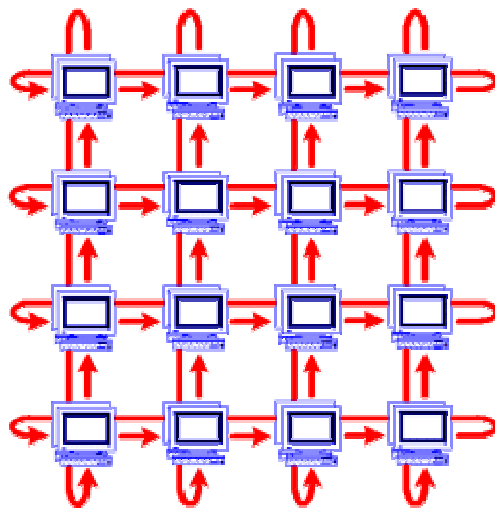


Status of CAF

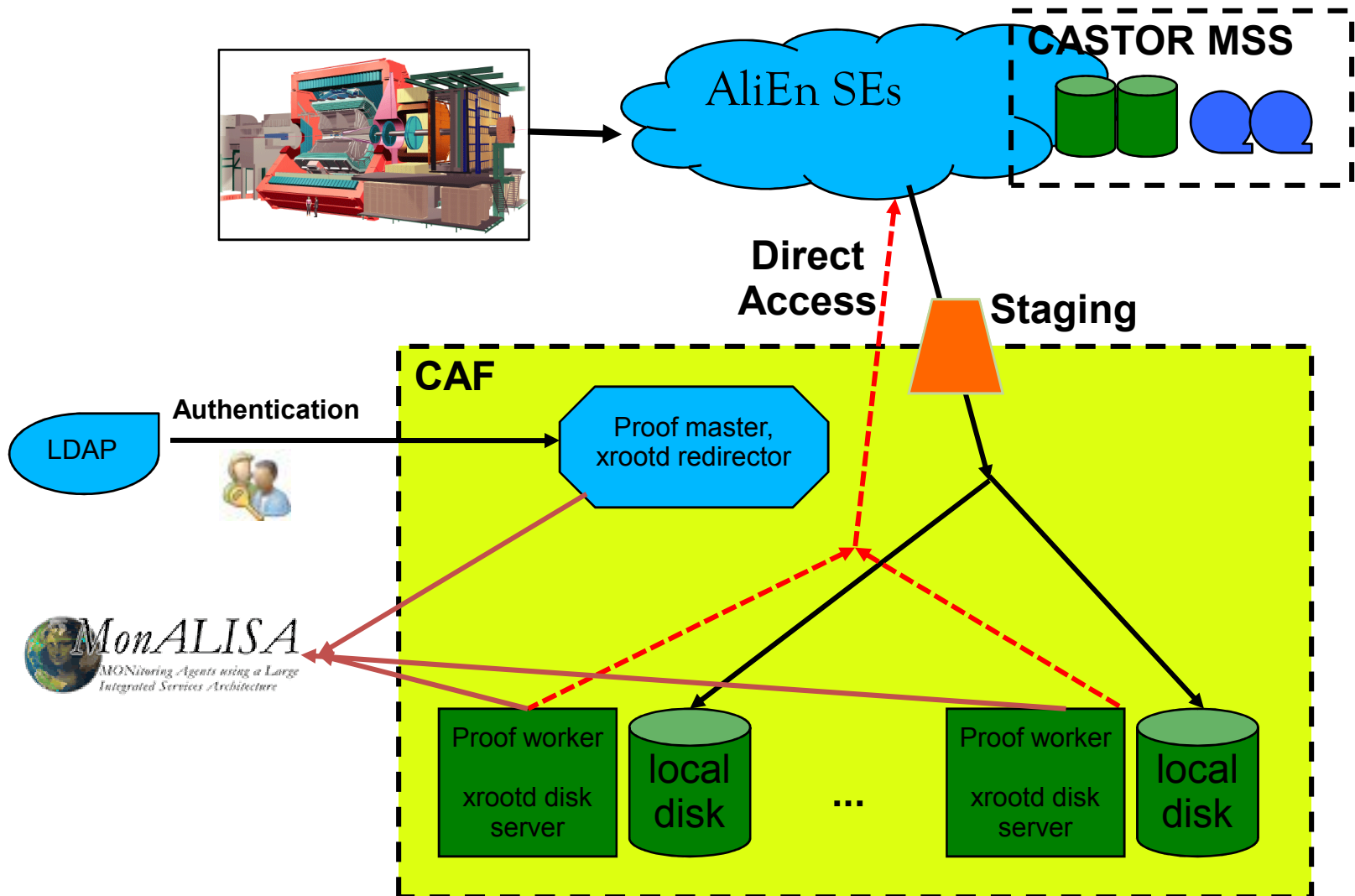


Marco MEONI

CERN - Offline Week - 25.06.2009



CERN Analysis Facility (CAF)



SW Suite

- **ROOT v5-23-04**
 - XrdProofd and XrdXrootd in separate instances (stability improved)
 - Xrootd version is 20090217
- **AliRoot v4-16-Release**
 - deployed to AFS and enabled via a meta par-file containing no source code
 - AF-v4-16.par (loads VMC, Net, Tree, Physics, STEERBase, ANALYSIS, ESD, AOD, ANALYSISalice)
 - AF-v4-16-rec.par (enables the full AliRoot)
 - AliRoot v4-17-Release available once the tag is ready
- **New features**
 - Access to the Grid (will be enabled soon)
 - A dataset can store the name of the default tree




How to use CAF at

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

HW problems

- Interventions on the CAF machines (faulty memory module)

- May '09 lxfsrd0508
 - lxfsrd0705
 - Jun '09 lxfsrd0701
 - lxfsrd0705
 - lxfsrd0514
 - lxfsrd1101
- 

CAF	
Arch.	Intel Xeon
CPU	15 x 8-core (IT standard)
Disk	15 x 2.33 TB RAID5
Workers	26 (2/node)
Mperf	8570

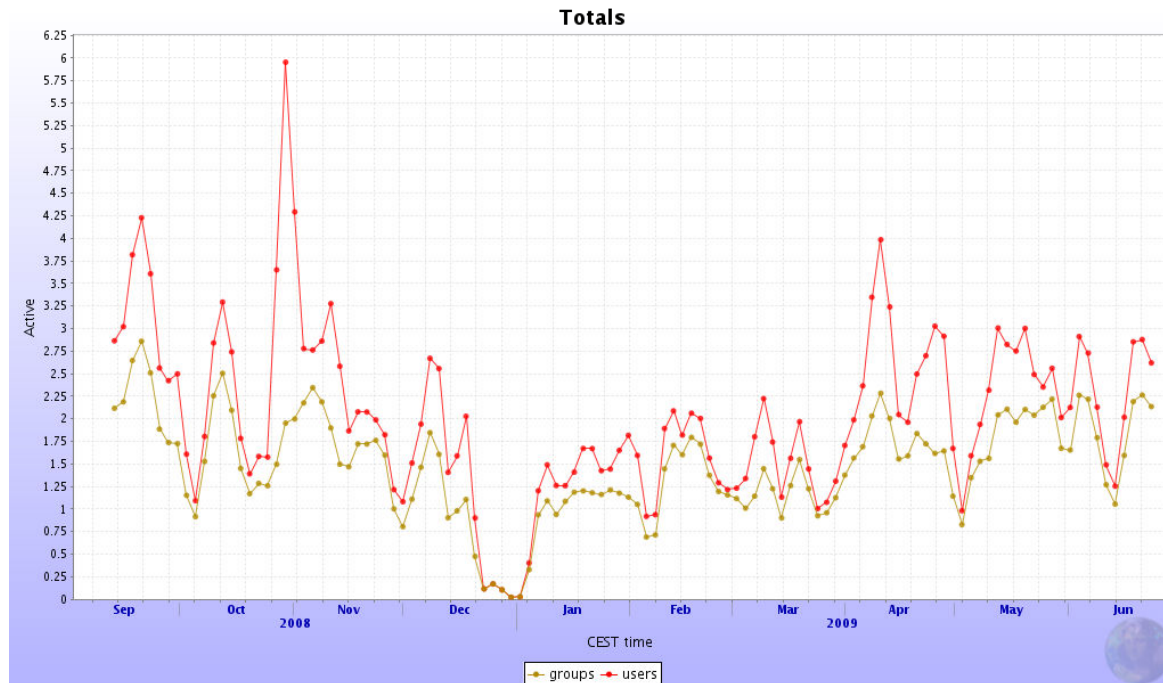
- Fixes usually done by the IT within the estimated time
- Transparent to users
 - CAF not restarted (only the faulty machine goes offline)
 - Warnings not all workers are available
 - Some data temporarily unavailable

CAF Usage

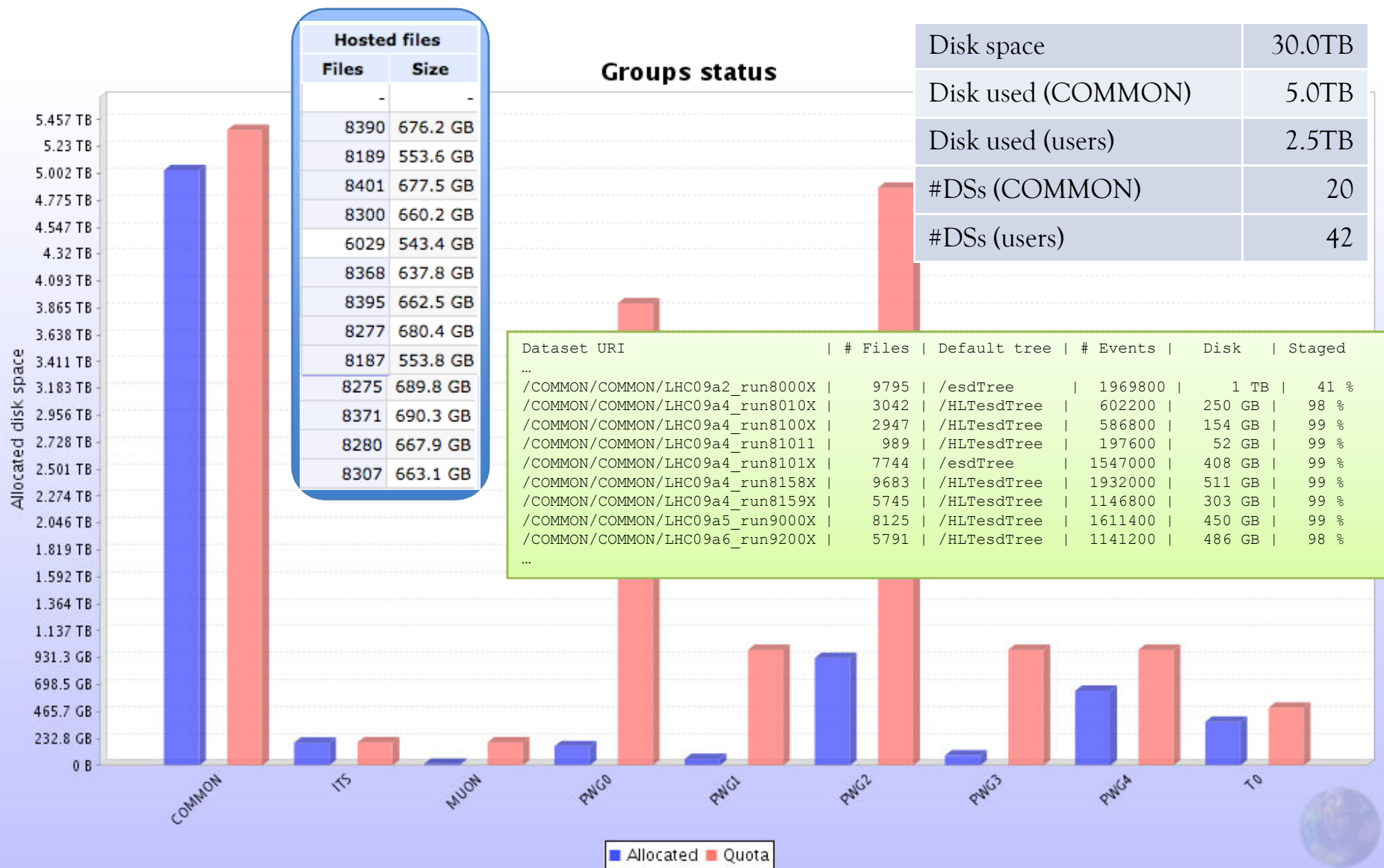
Groups	#Users
PWG0	21
PWG1	3
PWG2	39
PWG3	19
PWG4	31
13 SUB-DETECTORS	35
Not assigned	11

- Monitoring of user sessions in place since Sept '08
- Up to 23 users in parallel
- Not assigned users will be refused access to CAF in the future
 - They receive an email every hour
CAF user 'foo' running in group 'default'

-19 groups
-121 unique users
(a user can belong to several groups)

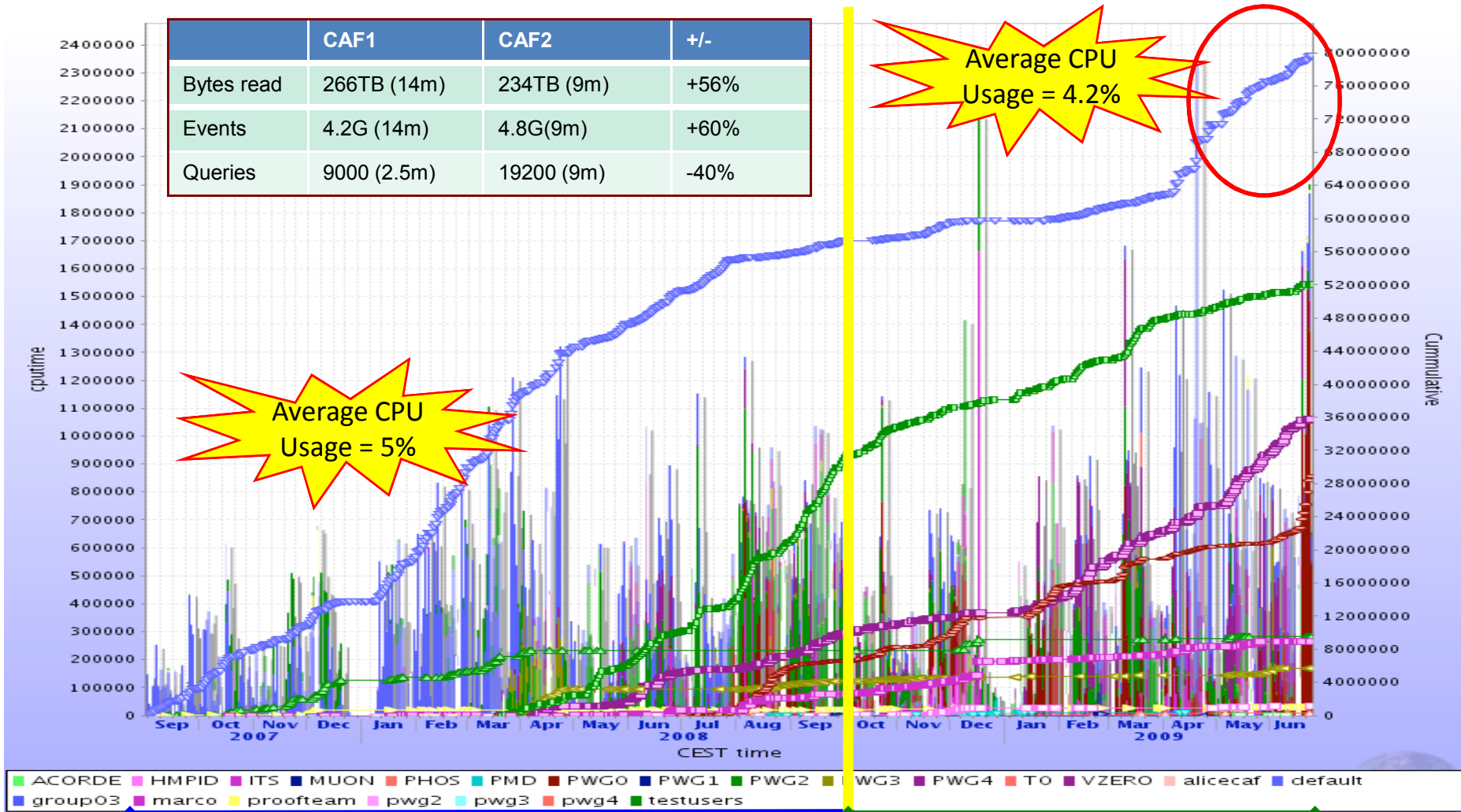


Dataset



CPU Usage

	CAF1	CAF2	+/-
Bytes read	266TB (14m)	234TB (9m)	+56%
Events	4.2G (14m)	4.8G(9m)	+60%
Queries	9000 (2.5m)	19200 (9m)	-40%



Average CPU Usage = 5%

Average CPU Usage = 4.2%

Group default

CAF1

66 CPUs, 13 months, 2.25×10^9 secs
 CPUtime = 1.21×10^8 secs

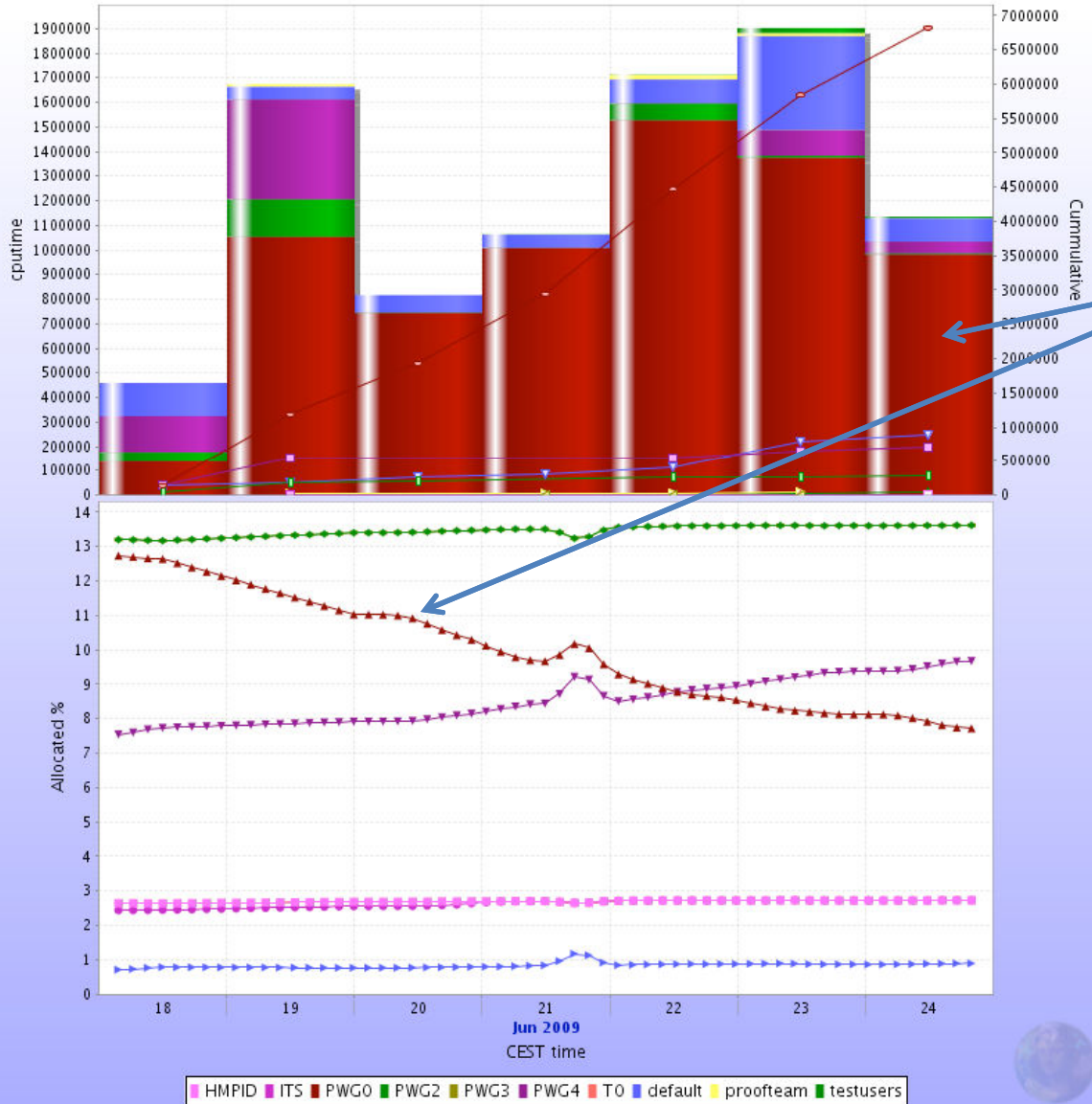
CAF2

104 cores, 9 months, 2.47×10^9 secs
 CPUtime = 1.03×10^8 secs

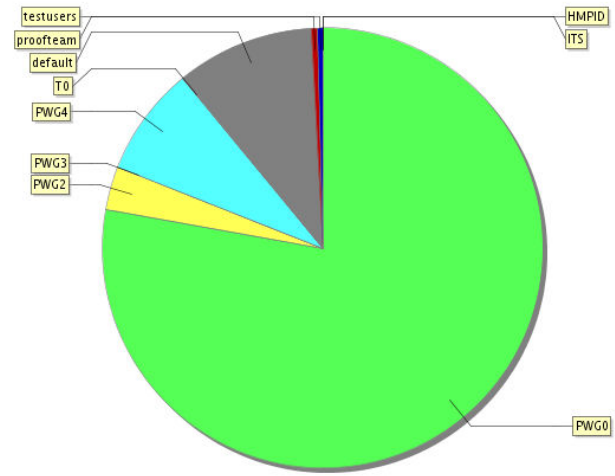
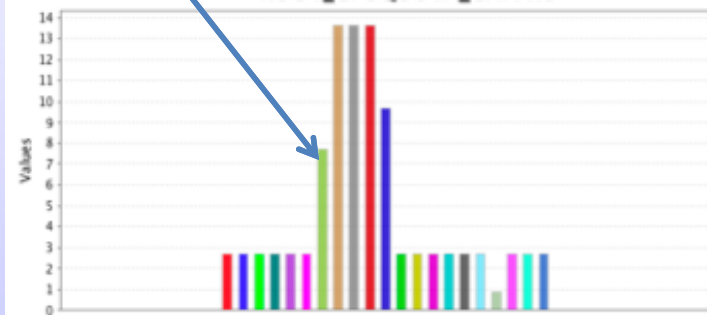
CPU Fairshare

Default quotas:

- PWGs: 50
- Detectors: 10



- One week stress test
- PWG0 running 24/7
- PWG0 priority reduced by 40%



Overview

- CAF
 - In production since May 2006, satisfying current stability, 1 reboot a week
 - Current SW suite includes ROOT v5/23-04 + AliRoot v4-16-Release
- User support
 - Monthly tutorials at CERN, ~600 people attended so far, 15 users registered for July's session
 - Mailing list: alice-project-analysis-task-force@cern.ch
 - Web page: <http://aliceinfo.cern.ch/Offline/Analysis/CAF>
- Under development
 - Data Stager supporting dataset of Grid files
 - Entry lists of entry lists with chains in PROOF for multi-event analysis
 - Possibility to run without a specific user accounts (pool account)
 - Dataset functionality for associated files (e.g. MC + ESD)
- Regular biweekly meeting joining CAF/PROOF/ROOT/Grid experts
- Acknowledgements
 - Jan I. and Gerri from the PROOF team for the usual collaboration
 - Jan Fiete for the good teamwork
 - Mariella and Arian that “volunteered” to present CAF user experience today