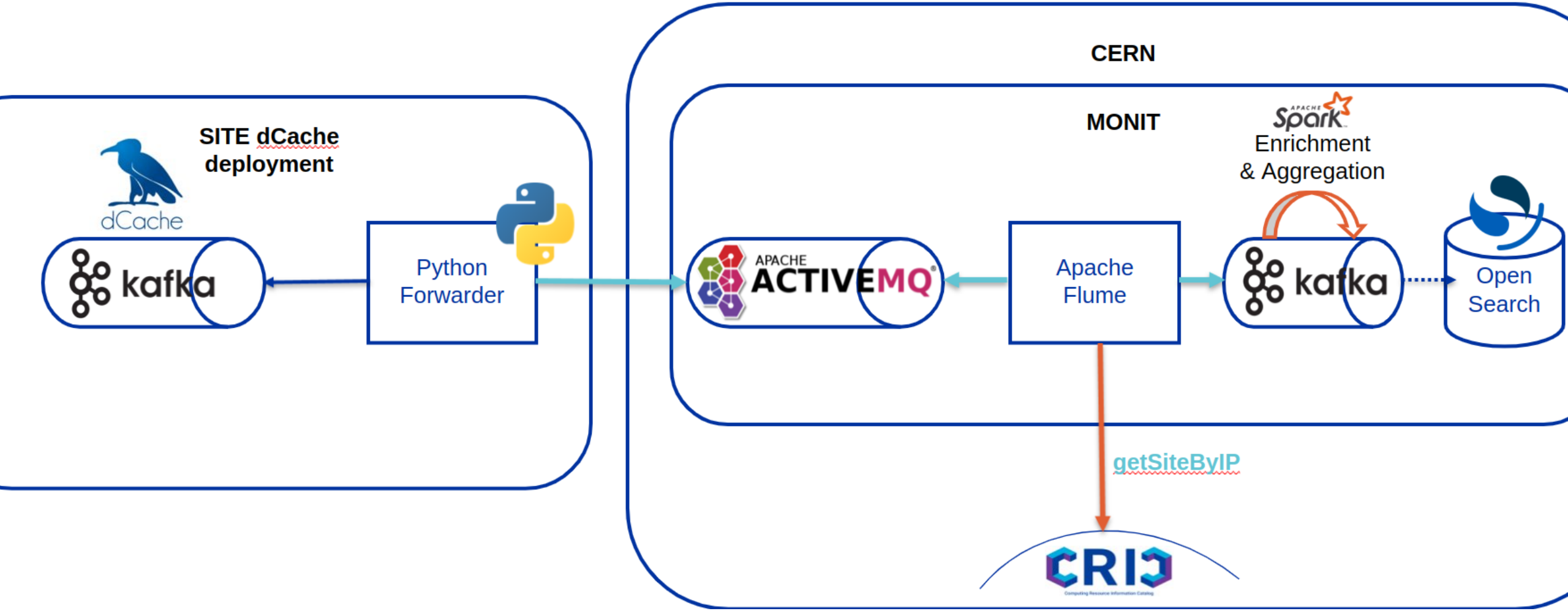
Transfers Finished



› dCache *(3 panels)*

› GLED *(4 panels)*

dCache (XRootD) Monitoring Architecture

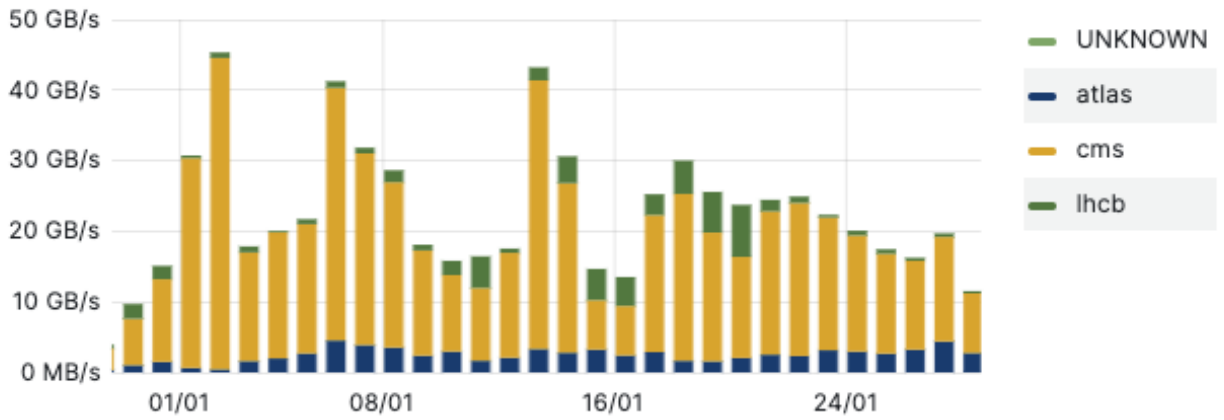


› Next Generation *(4 panels)*

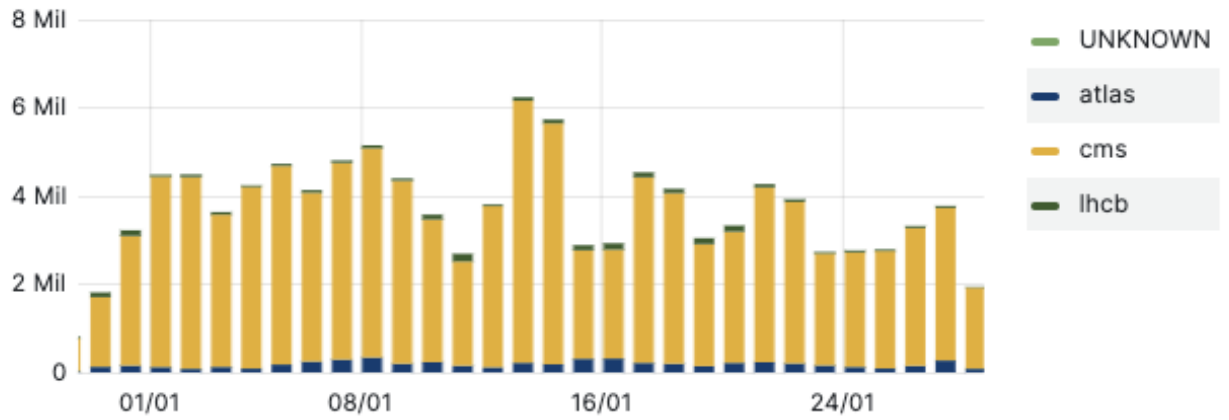
Link to Dashboard

⌄ dCache

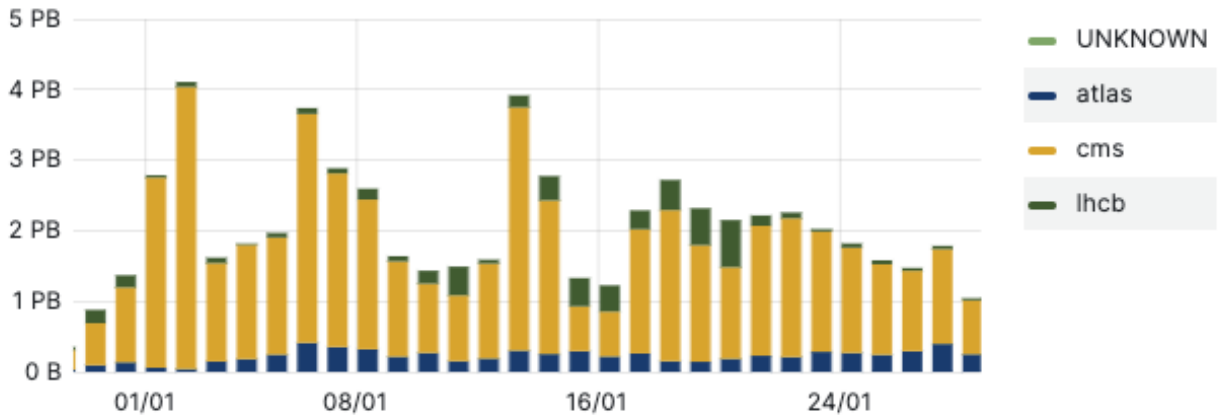
Transfer Throughput



Transfers Finished



Transferred Volume



› GLED *(4 panels)*

IPv6 Field

- Can be found across all flows (Monalisa, NG, dCache)
- It’s not reliable as it’s represented by a Boolean
  - True: Transfer is identified as IPv6
  - False: Transfer is not identified as IPv6 (either IPv4 or not known)
- FTS introduced the “ipver” field counterpart
  - Allows for better understanding of the state: 4, 6, unknown…
  - It has been requested to have the same in XRootD
    - Work ongoing on the MONIT side

IP version: Monalisa

- Monalisa doesn’t report any IP related information
- IPv6 Field added by MONIT always as “false”
  - Not reliable
- We will need to set the new “ipver” field to “unknown”
  - Not very useful and probably won’t be done

IP version: Next Generation

- Extracted from the client logging information
  - XRootD streams send 4 or 6
  - Collector translates this to IPv6 true or false
  - If there's no loginfo (stream missing) it will still send false
- Plan to add "ipver" field in the collector
  - Take directly what XRootD sends and set "unknown" if not available

IP version: dCache

- Information based on the client IP settings
  - I do assume this is reliable but don’t know the insights
- Already providing the “ipver” field
  - Not showing in the dashboard as other XRootD flows don’t have it yet

Summary

- XRootD Monitoring is currently in a “semi” reliable state
  - Few sites fully integrated (not sure if validated)
  - Few things still to tweak
    - Multi-VO sites, IP version info…
- ipver information should start appearing in the next weeks
  - Dashboards will be changed to allow the usage of the field

Q&A

Thank you!

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