Contribution ID: **404** Type: **presentation**

Caching technologies for Tier-2 sites: a UK perspective.

Monday 9 July 2018 14:00 (15 minutes)

Pressures from both WLCG VOs and externalities have led to a desire to "simplify" data access and handling for Tier-2 resources across the Grid. This has mostly been imagined in terms of reducing book-keeping for VOs, and total replicas needed across sites. One common direction of motion is to increasing the amount of remote-access to data for jobs, which is also seen as enabling the development of administratively-cheaper Tier-2 subcategories, reducing manpower and equipment costs.
Caching technologies are often seen as a "cheap" way to ameliorate the increased latency (and decreased bandwidth) introduced by ubiquitous remote-access approaches, but the usefulness of caches is strongly dependant on the reuse of the data thus cached.
We report on work done in the UK at four GridPP Tier-2 sites - ECDF, Glasgow, RALPP and Lancaster - to investigate the suitability of transparent caching via the recently-rebranded XCache (Xrootd Proxy Cache) for both ATLAS and CMS workloads. We discuss issues with authentication, and measure the actual hit rates against the caches and their effect on efficiency of jobs at sites.
We also examine the use of Xroot Proxy Caches backed by solid state media as internal caches within a site, buffering popular files between the site Storage Element and the workers.

Authors: SKIPSEY, Samuel Cadellin; DOIDGE, Matthew (Lancaster University); LI, Teng (Shandong University, China); BREW, Chris (Particle Physics-Rutherford Appleton Laboratory-STFC - Science &); CURRIE, Robert Andrew (The University of Edinburgh (GB))

Presenter: SKIPSEY, Samuel Cadellin

Session Classification: T4 - Data handling

Track Classification: Track 4 - Data Handling