

DIRAC Project News

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*5th DIRAC User Workshop,
Ferrara, 27 May 2015*



- ▶ Workshop to bring together DIRAC developers and users
- ▶ The main goal is information exchange
 - ▶ News, needs, ideas, criticism, etc
 - ▶ Do not hesitate to ask questions
 - ▶ Discussions are welcome
- ▶ Setting up further development and support lines

- ▶ **Main lines**
 - ▶ Code hardening
 - ▶ Using new technologies to boost scalability, reactivity of the system
 - ▶ SQLAlchemy, ElasticSearch, MQ
 - ▶ Support for Communities needs
 - ▶ Support for Multi-VO mode of operation

- ▶ **Requests from user communities**
 - ▶ Workflows
 - ▶ Bulk data management (datasets)
 - ▶ Bulk job management
 - ▶ Monitoring (operations, resources)
 - ▶ ...

- ▶ Two new releases in the last year
 - ▶ 40 patches in the current production release
 - ▶ Reviewing of the release strategy is needed
 - ▶ Faster releases vs more important patches

- ▶ **v6r12** – october 2014
 - ▶ Pilot 2.0 framework introduced
 - ▶ Multi-DB Accounting
 - ▶ Multiple optimizations:
 - ▶ Transformation
 - ▶ DataManagement (DFC, FTS3)

- ▶ **v6r13** – may 2015
 - ▶ IPv6 support
 - ▶ Security fixes: MySQL, CRLs
 - ▶ Request Management based on SQLAlchemy
 - ▶ Storage architecture revisited
 - ▶ Computing resources revisited

- ▶ **v6r14 to come**
 - ▶ RFC proxies support
 - ▶ Pilot logging
 - ▶ More back porting from v7r0 branch
 - ▶ Server side job splitting
 - ▶ CS helpers
 - ▶ ...
- ▶ **v7r0 – delayed**
 - ▶ Resources description reviewed
 - ▶ Many things back ported into v6r12, v6r13
 - ▶ More effort needed for testing

- ▶ LHCb
- ▶ Belle II
- ▶ BES III
- ▶ ILC/Calice
- ▶ CTA
- ▶ Alpes Laser
- ▶ Glast
 - ▶ FG-DIRAC with extensions
- ▶ GEANT 4
 - ▶ Merge with the ILC DIRAC service ?
- ▶ New evaluations
 - ▶ Auger, LSST, Xenon, ...

- ▶ **FG-DIRAC, France**

- ▶ Historically the first Multi-VO DIRAC service

- ▶ 15 VOs, ~100 registered users

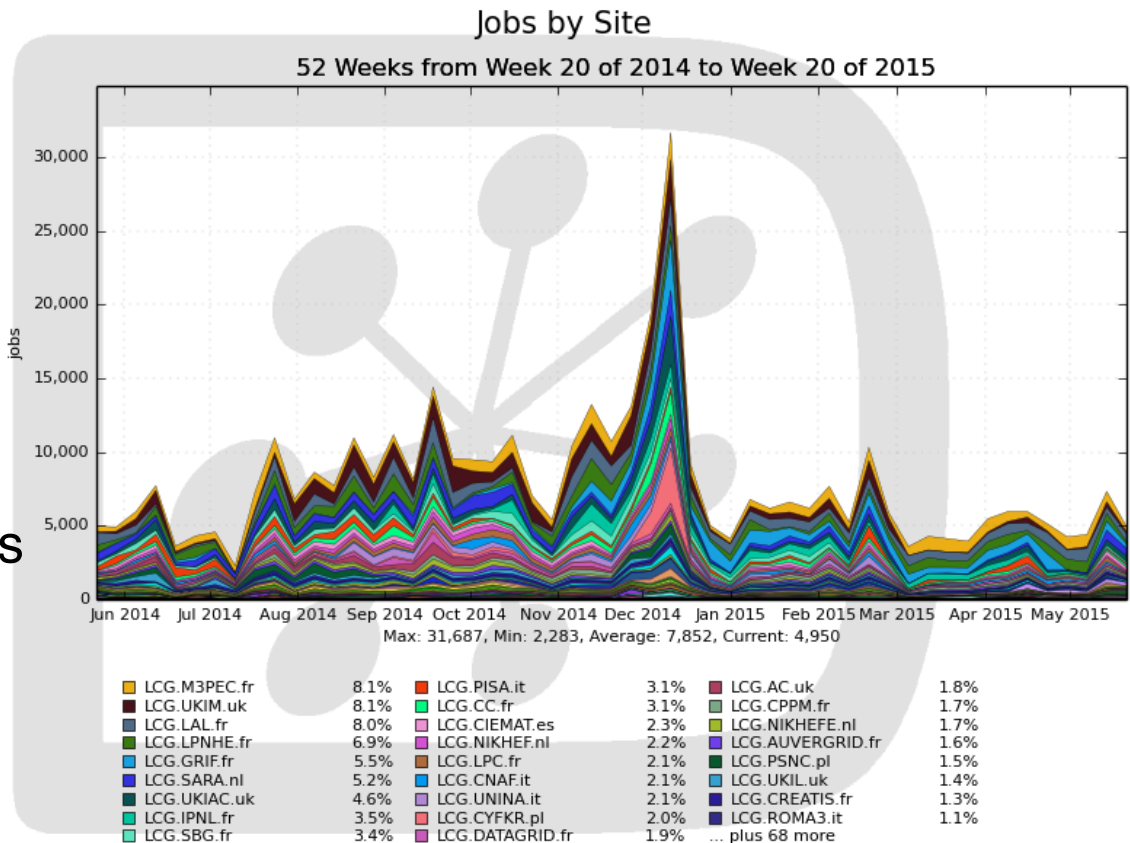
- ▶ Mostly biomed applications

- Application portals

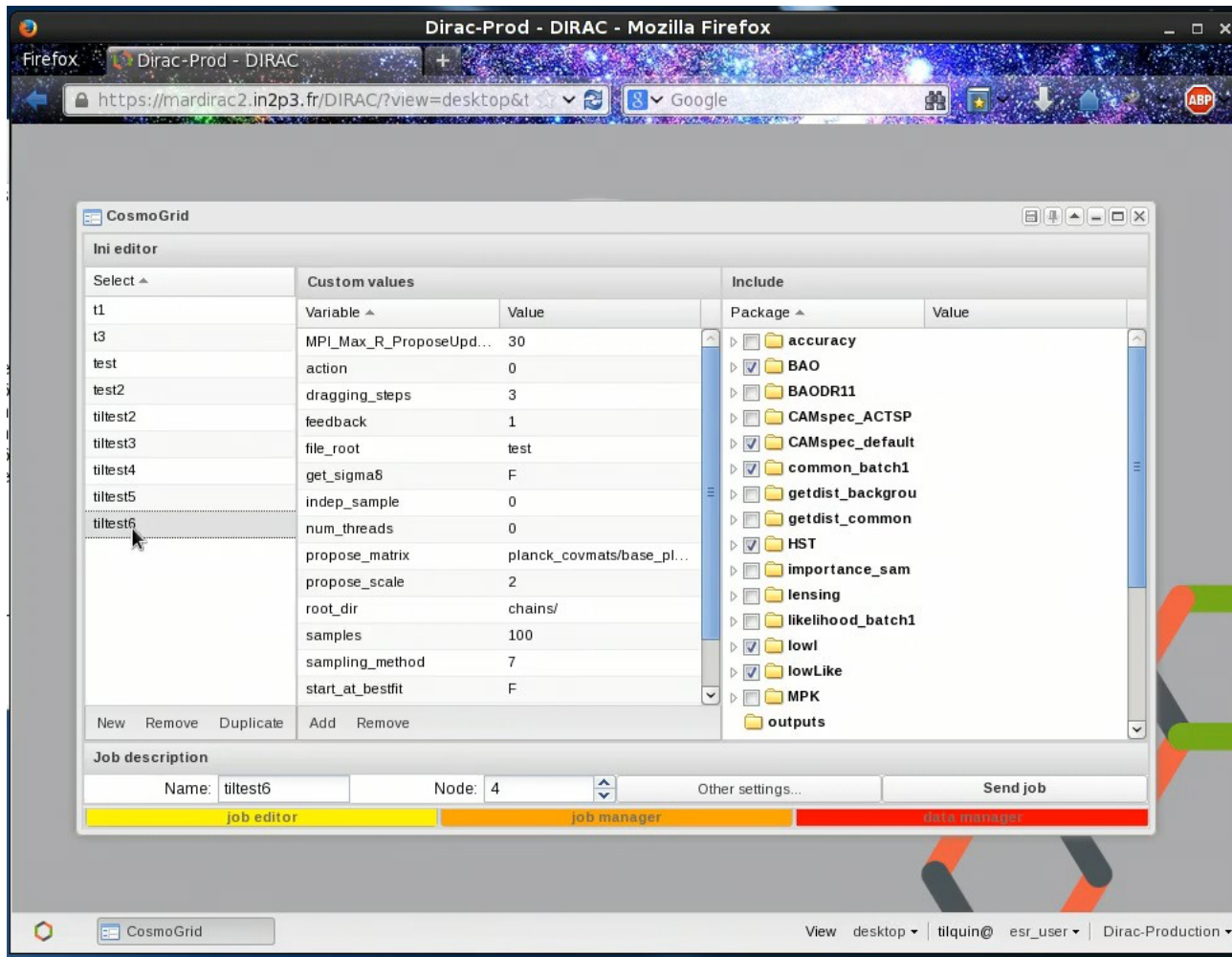
- Using REST interface

- ▶ **ESR**

- ▶ KosmoDIRAC extension – Web application in the DIRAC portal framework

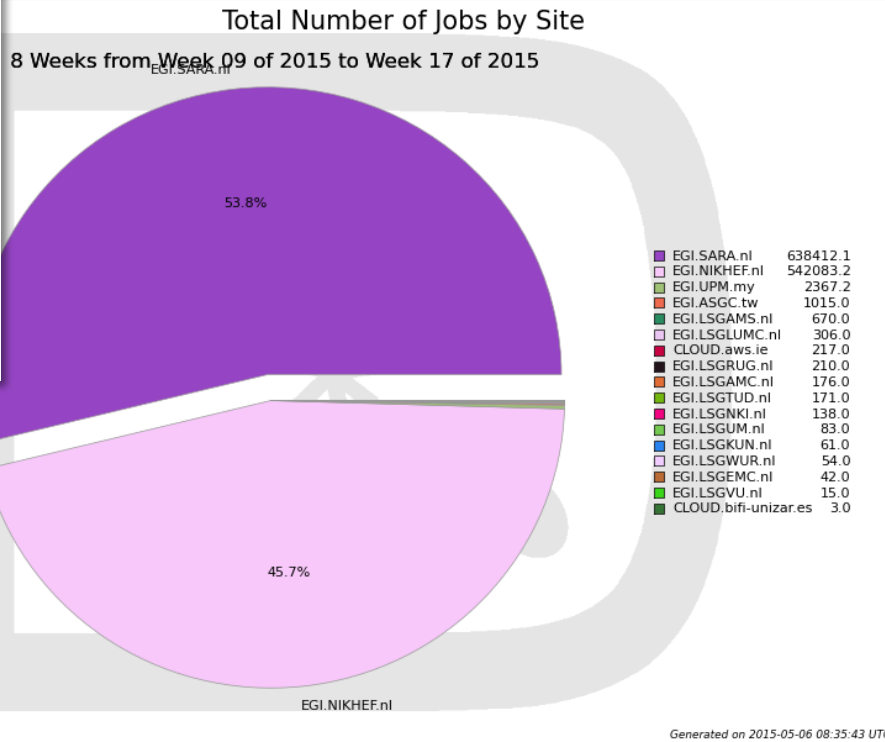
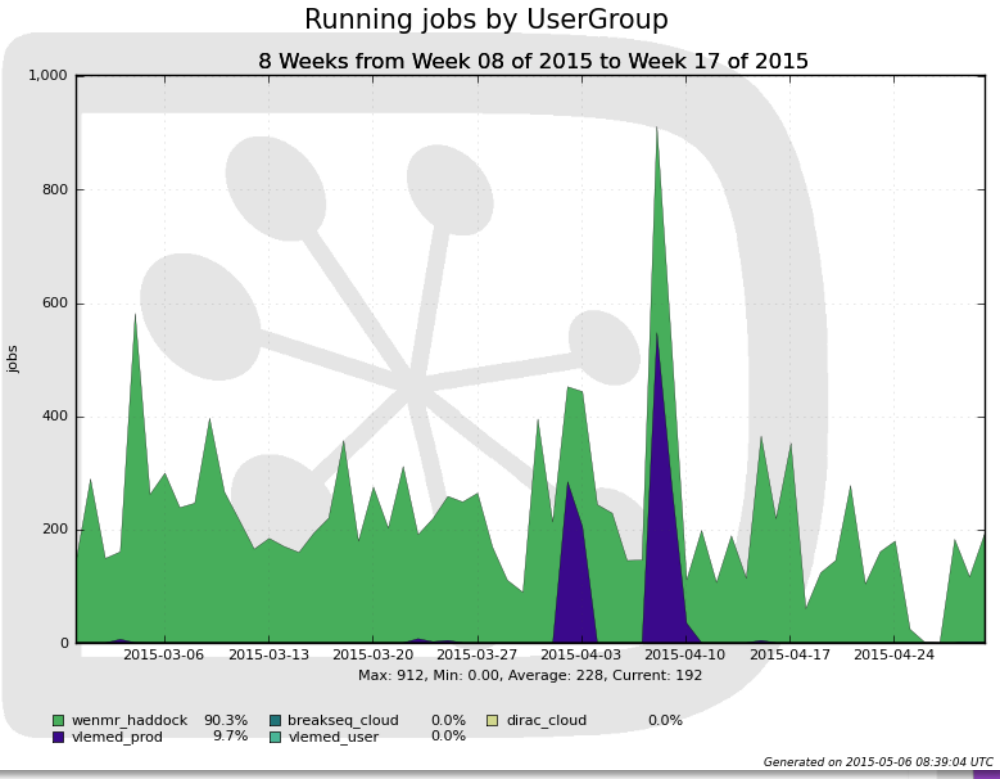


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▶ DIRAC4EGI

- ▶ > 1 million jobs processed in the last 2 months
- ▶ Main VO's enmr.eu (WeNMR) and vlemed
- ▶ Other VO's:
 - ▶ eli-beams.eu, eng.vo.ibergrid.eu, fedcloud.egi.eu, vo.plgrid.pl
- ▶ Most of the jobs at EGI.NIKHEF.nl and EGI.SARA.nl
 - ▶ but also others: e.g. EGI.UPM.my (Malaysia) and EGI.ASGC.tw
 - ▶ Amazon cloud
- ▶ WeNMR
 - ▶ Multiple application portals
 - Haddock application interfaced to DIRAC
 - See dramatic increase in job efficiency
 - ▶ More application to be ported to DIRAC
 - Need for software tags,
 - Job memory requirements,
 - multi-core slots requirement



▶ GridPP, UK

- ▶ 10 registered VOs
- ▶ NA62, T2K, pheno, northgrid, londongrid, snoplus, gridpp

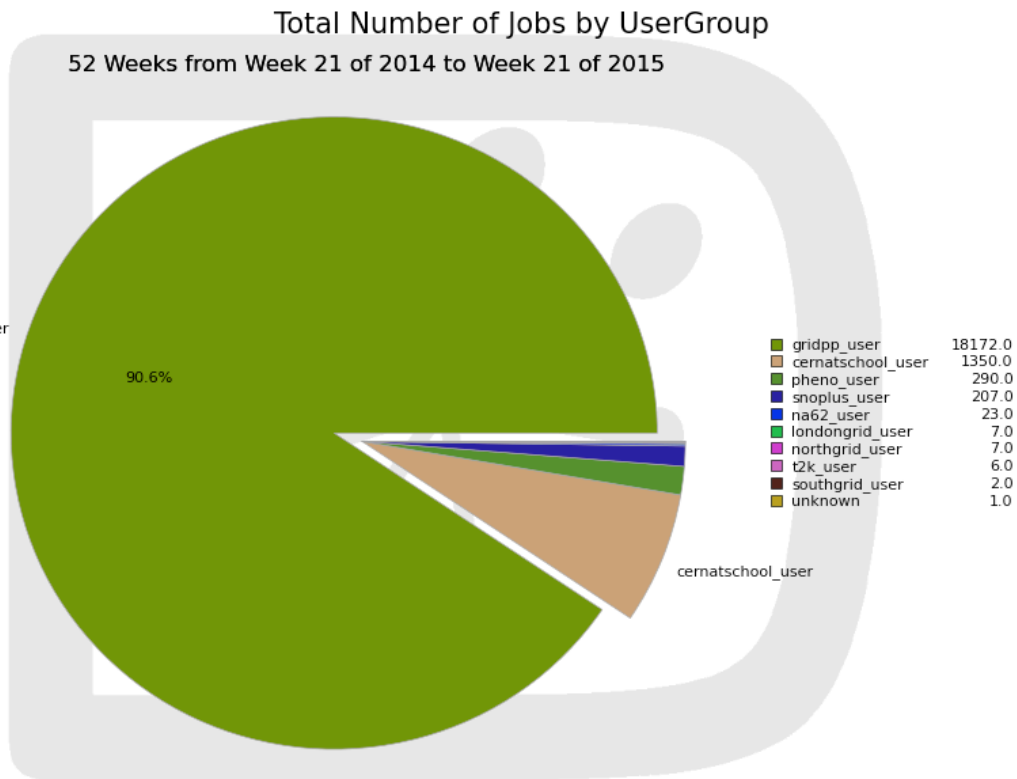
CERN@school



CERN & Society

- ▶ 5 CHEP contributions
 - ▶ Multi-VO support
 - ▶ Automated Resources Status
 - ▶ User and Group management

▶ User support <https://www.gridpp.ac.uk/wiki/Dirac>



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▶ Other installations

▶ IHEP, China (*Xiaomei Zhang*)

- ▶ BES III + CEPC + Juno + ...

▶ Dubna, Russia (*Alexander Uzhinsky*)

- ▶ Development test bench for BES III
- ▶ General purpose server

▶ Malaysia (*Muhammad Farhan Sjaugi*)

- ▶ General purpose trial

▶ NIPNE, Romania (*Corina Dulea*)

- ▶ General purpose, local resources mostly
 - VO gridfin.ro for testing
 - VOs eli-np.eu, ronbio.ro to come

▶ DESY, Germany (*Friederike Nowak*)

- ▶ Trial installation, local resources

▶ IberGRID (*Adria Casajus*)

- ▶ II registered VOs
 - phys.vo.ibergrid.eu
 - Experiments: Gaussian, Magic

- ▶ H2020 VLDATA proposal
 - ▶ Submitted in September 2014
 - ▶ Not accepted
 - ▶ New contacts retained
 - EISCAT-3D, WS-Pgrade, ...

- ▶ EGI Engage – long-tail user support
 - ▶ Individual users and small research groups
 - ▶ Catch-all VO
 - ▶ Robot certificates with user extensions
 - ▶ On-demand resource allocation
 - ▶ Interested in having DIRAC as backend for payload scheduling

- ▶ WS-PGRADE/gUSE (SZTAKI)
 - ▶ Popular application workflow portal
 - ▶ DIRAC backend integration

- ▶ Conference reports
 - ▶ CHEP 2015
 - ▶ 24 contributions with a strong to considerable relation to DIRAC
 - ▶ 2 poster award winners out of 8 (Track 2, Christophe, and Track 4, Kato Yuji)
 - ▶ Other Conferencies
 - ▶ ISGC,ACAT, ...
 - ▶ EGI Forum, November 2015
 - ▶ DIRAC workshop suggested by EGI Engage managers

- ▶ Tutorials
 - ▶ Organized by the Grid infrastructure projects
 - ▶ FG-DIRAC, GridPP
 - ▶ Organized by user communities
 - ▶ CTA, Auger

- ▶ Active DIRAC forums
 - ▶ <https://groups.google.com/forum/?hl=en#!forum/diracgrid-develop>
 - ▶ <https://groups.google.com/forum/?hl=en#!forum/diracgrid-forum>
 - ▶ > 200 topics discussed

- ▶ **DIRAC Consortium Agreement**
 - ▶ Signed by the three founding members in January 2014
 - ▶ UB, CNRS, CERN
 - ▶ Development, maintenance and promotion of the DIRAC software
- ▶ **Annex form for accepting new members is finalized**
- ▶ **No formally new partners so far**
 - ▶ Invitations are sent
 - ▶ Negotiations are ongoing
 - ▶ More news soon
- ▶ **Board of representatives this week**
 - ▶ The outcome to be reported later this week

- ▶ DIRAC User Workshop to exchange opinions and define further DIRAC software evolution lines
- ▶ DIRAC User Community is growing. Multiple DIRAC services are available in production and in a trial/preproduction state
- ▶ Collaboration with other projects that can benefit from the DIRAC service is ongoing
- ▶ DIRAC Consortium is going to grow with new partners contributing to the software development

