dCap vs gsidCap

- Non-authenticated vs authenticated access

- Both working fine with cmsRun (CMSSW)

- Timing:

  - „average" analysis based on PAT (official CMS analysis toolkit) accessing all high-level objects + Trigger

  - Usually I/O dominated

  - 1000 Events, ~10 Jobs, executed on server

dCap	gsidCap	dCap + Lazy	gsidCap + Lazy
650 ± 42 s	640 ± 56 s	543 ± 7 s	541 ± 7 s

Default caching   New caching

Conclusion

- No performance loss by authentication

- 20% performance gain of new caching

- What's the difference:

  - Old default: caching done by ROOT

  - New: Lazy-Download

  - remote file is downloaded to a local shadow file in 128 Mbyte bunches

  - ROOT will never read from remote file

  - shadow file in $TMPDIR or /tmp removed once the (remote) file is closed

https://twiki.cern.ch/twiki/bin/view/CMS/SWGuideTFileAdaptor