
ATLAS C2 experience

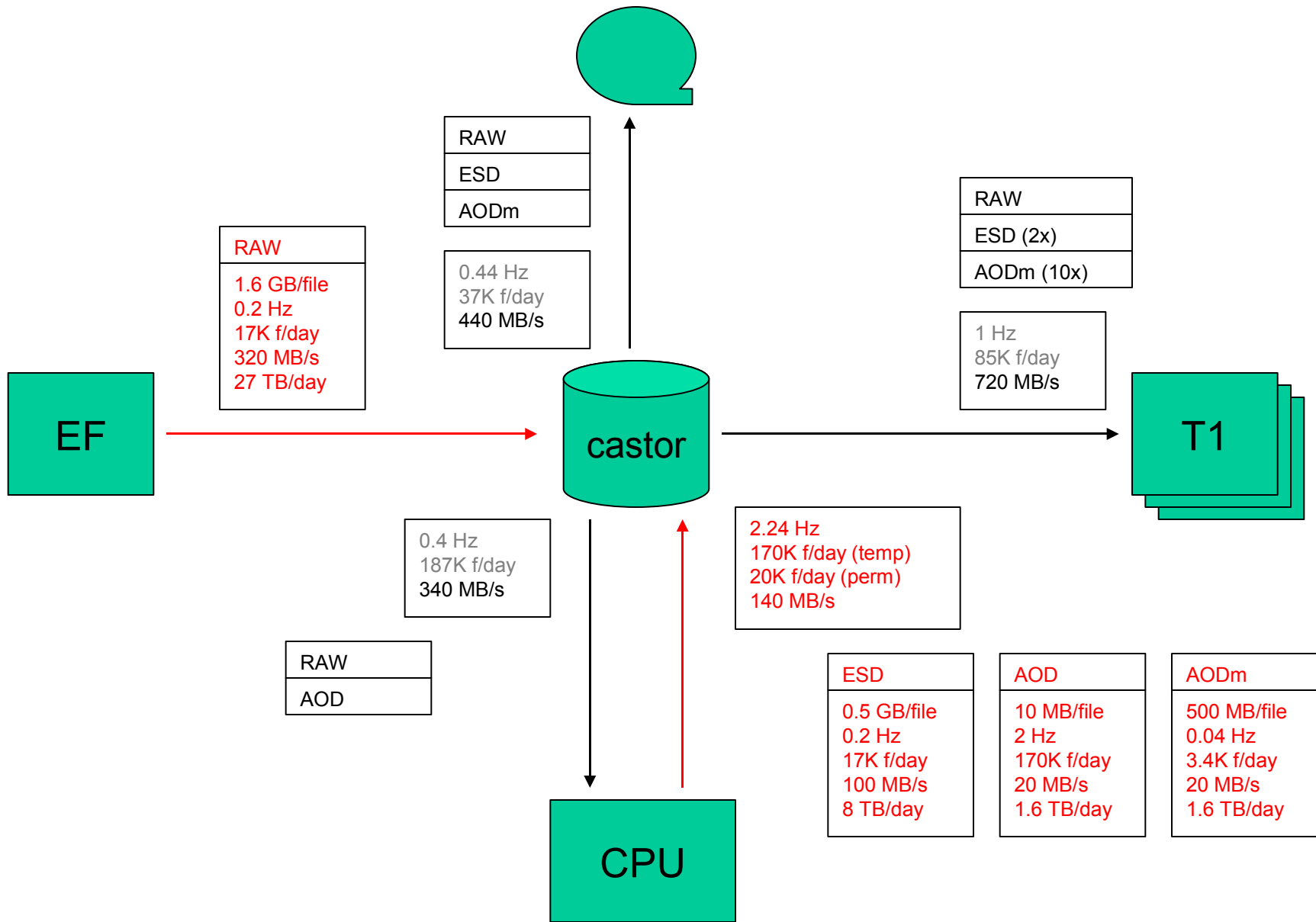
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(for the ATLAS collaboration)



■ use cases 1 : the clear ones

- Tier0 operations

- Castor stores all T0 data
 - RAW, ESD, AODTMP, AOD, TAG, ...
- supports all data paths
 - P1 -> T0, T0 -> T1s, archival to tape, IO to from reco farm, ...
- rfcv based
 - stage-in and stage-out to from local disk



■ use cases 2 : the not so clear ones

- everything else
 - (CAF) user files
 - O(100) users
 - rfio? xrootd?
 - disk only area, xp managed
 - pre-staged productions

■ tests 1 : the past ones

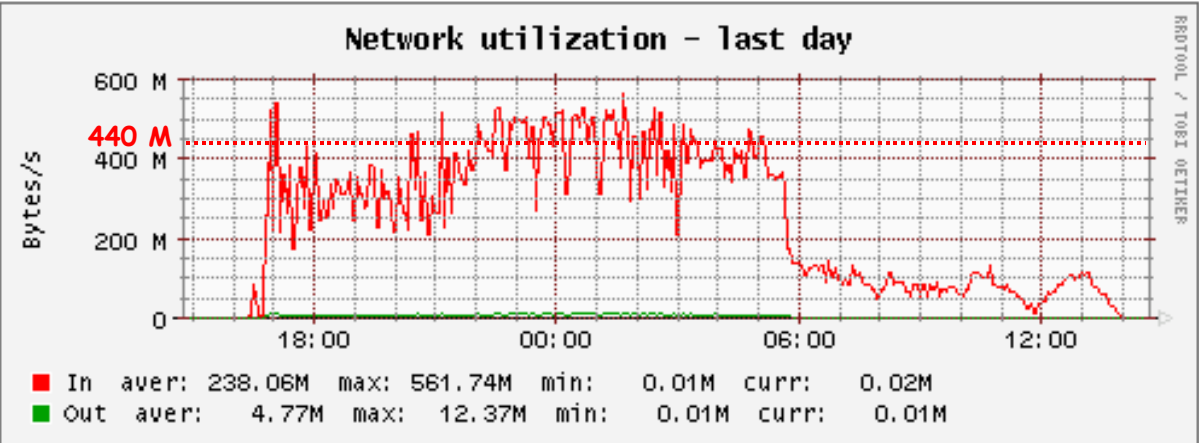
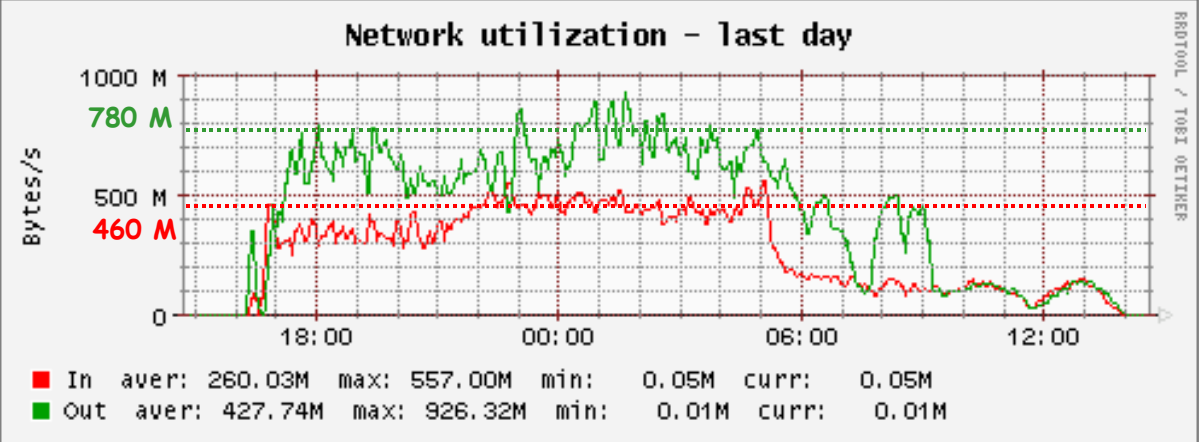
- SC3 test (Oct 05 - Jan 06)

- reached nominal rates on all T0 data paths except T1 export !
- usually only on Friday afternoon though ;-)

READING (nom. rate: 780 MB/s)
 - Disk → WN
 - Disk → Tape

WRITING (nom. rate: 460 MB/s)
 - SFO → Disk
 - WN → Disk

WRITING (nom. rate: 440 MB/s)
 - Disk → Tape



■ tests 2 : the future ones

- SC4 tests (June 06 - Dec 06)

- TO 2006-1
 - 3 weeks end of June
 - same as before, but with T1 export (~800 Mb/s)
 - focus on stability
- TO 2006-2
 - Sep
 - same again
- also distributed production tests and distributed analysis tests
 - plans not finalized yet

■ C1 ->C2 migration

- ATLAS migrated last ~ 2 months ago
 - limited experience
- initially things seemed a bit unstable but since last power cut few weeks ago there have been no more problems
- now have > 700K files staged
 - nr of files was most important limitation of C1 felt by ATLAS

■ **castor support**

- during SC3 T0 test C2 folks seemed overloaded
 - response time was $O(\text{day})$
- admittedly we only had 'second order' problems
 - it worked but we thought it could work better
- it seemed C2 folks had very limited and primitive monitoring
 - Lemon, direct SQL, ...
 - probably a bit too primitive for a system as complex as C2
 - anomalies were usually spotted by ATLAS
 - despite having access to close to zero monitoring data

■ conclusions

- basic functionality seems to be in place and working
 - some non-basic tools were/are missing like e.g. file distributions
- performance is promising
 - scaling worked well within the limits tested
- timing of this review is a bit awkward
 - too late for design ?
 - too early for user feedback