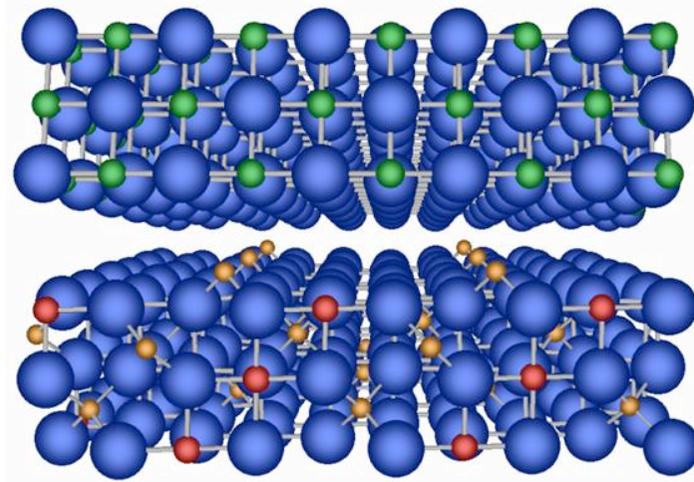


Status of CAF

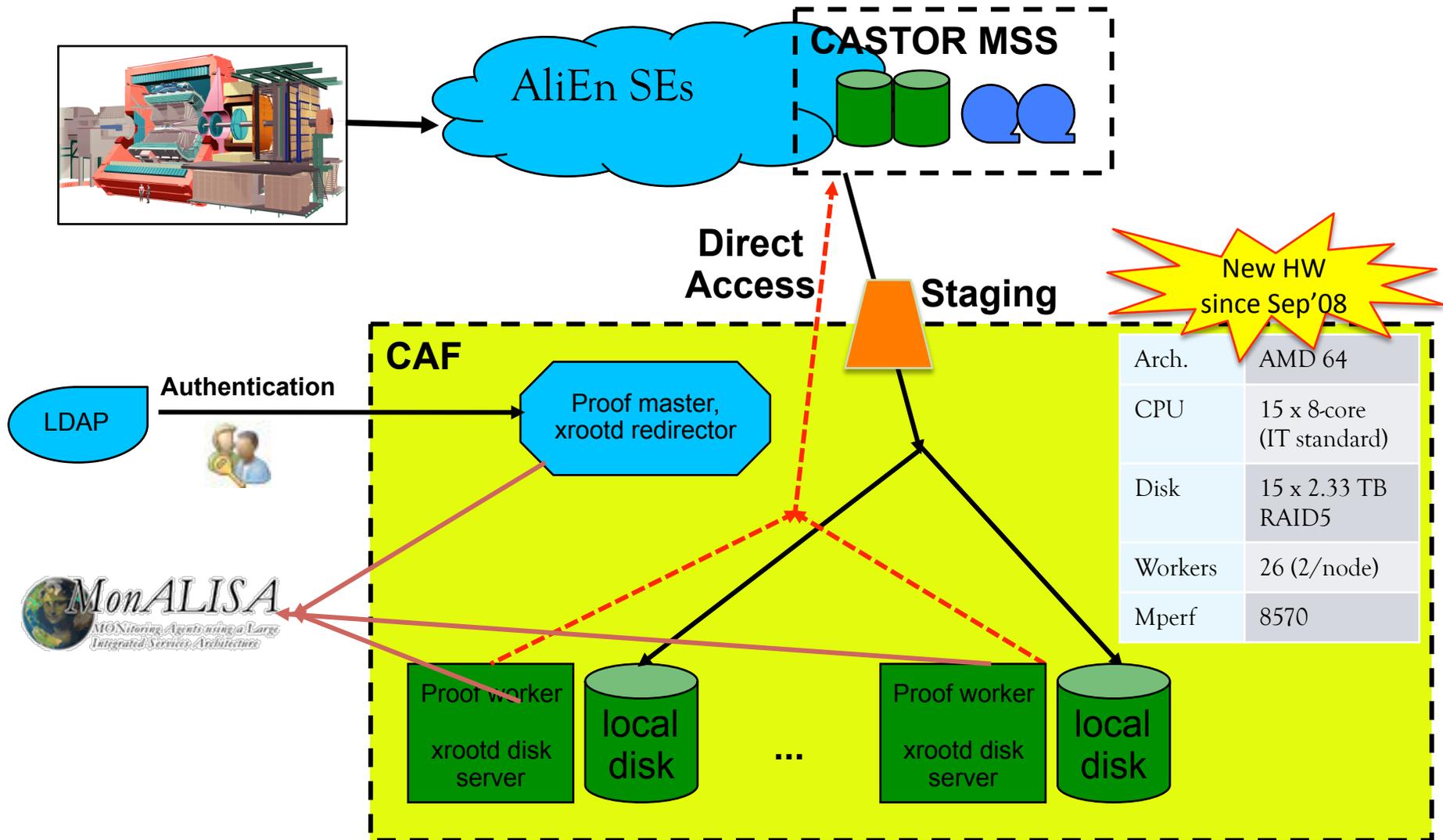


Marco MEONI
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CERN - Offline Week - 18.03.2009



CERN Analysis Facility (CAF)



Access to local disks → Advantage of processing local data

Current SW Suite

- **ROOT v5-22-00a** (5-22-00-patches + fixes in xrootd)
 - Contains a new XrdProofd plugin
 - Fixes the crash at Prepare when staging files
 - Transition from olbd to cmsd (Cluster Management Service Daemon)
 - ALICE file stager plugged into cmsd
 - GSI (Globus Security Infrastructure) authentication
 - Uses X509 certificates and LDAP based configuration management
 - Same mean of authentication for Grid and CAF
 - Grid files can be directly accessed (in principle; see open issues talk)
- **AliRoot v4-16-Release** deployed to AFS and enabled via AF package (meta par-file that contains no source code)

HW problems

- History of interventions on the new CAF machines

- Oct '08 lxfsrd1114 faulty memory module
- Nov '09 lxfsrd0508 motherboard to be replaced
- lxfsrd0705 faulty memory module
- lxfsrd0510 faulty memory module
- lxfsrd0508 reporting disk problems
- lxfsrd1114 faulty memory module
- Dec '08 lxfsrd0507 system firmware error
- Feb '09 lxfsrd0705 faulty memory module
- Mar '08 lxfsrd0508 faulty memory module
- lxfsrd1114 faulty memory module
- lxfsrd0508 memory problem

Melrow machines;
Intel(R) Xeon(R) CPU
E5345 @ 2.33GHz

- Normally easy to get in sync with IT to schedule the downtime
- Reparation usually done within the estimated time
- « Transparent » to user: CAF is not restarted, warnings appear that not all workers are available; some data temporarily unavailable

User support and problems (2009)



12 FAQ at

<http://aliceinfo.cern.ch/Offline/Activities/Analysis/CAF/index.html#faq>

- Mail/Mailing List
 - User not authorized to connect (group != z2)
 - Missing libXrdSecgsi.so even with `-enable-globus` (make `distclean-xrootd`)
 - Cannot validate all files in DS LHC09a4 (use LHC09a4_200k)
- Tutorials
 - VOMS registration non completed
 - Passphrase forgotten
 - AliEn account != AFS account
 - group != z2
 - CA unknown (not part of AliEn)
- Others
 - Few users not registered

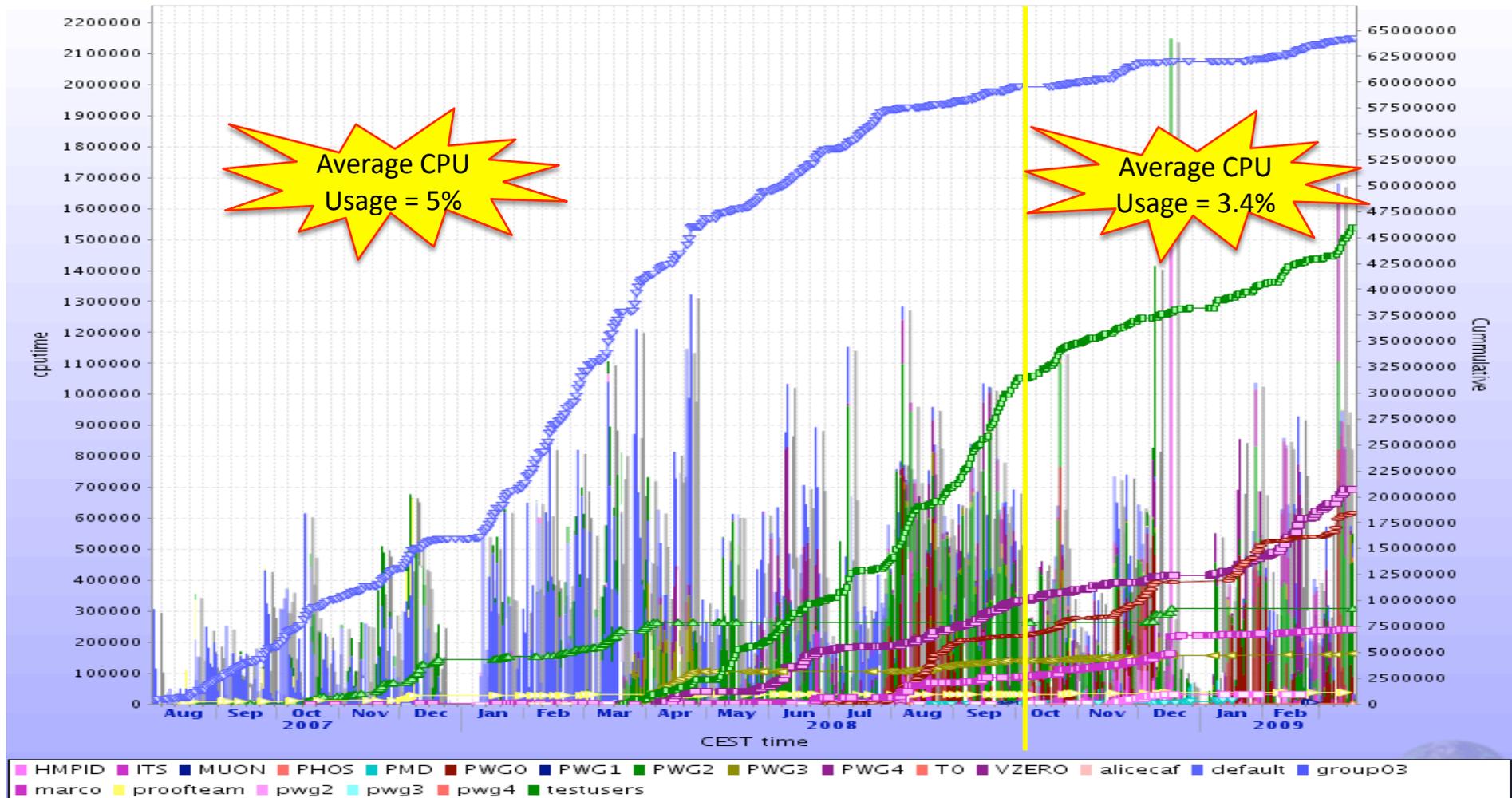
CAF Usage

Groups	#Users
PWG0	21
PWG1	3
PWG2	39
PWG3	19
PWG4	31
13 SUB-DETECTORS	35
Not assigned	4

-19 groups
-111 unique users
(a user can belong to several groups)

- Monitoring of user sessions in place since Sept '08
- Peak of 23 concurrent users
- Continuitive running since May 2006 (check “CAF monitoring” on the MonALISA repository)
- Average #users is 5 but meaningless in a quick interactive system. What is important are peaks and continuity
- Not assigned users will be refused access to CAF in the future

CPU Usage



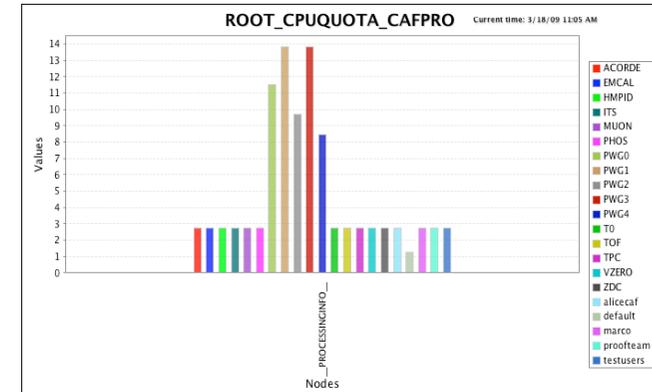
CAF1

66 CPUs, 14 months, 2.4×10^9 secs
 CPUtime = 1.22×10^8 secs

CAF2

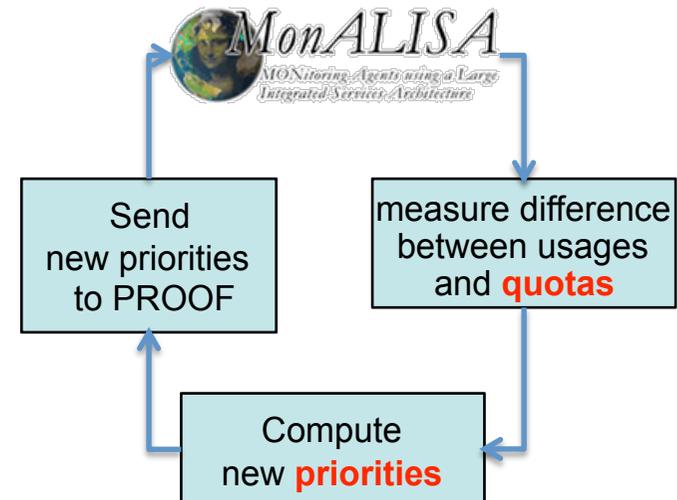
104 cores, 5.5 months, 1.5×10^9 secs
 CPUtime = 5.1×10^7 secs

CPU Fairshare

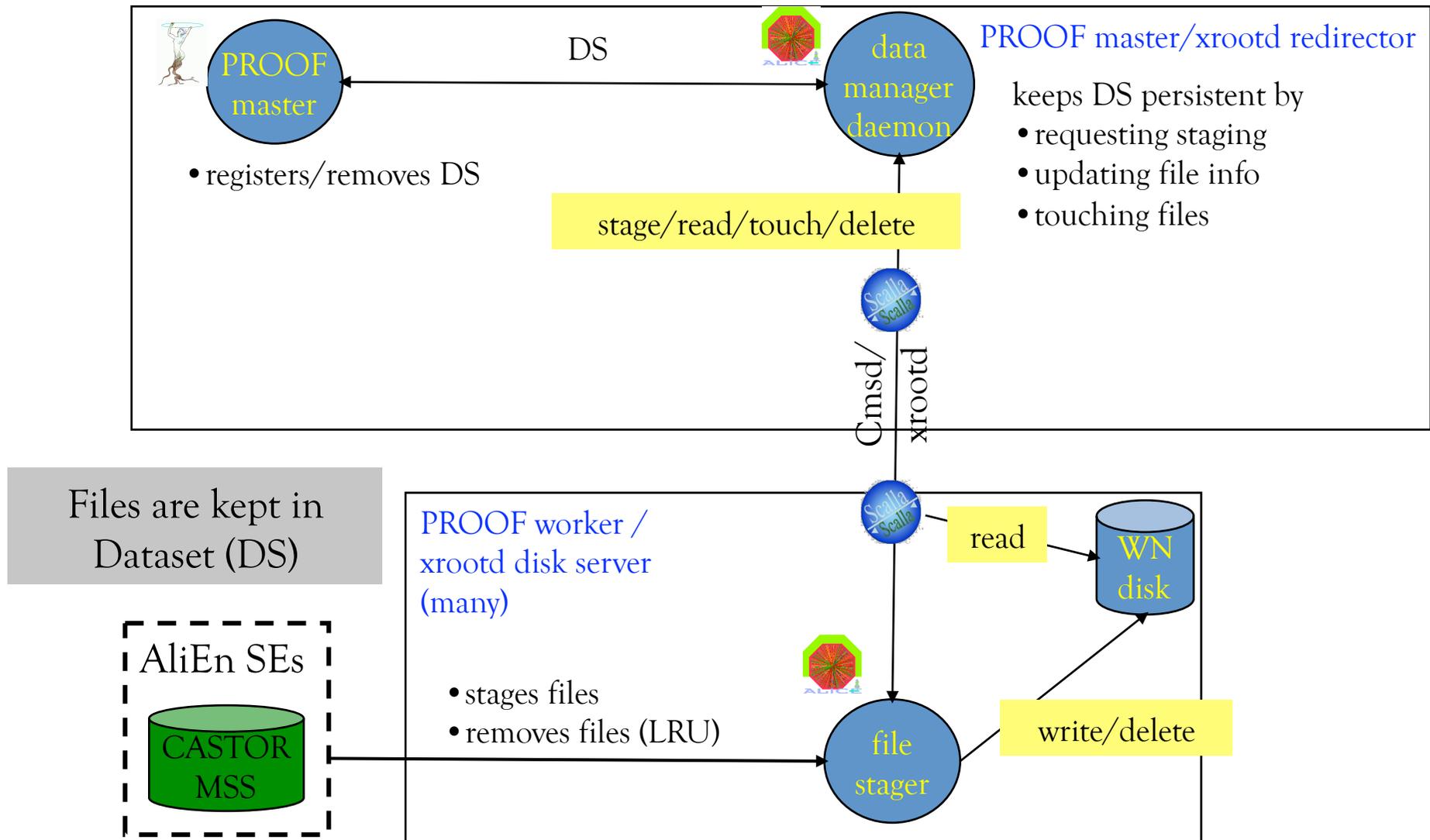


Default quotas:

- PWGs: 50
- Detectors: 10



Files Staging



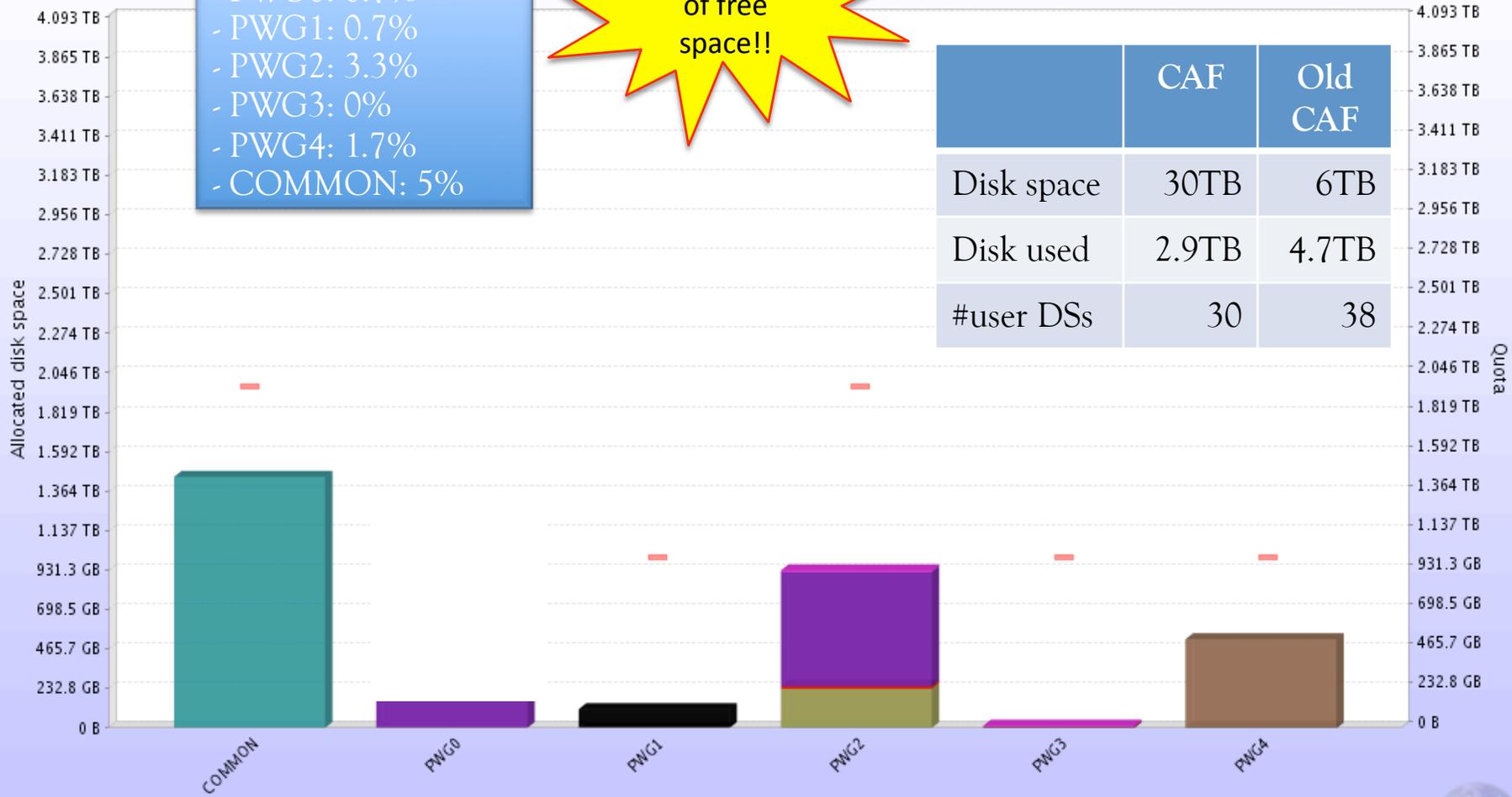
- DSs are used to stage files from the Grid, keeping information consistent

Dataset Monitoring

There is a lot of free space!!

- PWG0: 0.7%
- PWG1: 0.7%
- PWG2: 3.3%
- PWG3: 0%
- PWG4: 1.7%
- COMMON: 5%

	CAF	Old CAF
Disk space	30TB	6TB
Disk used	2.9TB	4.7TB
#user DSs	30	38



■ COMMON ■ akisiel ■ amaire ■ arian ■ arnaldi ■ brunog ■ cheshkov ■ dtruesda ■ ganis ■ hricaud ■ jani ■ jgrossoe ■ kleinb ■ kwatanab ■ mmeoni ■ mvala ■ nkolik
■ pganoti ■ pulvir ■ zampolli ■ Quota

Summary

- PROOF@CAF
 - In production since May 2006, current setup since Sep 2008
 - Rather frequent (non-blocking) HW failures
 - Current SW suite includes ROOT v5/22-00a + AliRoot v4-16-Release
 - Performance and speedup discussed during the last offline week (M. Meoni, 24/10/08)
- User support
 - Common 2009's problems
 - Monthly tutorials at CERN (500+ users so far)
 - Mailing list: alice-project-analysis-task-force@cern.ch
 - Web page: <http://aliceinfo.cern.ch/Offline/Analysis/CAF>
- CAF statistics
 - Number of Users
 - CPU usage and priorities
 - File staging and dataset
- Credits
 - PROOF team for the good teamwork