ATLAS Community Talk

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for ATLAS Distributed Computing

Brief ATLAS overview

- Daily average: 4M transfers, 6 PB volume
- Two FTS instances (75/25 split)
  - Each can handle the entire workload in case of an emergency
- Activities (16) used extensively
  - For monitoring, quality of service, and prioritisation
- Tape is not a write-only medium
- Multi-source when possible; multi-hop required along some paths (e.g. CTA instances)
- Started using archive monitoring earlier this year

FTS4 testing (1)

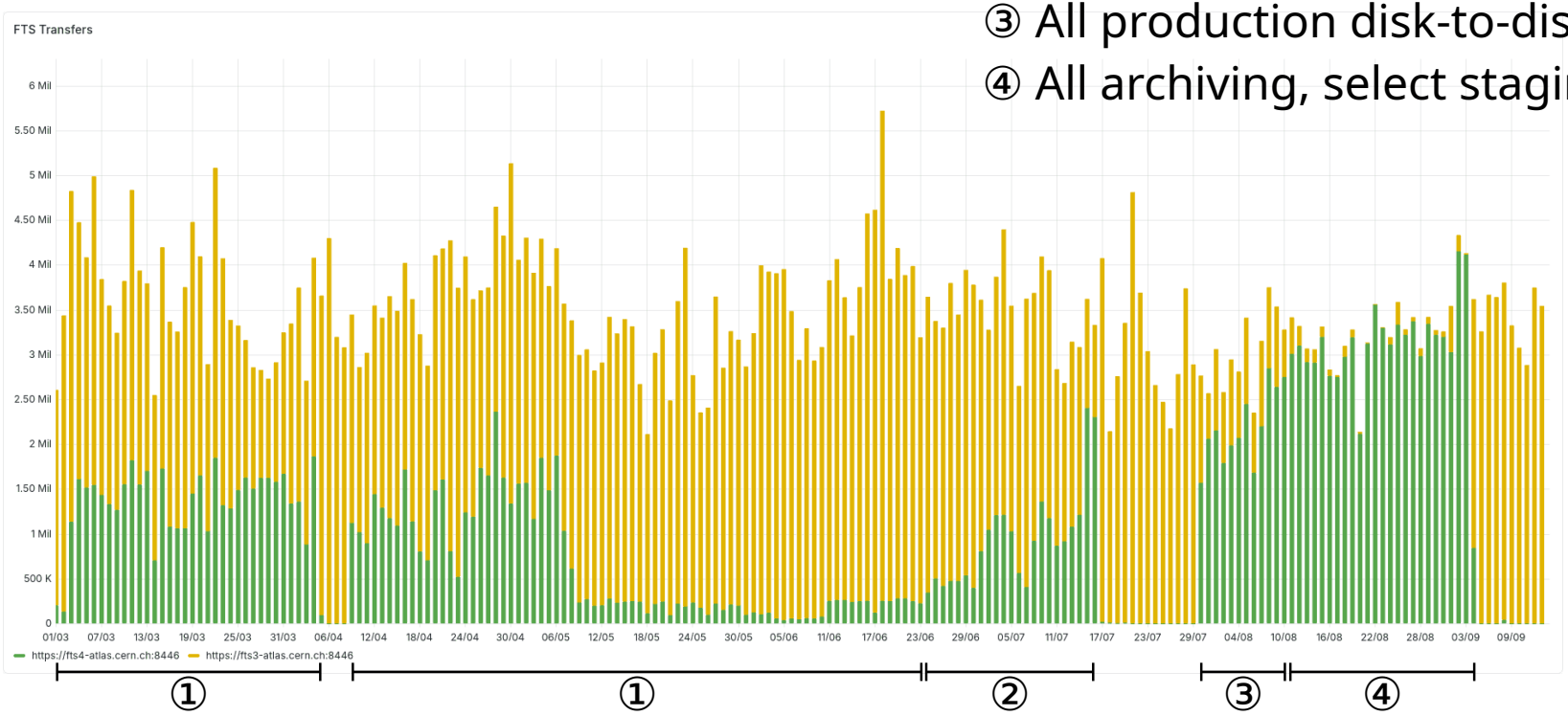
- ATLAS was eager to assist with the validation and assessment of FTS4
- Principles:
  - FTS4 must first demonstrate it can replace FTS3 for existing daily production workloads
  - Trust takes time to build
- Numerous regressions have been identified and addressed

FTS4 testing (2)

- Phase 1 (December 2025)
  - Functional tests only, basic validation
- Phase 2 (March – June)
  - Functional tests only, sustained and burst traffic
- Phase 3 (June – *ongoing*)
  - Production workloads (progressively)
- Refer to this DOMA presentation for more information

Migration to FTS4

① Functional tests only
② Some production disk-to-disk
③ All production disk-to-disk
④ All archiving, select staging



The ‘incident’

- Under certain circumstances, the *source* of a transfer was being deleted
- An unfortunate set of circumstances
  - A faulty change was committed upstream
  - Then erroneously deployed on the ATLAS FTS4 instance at the end of a working day
  - Transfer errors were mostly authentication-related, and we had encountered an incident related to the IGTF CAs earlier that week
- Once understood, the FTS, CTA, and DDM experts worked to quickly identify the extent of the damage and contain it (thanks!)
  - Final reckoning: 7K files of medium value were permanently lost
- ATLAS will assess the incident report and decide how to proceed with the testing

Beyond FTS4

- The first FTS4 public release will be a major milestone
  - But not the end
- Various requests made by ATLAS over the years have been set aside
- We hope that they will be reviewed and planned then
- ATLAS remains content with the collaboration with the FTS team and optimistic about the future

Questions?