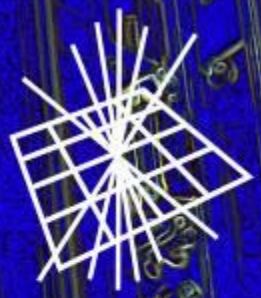


GridPP

UK Computing for Particle Physics

Synchronous get TURL

Brian Davies

STFC RAL

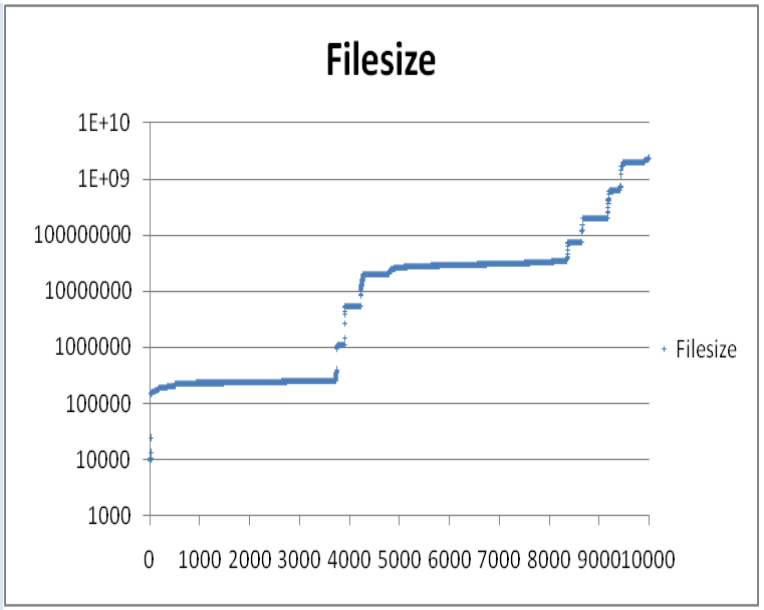
Current Results

- Synchronous get TURL should help increase in efficiency of transfers
  - In production
    - Already applied in BeStMan
  - Tested in dCache
    - Only 1/26 tested dCache running synchronously.
    - Lcg-gt takes ~6s in Asynchronous mode, 0.5 s in synchronous mode
      -(Issue of polling policy of SRM could be changed to improve matters. Change first polling to 1s??)

      (How much effort should be put in to rolling out new feature to be discussed.)
  - No plan (yet) to add to DPM or CASTOR

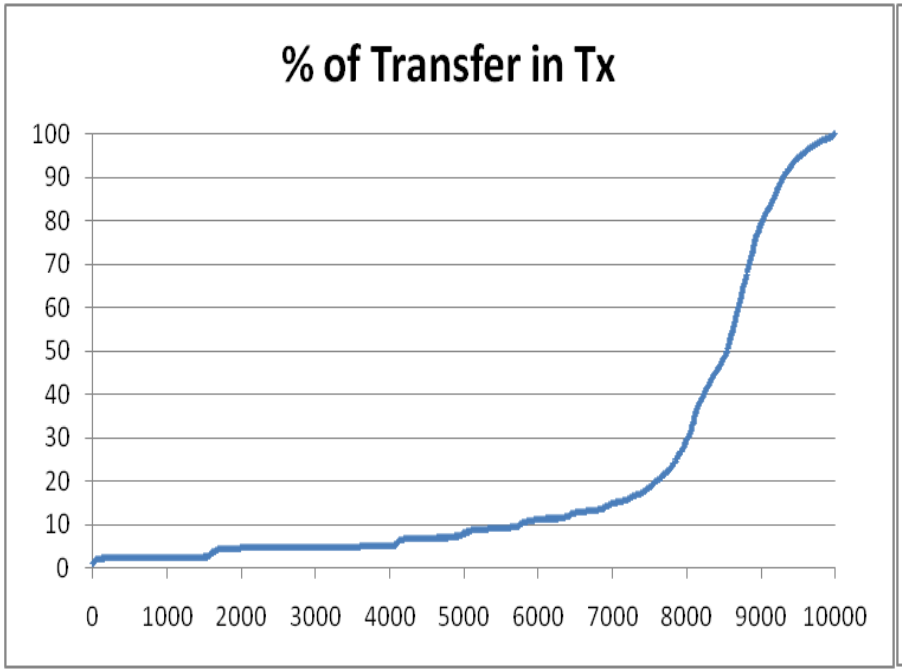
Why ? (1)

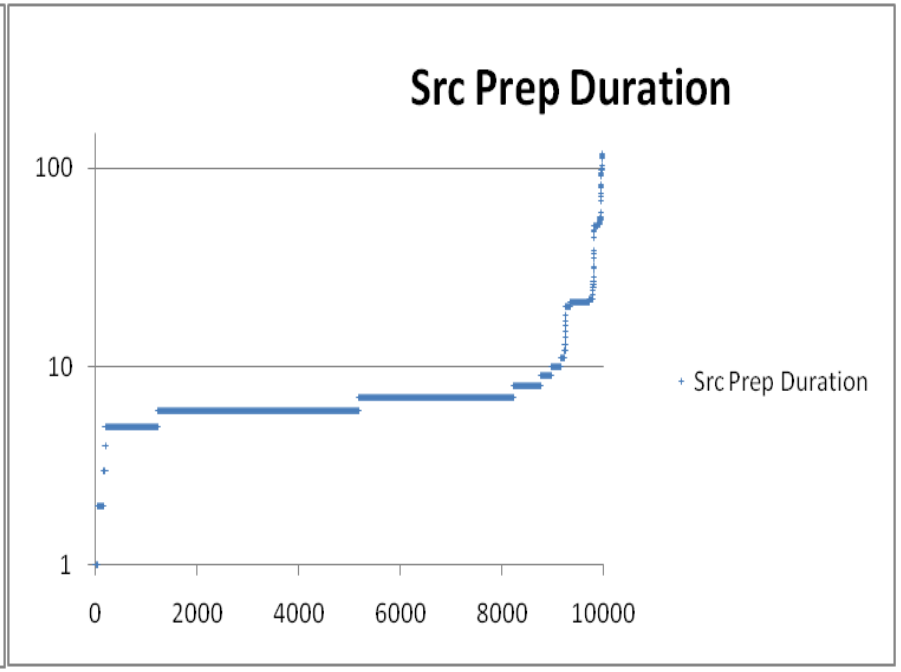
- File size still small.
  - Overhead still major factor.
  - Only 5% of files larger than 1GB
  - 85% files smaller than 100Mb; 40% files smaller than 1MB
  - Average file size ~150MB
    - Sample of 10k file transfers for ATLAS on UK FTS server
- Sample taken outside data taking
  - ~4 hours of transfers
  - Dominated by MC production @T2s



Why ?(2)

- ~80% transfers spend 80% of there time in overhead period. (Tx)
- There is a significant tail in Src Prep Duration (secs)





VO Dependency

- Other VOs have different file profile
  (CMS sample of 10k files from same time period)
  - More uniform file size
    - During monitor period, majority of data transferred test data
      - Care needed in comparisons.
  - Larger files improves % time in Transfer phase (Tx)
    - Variance large even with files of similar size.
  - Similar profile for Src Prep Duration
    - Independent of file size (as expected)