DIRAC experience in France Grid

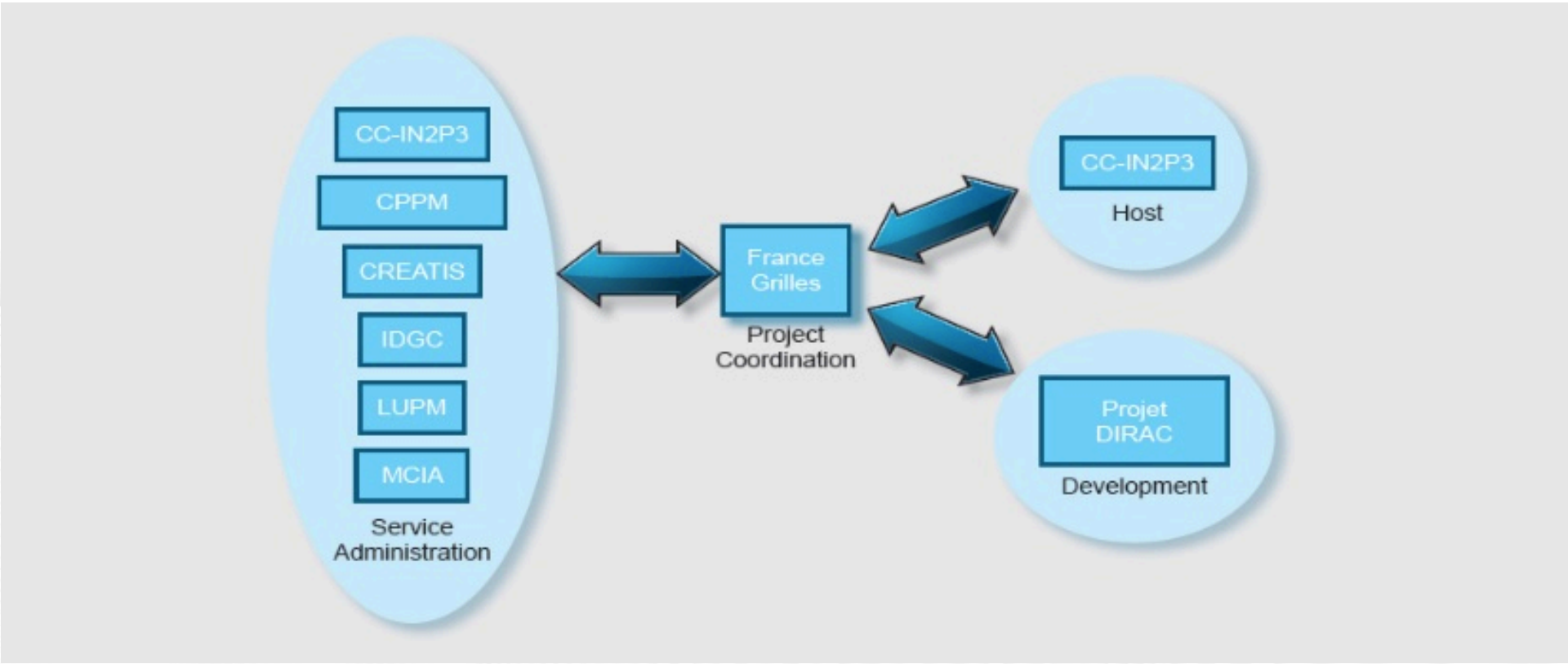
Overview

- DIRAC in France Grid
- Servers
- Some numbers
- Frequent questions coming from our users

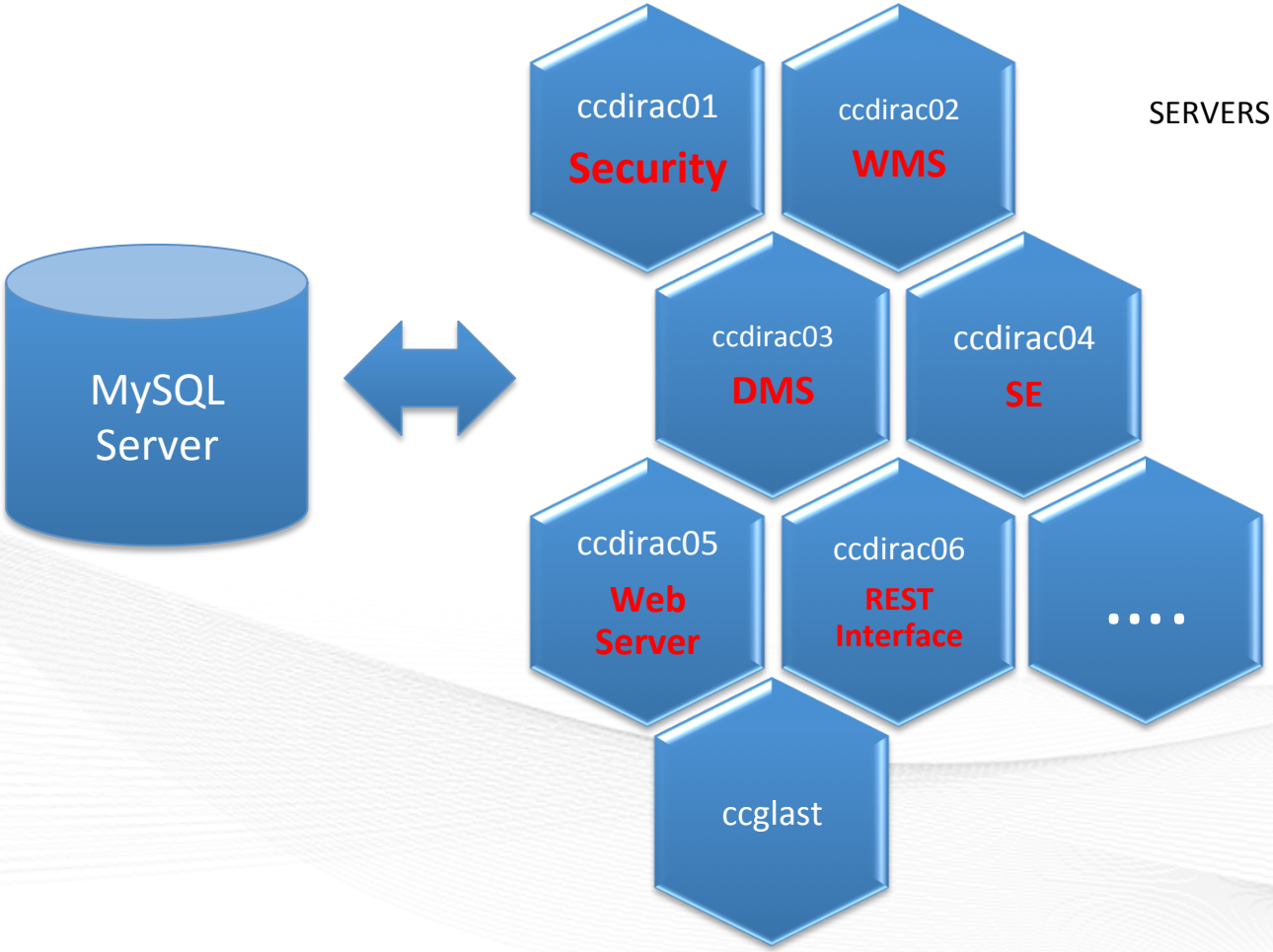
DIRAC in France Grid

- Started as a support for user tutorials
- Several regional and university campus installations
  - Complex maintenance
- Joint effort to provide France-Grid DIRAC service
  - Hosted by the CC/IN2P3, Lyon, T1 center
  - Distributed team of service administrators
    - 5 participating universities

DIRAC in France Grid



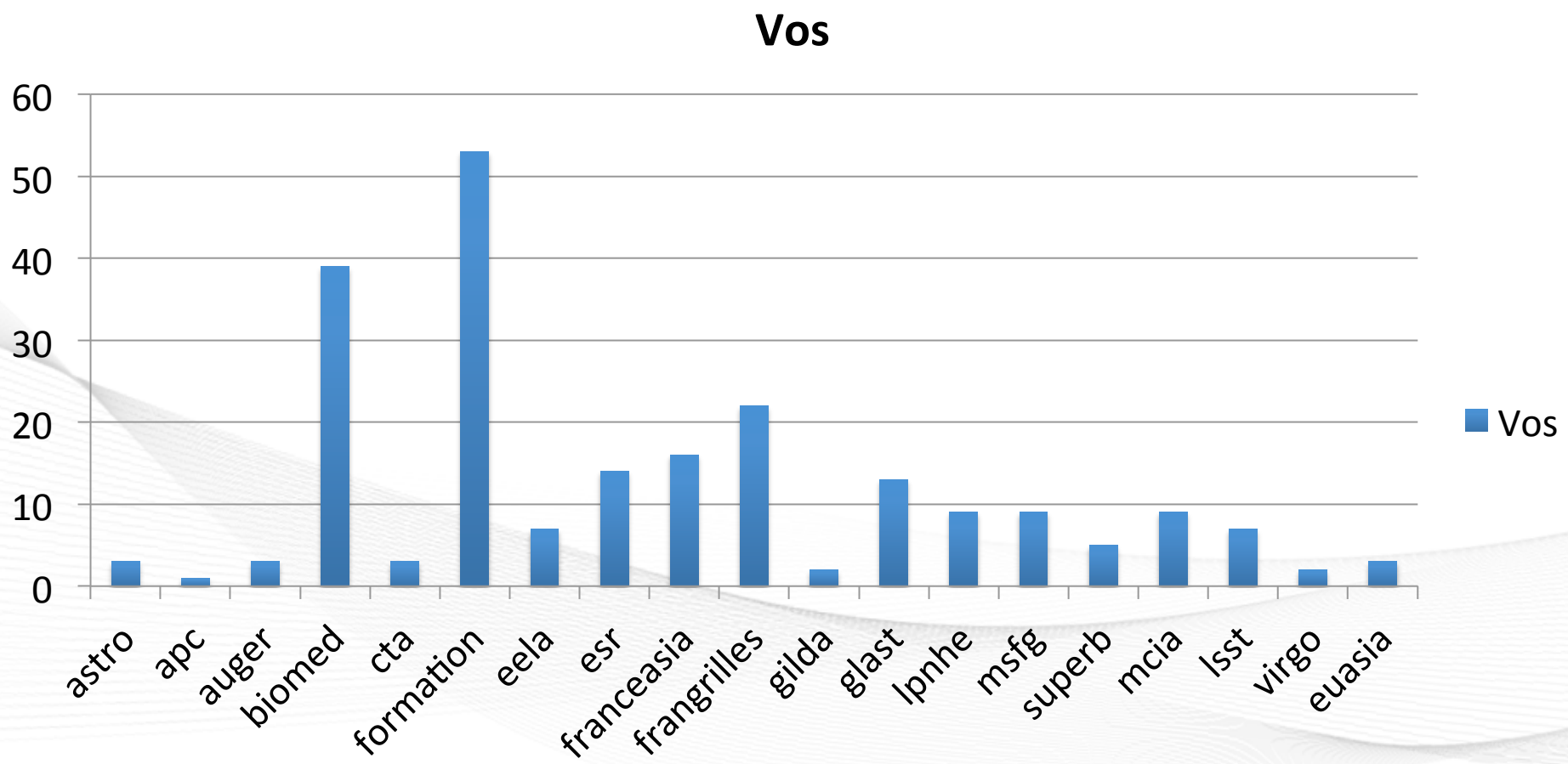
Servers – Distributed Environment



Some numbers

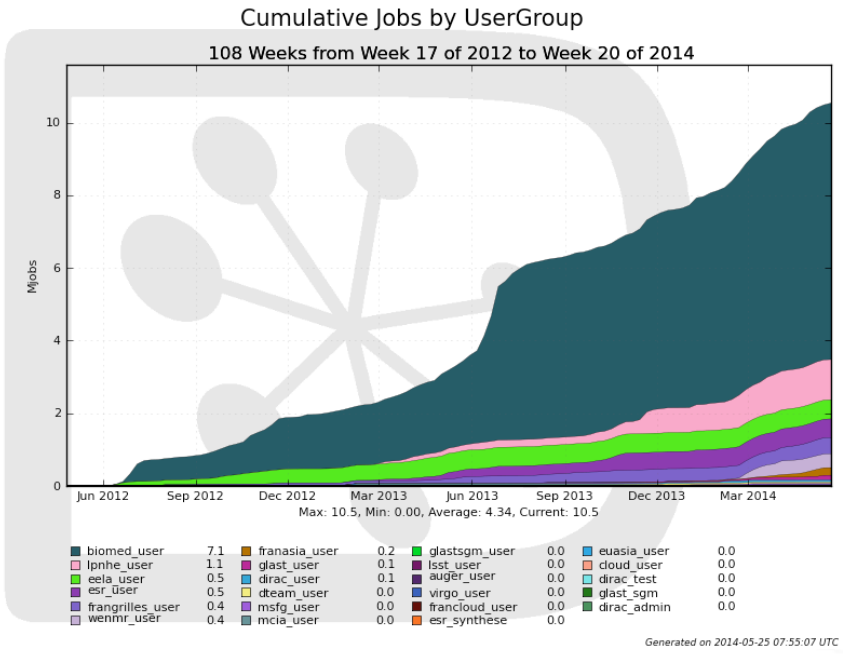
- 17 VOs:
  - astro, auger, biomed, esr, euasia, gilda, glast.org, prod.vo.eu-eela.eu, vo.cta.in2p3.fr, vo.formation.idgrilles.fr, vo.france-asia.org, vo.france-grilles.fr, vo.lpnhe.fr, vo.msfg.fr, vo.mcia.fr
- 182 users registered
  - 1 robot user VIP/GateLab Biomed

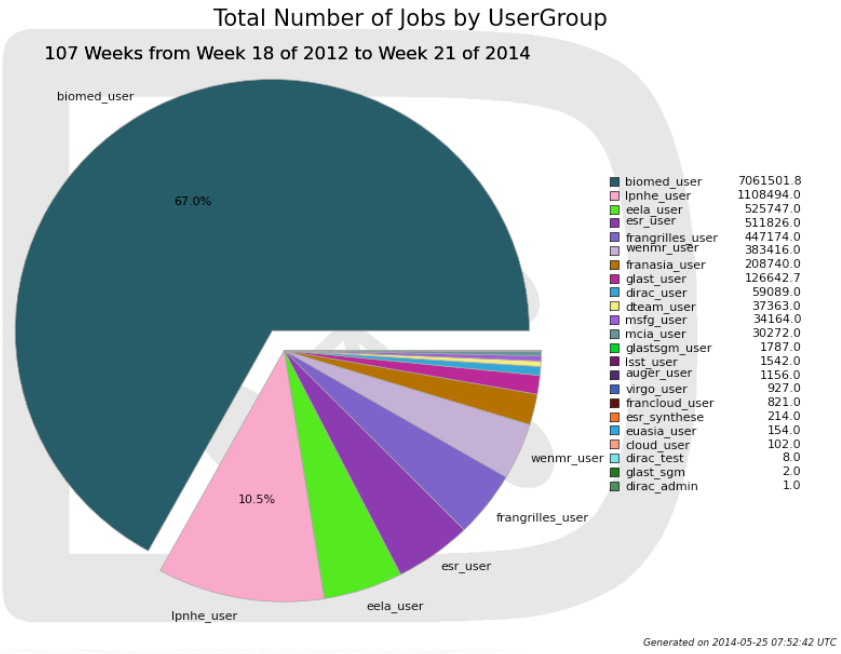
Users by VO


Vos
60
50
40
30
20
10
0
astro
apc
auger
biomed
cta
formation
eela
esr
franceasia
frangrilles
gilda
glast
lpnhe
msfg
superb
mcia
lsst
virgo
euasia
Vos

Total number of jobs by user group – 02/05/2012 25/05/2014

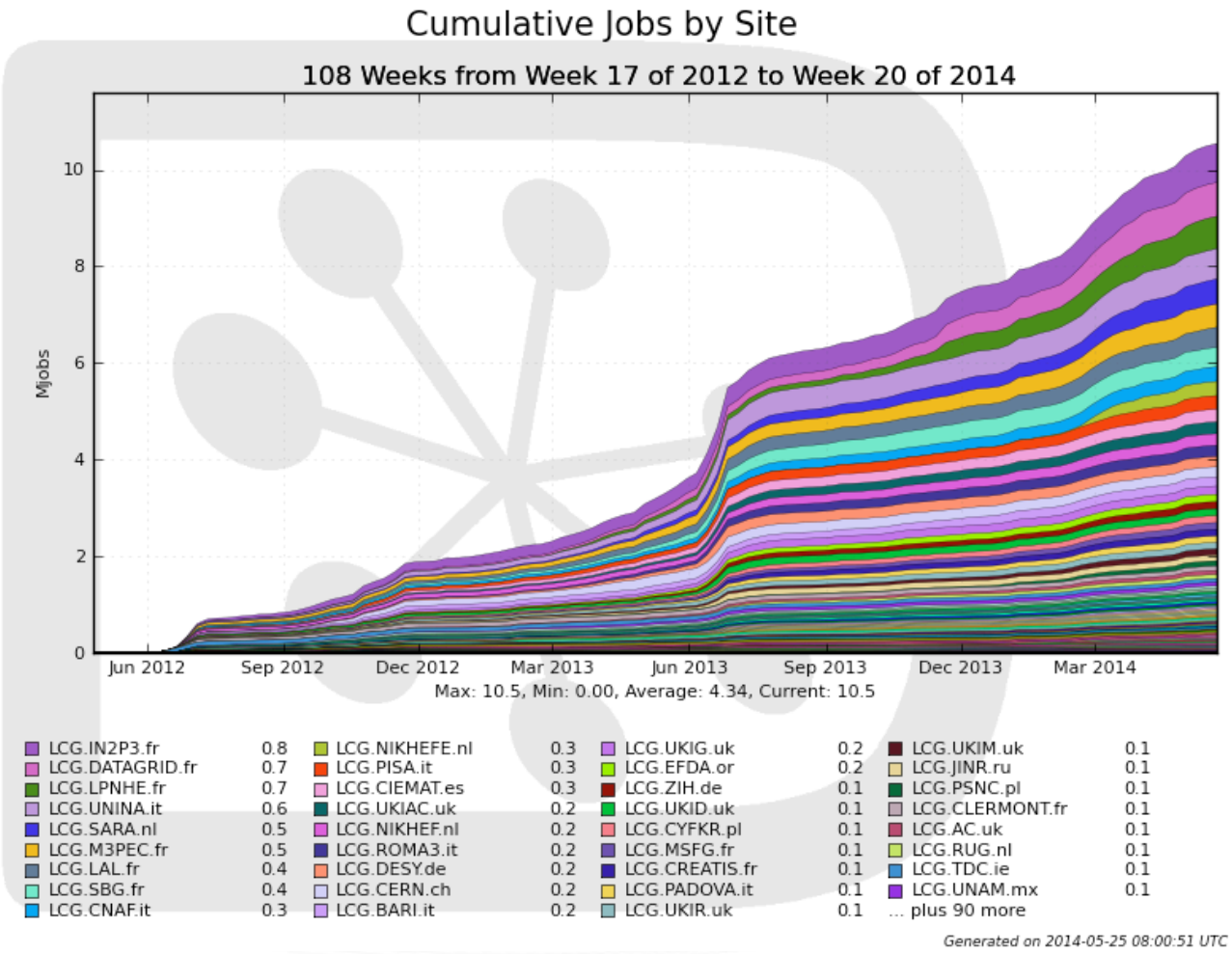
- In production since May 2012
  - First ~10 millions jobs went through the system
    - Mostly biomed applications (67%)



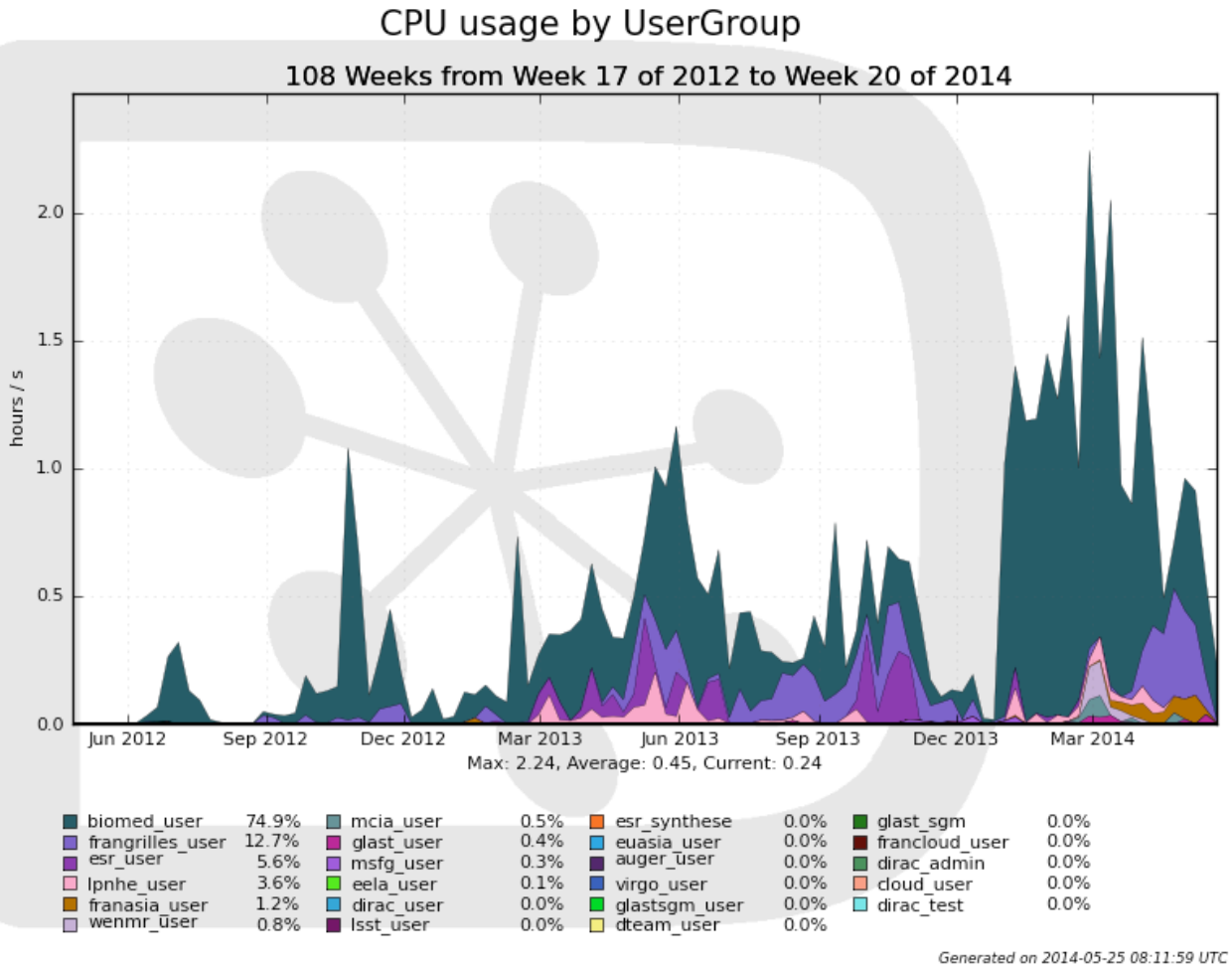


Cumulative jobs by site

In the configuration file:
- 153 LCG sites
- 74 Storages Elements

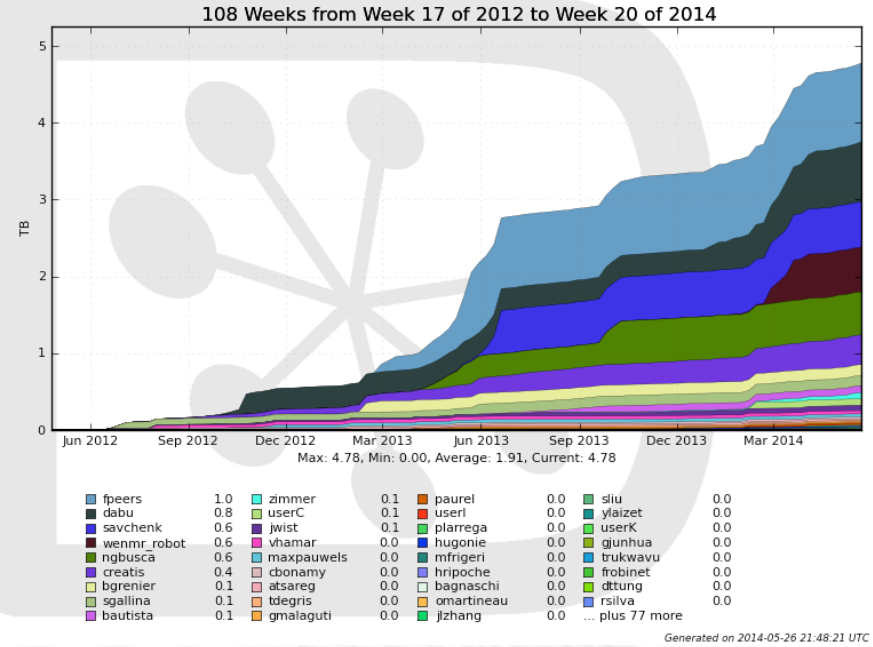


CPU Usage

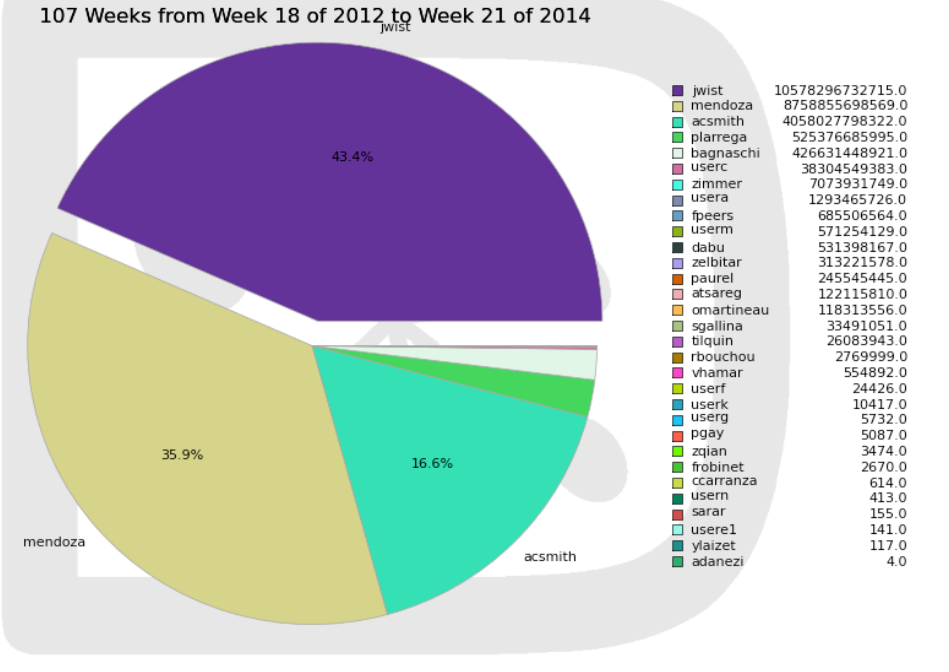

CPU usage by UserGroup
108 Weeks from Week 17 of 2012 to Week 20 of 2014
hours / s
2.0
1.5
1.0
0.5
0.0
Jun 2012
Sep 2012
Dec 2012
Mar 2013
Jun 2013
Sep 2013
Dec 2013
Mar 2014
Max: 2.24, Average: 0.45, Current: 0.24
biomed_user 74.9%
frangrilles_user 12.7%
esr_user 5.6%
lpnhe_user 3.6%
franasia_user 1.2%
wenmr_user 0.8%
mcia_user 0.5%
glast_user 0.4%
msfg_user 0.3%
eela_user 0.1%
dirac_user 0.0%
lsst_user 0.0%
esr_synthese 0.0%
euasia_user 0.0%
auger_user 0.0%
virgo_user 0.0%
glastsgm_user 0.0%
dteam_user 0.0%
glast_sgm 0.0%
francloud_user 0.0%
dirac_admin 0.0%
cloud_user 0.0%
dirac_test 0.0%
Generated on 2014-05-25 08:11:59 UTC

Data Usage

Cumulative Output sand box size by User



Total data transfered by User



Frequently questions from our users

- Job requirements based on CE VO tags
- Multicore jobs/pilots
- If a user can provide DIRAC with some personal access to a computing resource (e.g. SSH/Torque with pub key) so that private pilots can be submitted for the user's jobs
- Simple job dependencies, in a sort of DAG style (e.g. like Torque/MAUI dependencies: afterok, afternotok, notbefore, notafter, ...)
- DFC "mv"/"rename" functionality.
- How to use files than are already registered in LFC and maintain the LFN, using DFC.

Conclusions

- Our users are happy to use DIRAC and also with the support received ☺
- DIRAC scalability allows us to install servers in several sites.
- This experience allows us to probe than NGIs installations are an easy and stable way to provide services to regional VOs: our machines has more than 1 year up and running.