



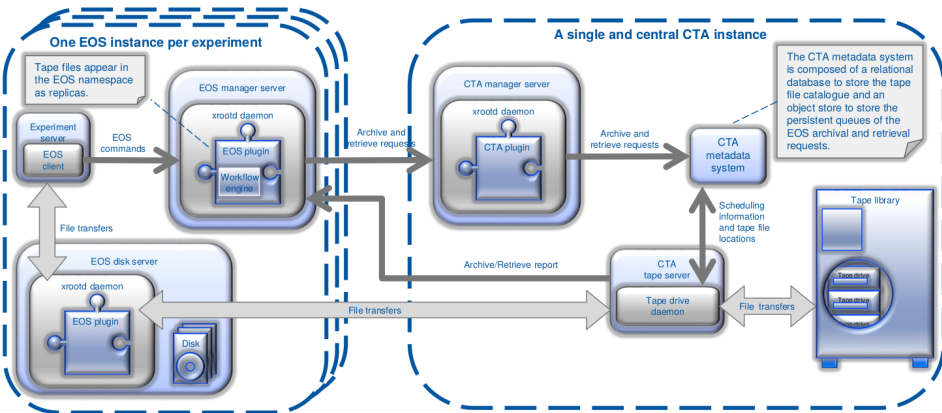
CERN Tape Archive (CTA) : EOS tape archival storage back-end

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2nd EOS Workshop, CERN, Meyrin

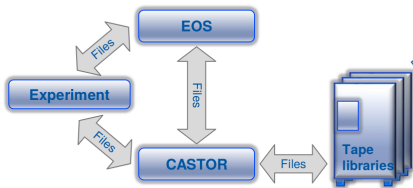
6 February 2018

EOS+CTA Architecture

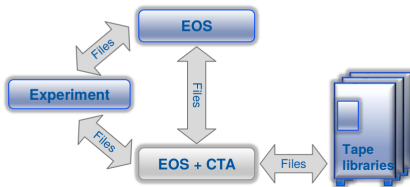


EOS+CTA Deployment

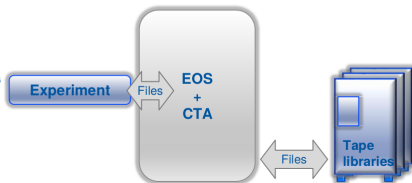
Current CASTOR deployments



Proposed EOS+CTA deployment model for main experiments



Alternate deployment model



EOS+CTA Deployment

EOS Instances

- One EOS instance per main experiment for disk storage and user jobs
 - EOSALICE, EOSATLAS, EOSCMS, EOSLHCb, EOSPUBLIC
- One EOS instance per main experiment for tape archiving
 - EOSCTAALICE, EOSCTAATLAS, ... (replaces CASTORALICE, CASTORATLAS, ...)
 - Optimised for staging files between tape and disk
 - No automated synchronisation between EOS... and EOSCTA....
 - Access by privileged experiment accounts. No user jobs.

EOS+CTA Deployment

CTA Instance

- One central instance of CTA
- Front-end nodes
 - handle commands and metadata operations from EOS and tape operators
- Tape Servers
 - interface between tape drives and libraries and EOS disk servers
- Metadata Catalogue
 - maps files to tape cartridges
- Distributed ObjectStore
 - persistent store for status and queue information

FTS Integration

Implementation of Staging Functionality

- FTS ↔ EOS ↔ CTA
- No HSM/near-line tape storage
- EOS–CTA extensions required to integrate current FTS functionality:

Bring Online: Request a list of files to be staged from CTA to EOSCTA...

Status Of Get Request: Query status (Queued/Finished/Failed) of previously-requested files

Abort Request: Cancel a previous **Bring Online** request

Timeline

2018

1Q 2018 (Now)

- EOS-CTA interface (see next presentation)
- Scalable ObjectStore

2Q 2018

- Repack
- Garbage Collection

3Q 2018

- Ready with Pre-production “Field Test” experiment instances
- CASTOR migration tools/strategies
- Work with user community

4Q 2018

- Stress testing with experiments

Timeline

2019 and Beyond

- Deployment
- Replace CASTOR
- Non-Oracle backend for tape catalogue