

DOMA General Meeting QoS Update

05/09/2019

Site Survey

- Recent activity has centred on interpretation of the site survey
- Around 80 sites responded
- Analysis is still underway, here we present a few early indications of results
- Results and analysis accumulating here:
 - <https://twiki.cern.ch/twiki/bin/view/LCG/QoSsurveyAnswers>

Early results

- Q1 - underlying media
 - Not yet analysed
- Q2 - media combinations
 - RAID6 with 12-16 disks represents over 2/3 of sites
 - This does not give much margin for further cost savings
 - JBOD with Ceph, EOS, HDFS and GPFS
- Q3 - storage system
 - Few surprises in grid storage systems
 - Underlying resource typically local mounted fs, but fair amount of Ceph, HDFS and Lustre
-

Early results

- Q4 – effort
 - Not yet analysed
- Q5 - "storageless sites"
 - T1s will not become storageless
 - The vast majority of T2s are neither planning nor wanting to move to storageless setups.
- Q6 - non WLCG communities
 - Practically all T1s are already sharing their resources across WLCG and other communities with little problems
 - The situation for T2s and T3s is almost equally split: approximately half of the sites are already shared sites, the other half are not sharing.



Early results

- Q7 - future directions
 - Ceph is cited in numerous contexts
 - Redundancy layer over JBOD, provision of S3, provision of posix fs
 - No strong signal on site directions
 - e.g. novel media (shingled disks), server densification, volatile storage ...
- Q8 - experiment workflows
 - Concern about granularity of matching workflow to resources → QoS classes
 - Concern about cost and disruption of WAN access to custodial sites
 - Desire for better tools provided by the experiments to the sites

Objective

- Identify a small set of topics on which the WG will concentrate future effort
 - In particular, use the site survey to identify common directions and interests across sites
- Possible list (see twiki for more detail)
 - 1) Procurement, densification and media
 - 2) Software defined storage
 - 3) Client-driven QoS
 - 4) WLCG QoS classes