

Storage Space Accounting

Introduction to discussion

Disclaimer: bootstrap for discussion, statements not verified with Experiments Computing management

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on behalf of WLCG Ops Coord

Storage Space Accounting use cases

- As of today we **do not have** a clear comprehensive **overview of Storage space accounting**
 - each experiment has its own way to monitor/account for Storage Space
 - consolidate around one (few) solutions could be cost-manpower effective
- 2 main use cases
 - Global view of the total and free space at the site
 - Full storage dump
- <https://twiki.cern.ch/twiki/bin/view/LCG/SpaceAccountingInput>

Global view of the total and free space

- a precise (+/- few GB) view on total and used space for that StorageArea
 - or SpaceToken, or path where the quota is set, basically the entity which can “get full”
 - Frequency approx ~20-30minutes (1GB/s mean 1TB in half an hour)
- Structure, interface, ways to get this numbers:
 - to be agreed upon
 - Next slides from Oliver and Fabrizio on WebDAV
- ATLAS at the end would like to have ~:

```
{
  "ATLASDATADISK":
    {"status":online/offline,
     "status_message": "The report can not be created because ...",
     "list_of_paths":
       ["/castor/ads.rl.ac.uk/prod/atlas/stripInput/atlasdatadisk/",
        "/castor/ads.rl.ac.uk/prod/atlas/stripInput/atlasgroupdisk/],
     "total_space": 5000000000,
     "used_space": 2000000000,
     "num_files": 123456,
     "time_stamp": 1447936989},
  "ATLASSCRATCHDISK":
    {same}
  "ATLASLOCALGROUPDISK":
    {same}
}
```

Full storage dump

- Full storage dump listing all files with their sizes
 - Can be resource consuming for the storages: ~ monthly frequency for the full dump would be ok.
 - There could be smarter way to do so: e.g. incremental changes
- CMS next detailed presentation will explain in details
- Needed also by ATLAS (e.g. dark data and consistency checks)
 - Link to [ATLAS ConsistencyCheck and Storage Dump Creation twiki](#)