

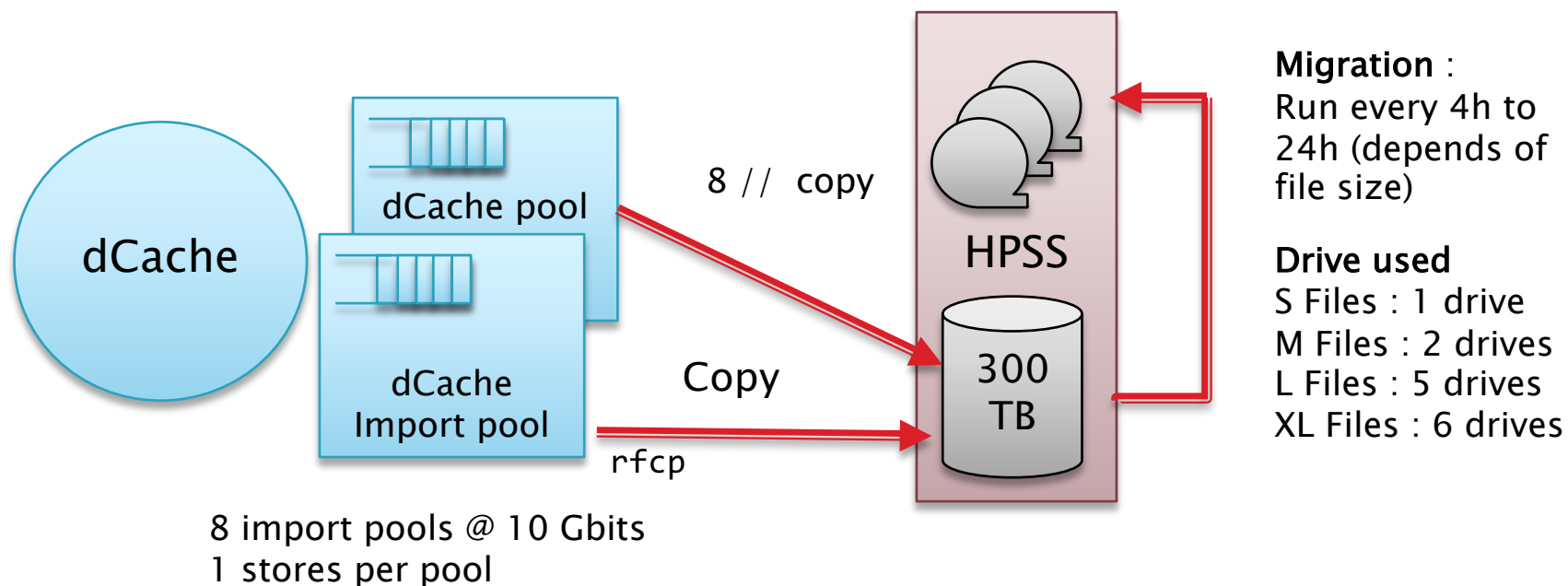
dCache-HPSS configuration

ATLAS

dCache-HPSS Configuration for Atlas

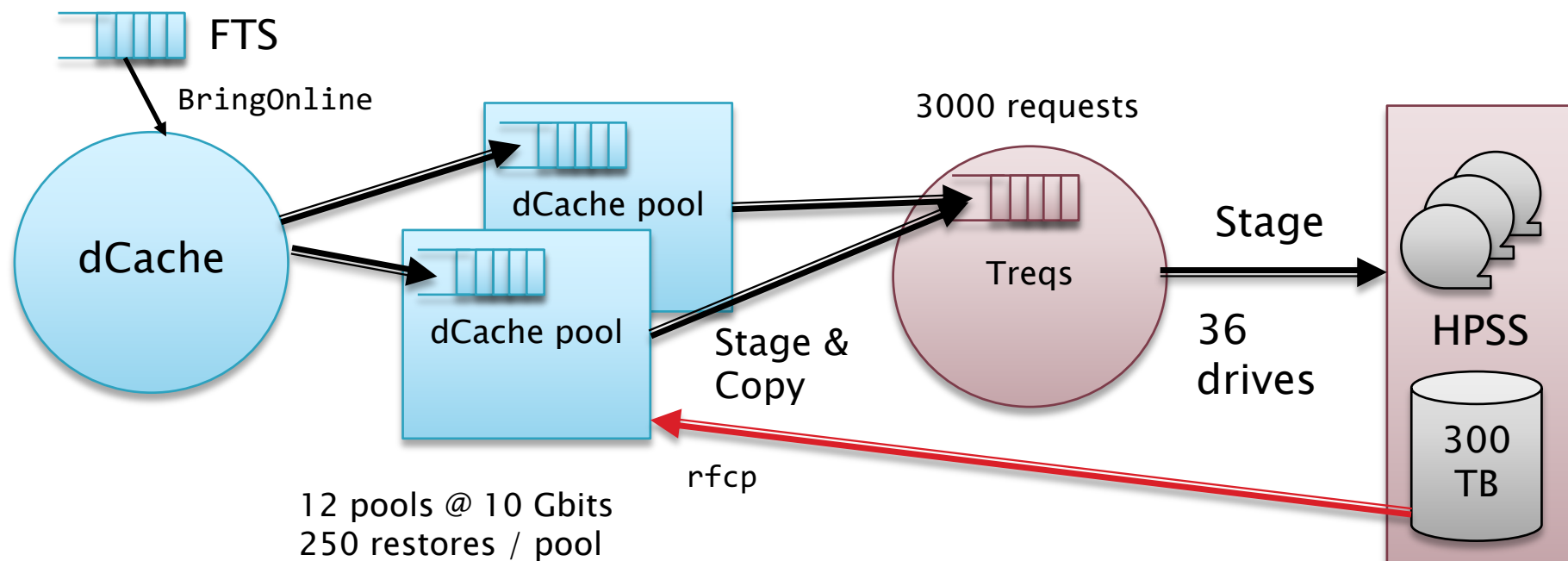
- ▶ Store operation
 - 8 import pool , 1 connection per pool
 - 3 Files families (mctape / datatape / archive)
 - 4 storage class (based on file size)
- ▶ Files written in the same time are spread over multiple tapes
 - IE : 6 tapes for XL files.
- ▶ Filename based on pnfsid:

/hpss5/dcache/atlas/**datatape**/2018/10/000055C8CF15B9764B858C974D31928071D3
datatape | **mctape** | **archive** : File family



▶ Restore operation

- dCache submit requests over 12 pools
- Each pool can handle 250 restores
- Treqs schedule requests and stage files
 - 36 drives configured
- HPSS handle only 1 stage requests a time per drive



- ▶ Atlas Data carousel test :
 - 200 TB staged in 26 hours
- ▶ 192 unique tape for the 84,000 files
 - Total : 1025 mounts
 - Min : 1 mount / Max : 18 mounts / Avg : 5,33 mounts/ tape
 - Only 30 tapes (17%) has been mounted 1 time only
 - But performances was still very stable during the test (3GB/s)
- ▶ Reasons :
 - Rucio sent ~5000 files / h to FTS
 - Treqs queue handle ~ 3000 requests at time
 - So tape containing lot of files may be mounted multiple time within 26 hours
- ▶ Could it be realistic to send the whole dataset at once ?
 - to compare performances

Thank you

- [1] <https://conference-indico.kek.jp/indico/event/28/session/10/contribution/25>
- [2] <https://indico.cern.ch/event/466991/contributions/1143626/>