



LHCb Operations Report

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on behalf of 

Outline

- News & Activities
- GGUS tickets
- Sites & Outstanding issues
- Conclusion

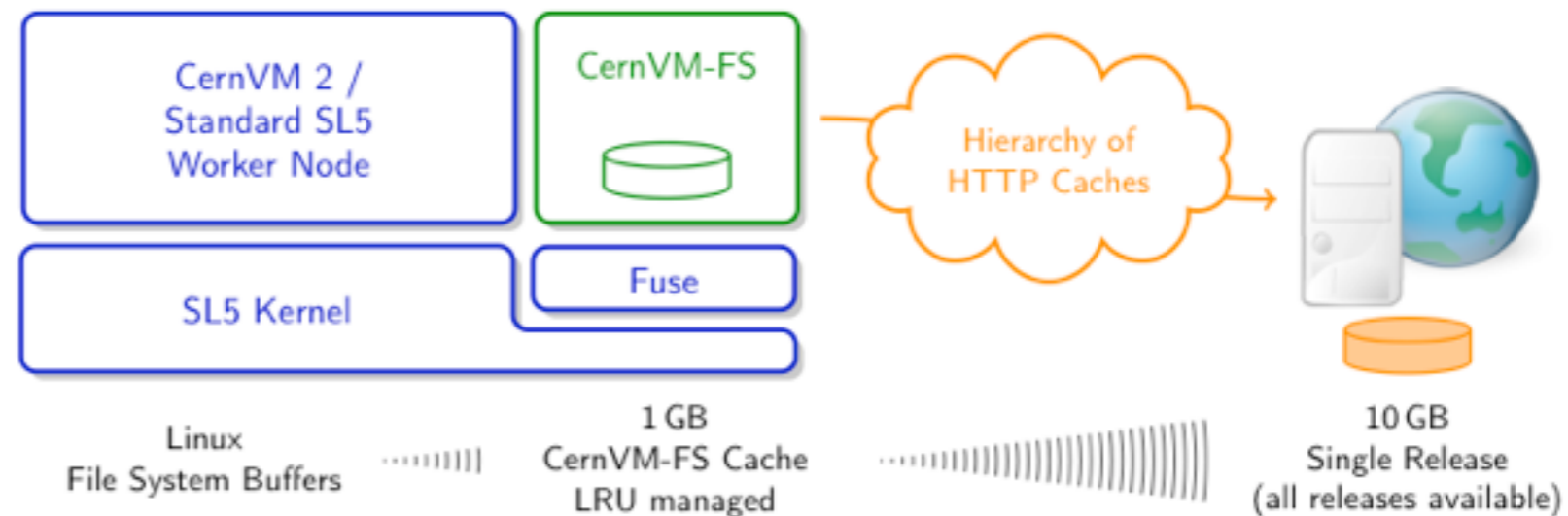
News

- CVMFS used in production at some TIs
- Due to shortage of disk space re-visiting of the computing model
 - Distribute dst data only on T0 + 3 TIs
- Launched activity on data consistency checks

CVMFS

- CVMFS simplifies software deployment to grid sites
- Some T1 sites have switched for LHCb usage

- NIKHEF in production for whole quarter
- Seamless migration last week at PIC



- RAL and CNAF are currently testing it
- Very good performance - only 1 issue (see later)

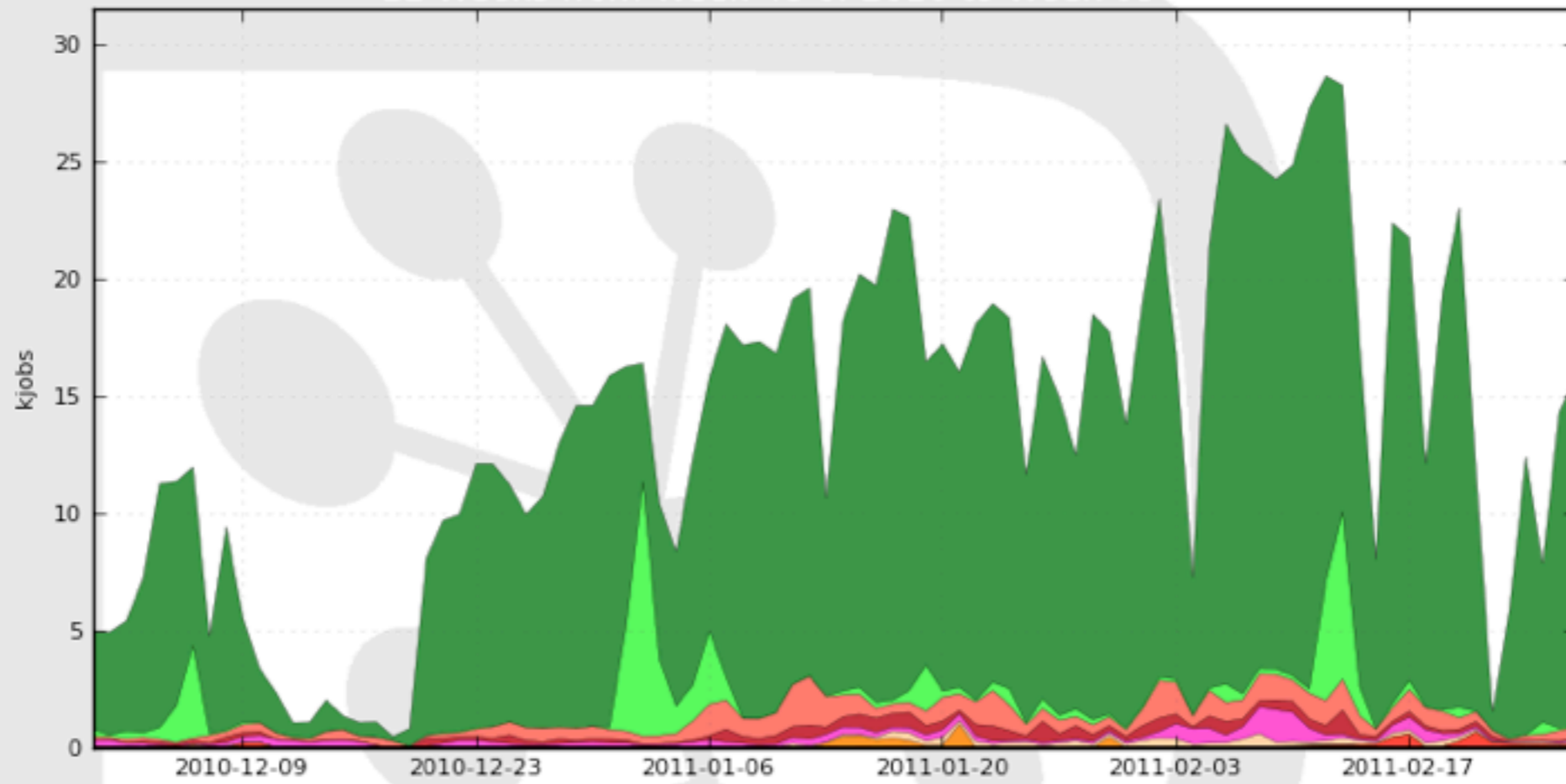
Operations Activities

- Production:
 - Bulk of operations were MC production
 - For this quarter both on T0/1s and T2s
 - Re-stripping of some charm channels
- SAM / Nagios migration almost finished
 - DIRAC SAM jobs to be done by April

Parallel Jobs executed

Running jobs by FinalMinorStatus

12 Weeks from Week 48 of 2010 to Week 09 of 2011



Execution Complete	85.9%
Pending Requests	4.6%
Stalled	4.3%
Application Finished With Errors	1.9%
Job has exceeded maximum wall clock time	1.7%
Watchdog identified this job as stalled	0.7%
Uploading Job Outputs	0.4%
Received Kill signal	0.3%
... plus 21 more	

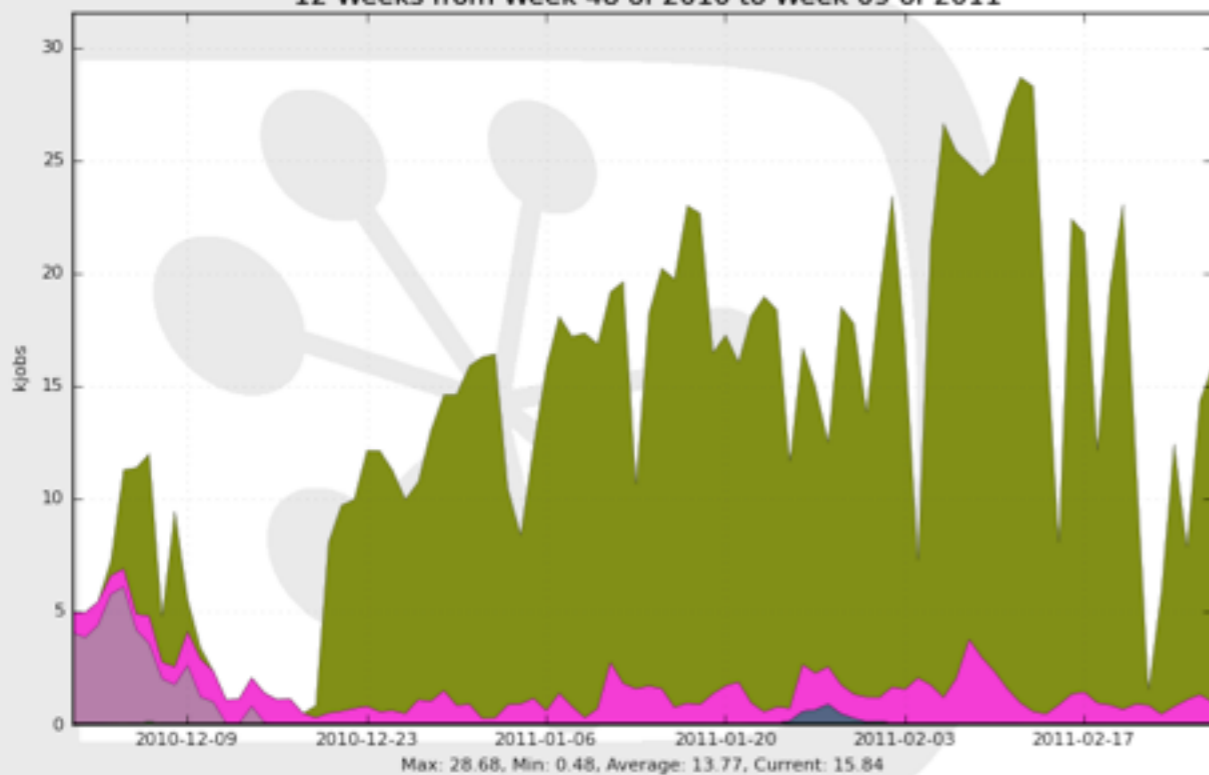
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Site activities

- Mainly MC production
- shared ~ 50/50 between T0/T1 and T2s

Running Jobs by JobType / all Sites

12 Weeks from Week 48 of 2010 to Week 09 of 2011

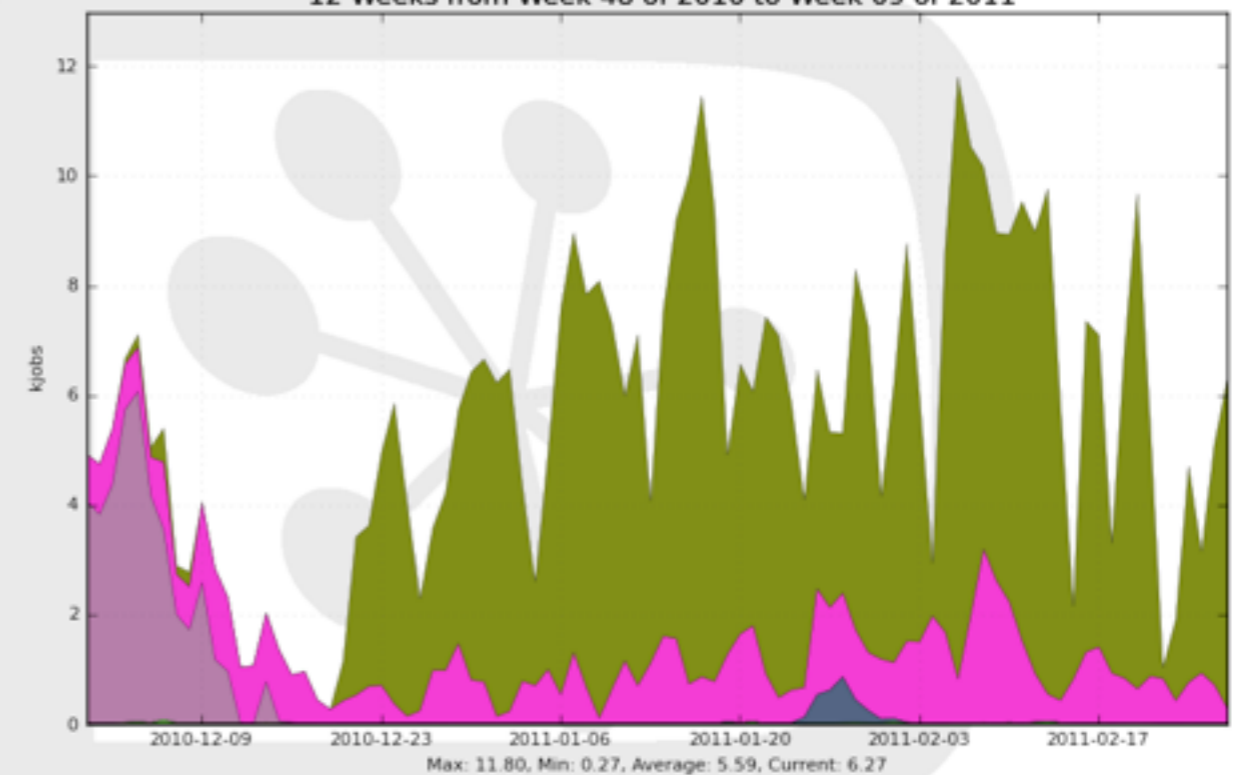


MCSimulation	88.3%	DataReconstruction	3.3%	Merge	0.1%	unknown	0.0%
user	8.0%	DataStripping	0.2%	sam	0.1%		

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Running Jobs by JobType / T0+T1s

12 Weeks from Week 48 of 2010 to Week 09 of 2011



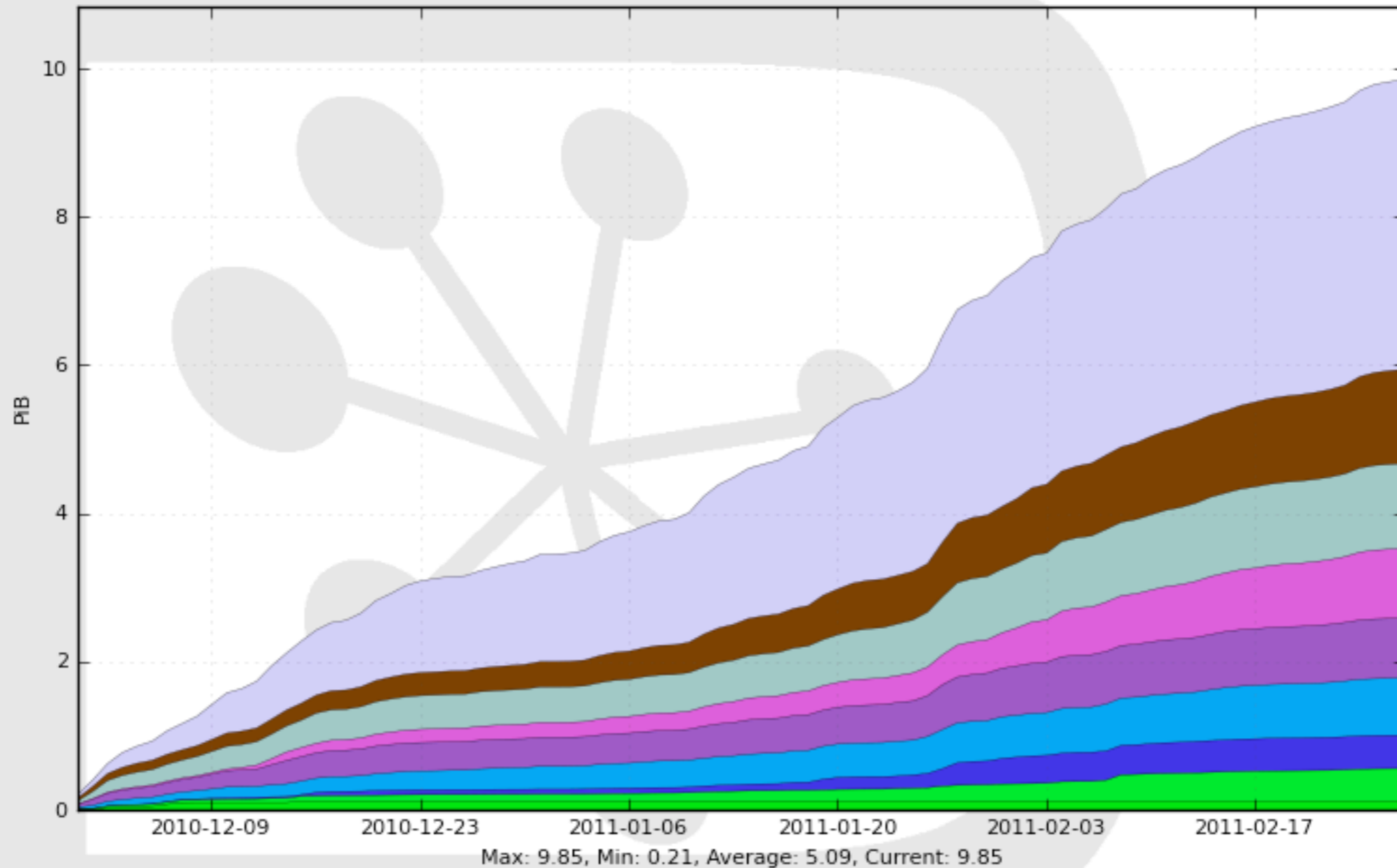
MCSimulation	73.2%	DataReconstruction	8.1%	Merge	0.2%	unknown	0.0%
user	17.8%	DataStripping	0.6%	sam	0.0%		

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Data Management

Cumulative Input data by Site

12 Weeks from Week 48 of 2010 to Week 09 of 2011

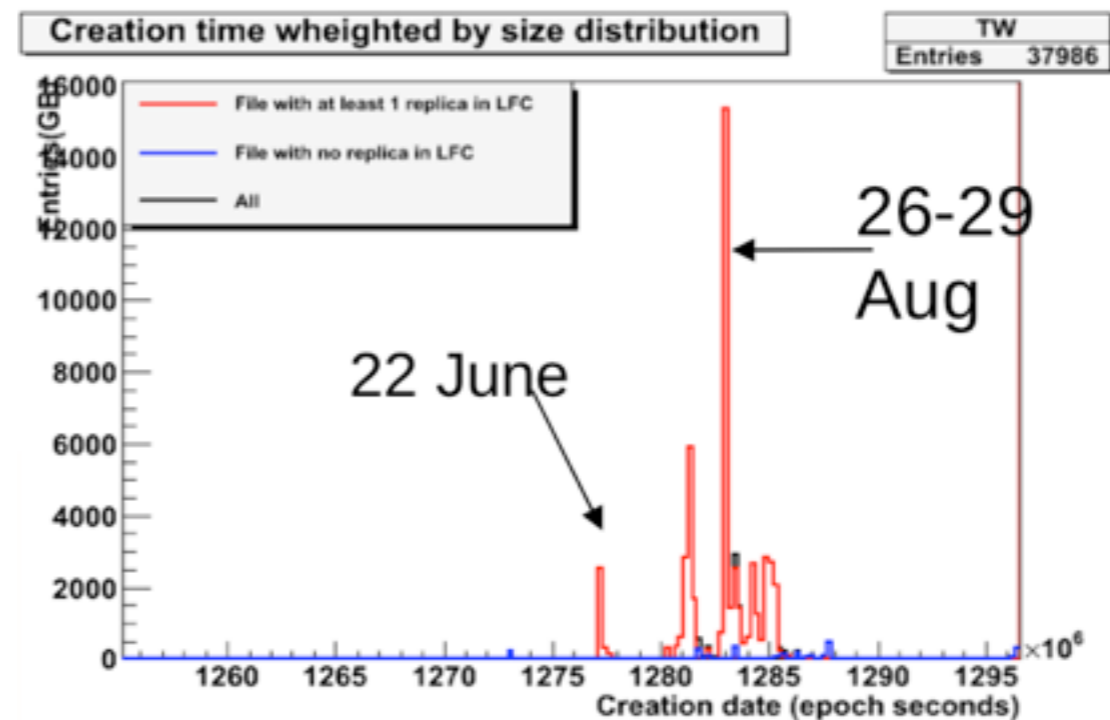


LCG.CERN.ch	3.9	LCG.NIKHEF.nl	0.9	LCG.SARA.nl	0.4
LCG.GRIDKA.de	1.3	LCG.IN2P3.fr	0.8	LCG.PIC.es	0.4
LCG.RAL.uk	1.1	LCG.CNAF.it	0.8	CREAM.NIKHEF.nl	0.1

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Data Consistency

- Activity on data consistency was started
 - Found discrepancies (Storage>LFC) in production (up to 5%) and user (~ 13%) space
 - The mismatches in production can be mapped on e.g. service outages during data removal
- New tools have been developed in Dirac to automatise the checking of data consistency in the future

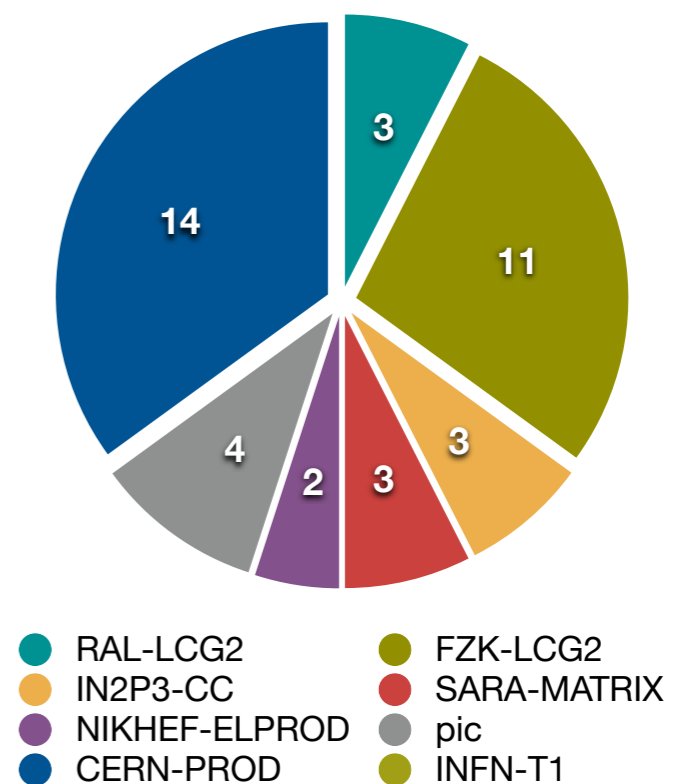


GGUS tickets summary

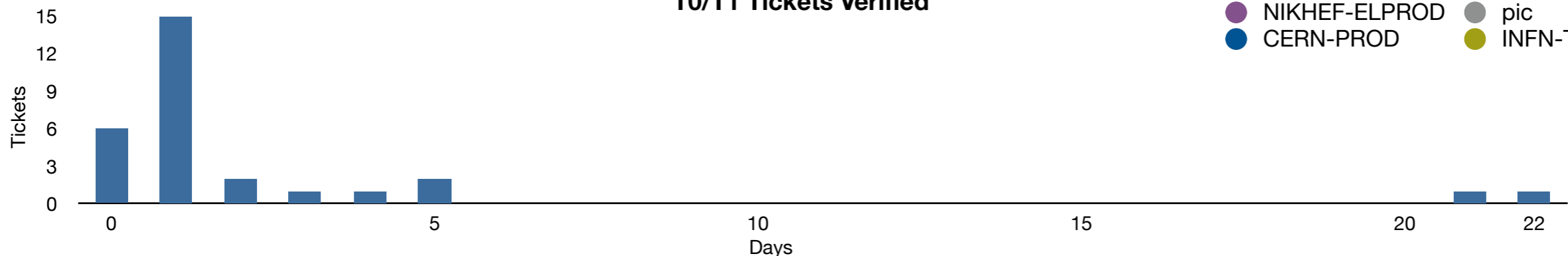
Reference period 1. Dec '10 - 28. Feb '11

- 103 tickets in total (previous Qs 152, 203)
- 40 T0/T1 tickets
 - 29 verified
 - 72 % within 2 days
 - 4 alarm tickets (1 real)

T0/T1 Tickets opened



T0/T1 Tickets Verified



Cream CE

- 15. Feb: Cream CE 1.6.4 was causing problems on job submission “truncating user DNs”
 - Observed at Gridka and Cern
 - Quickly fixed by Cream developers
- Fix was quickly deployed at concerned TIs

Infosystem

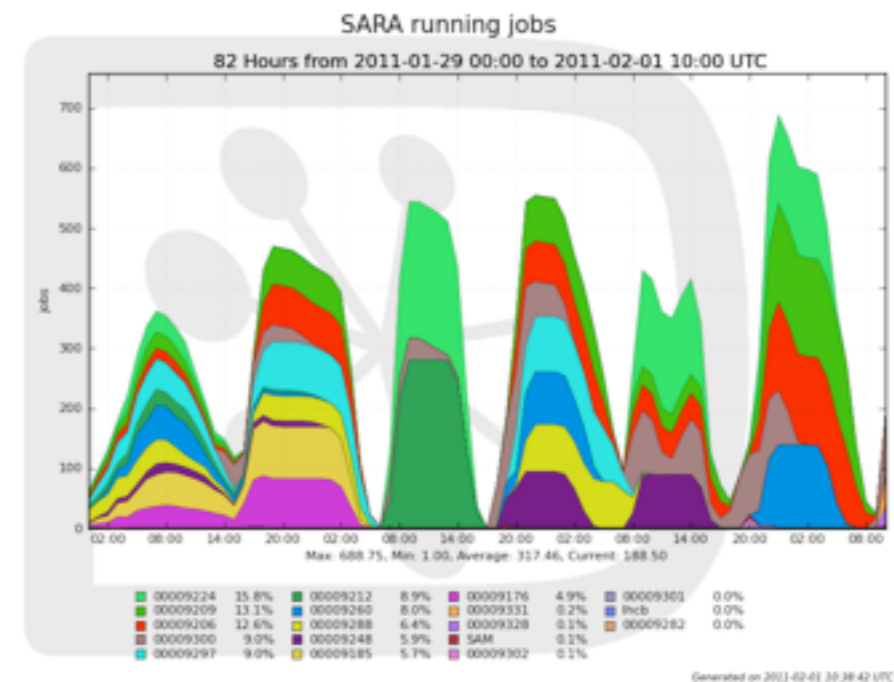
- 2. Feb : “Flickering” BDII reporting 0s for number of waiting jobs
 - The result is a flooding of the site with jobs
 - The issue was reported for GridKA and CERN
 - Solved by tuning the GLP system

Runtime environment

- Since Jan: Especially for sites with afs shared software area the setup of the runtime environment occasionally times out
 - This is due to a high number of file operations during the setup step
 - IN2P3 has made some investigations and have fixed the problem. At CERN the problem still persists.
 - The final solution will be a re-engineering of this process

Sawfish pattern

- 1. Feb.: In case of under-used sites LHCb had lots of concurrent jobs running
- Resulted in early using up of the fair share for the reference period - thus no jobs for the rest
- This is unhandy in the case of eg. a reprocessing campaign this is hindering the earlier finishing of all jobs
- Too many parallel jobs also possibly kill the storage
- Thanks to sites which have granted an extension of the fair share period



Other Issues @Tier 1s

- 19. Jan, NIKHEF, problem after cvmfs version upgrade, new patch fixed it
- 27. Jan + 1. Feb, GridKA, shared area not accessible because of configuration problems
- 28. Jan, IN2P3, staging of files took too long and jobs were not finding the files online, thus stopped

Other Issues @Tier 1s

- 6. + 20. Feb, GridKA, srm problems, because of outdated CRLs and dcache db corruption
- 7. Feb, GridKA, infosys wrong configured submitting to CREAM instead of LCG CE
- 8. Feb, NIKHEF, jobs got killed, partly because of memory limits and partly nfs mount was lost

CERN

- 12. Jan, gridenv not working with Python 2.6 -> shall work with next UI version, open
- 21. Jan, SRM problems because of not fixed bug, happening infrequently
- 25. Jan, (alarm), VOMS not responding, because of database upgrade not working
- 27. Jan, xrootd failure to open files on castorlhcb because of a crash of xrootd. Usually should be restarted automatically. Lemon re-activated.

Tier 2s

- How to notify T2s of important upgrades?
- Eg. in the case of the Cream CE bug.
- WLCG channels are in place but can issues be re-inforced if important enough?

Conclusions

- LHCb production activities without any major problems
- Timely fixing of any other incidents by sites
- LHCb grid operations is ready and eager for the new data taking phase of LHC