Tier 2 site report: CSCS

Gianfranco Sciacca (Bern)
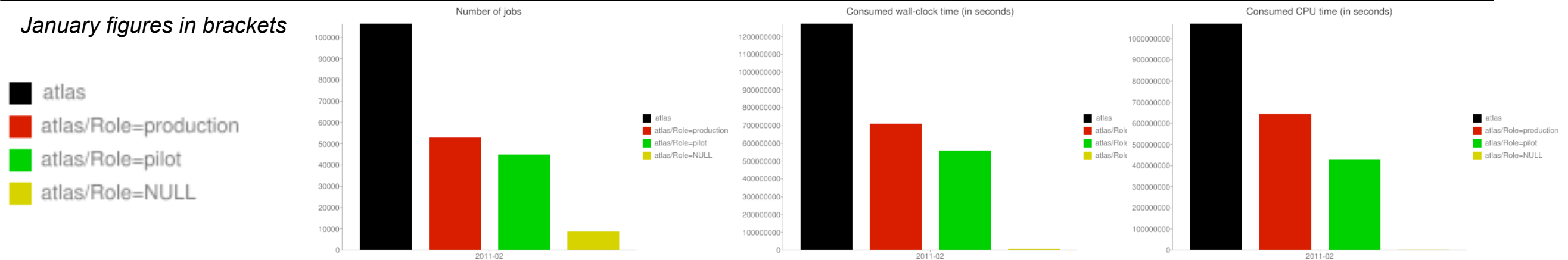
CSCS report (February)

CPU: https://mon.lcg.cscs.ch/pbsplots/pbsplots.py? (inc. WLCG and NorduGrid)

	Nr of jobs	Walltime (h)	CPU time (h)
Total	**106313** (135530)	**352811** (333435)	**297207** (299318)
PROD	**52856** (39360)	**196696** (270982)	**178447** (250608)
PILOT	**44782** (87827)	**154656** (59705)	**118498** (47821)
User	**8675** (8343)	**1460** (2748)	**262** (889)

January figures in brackets

- **CPU Efficiency: 84.3** (89.8 December)
- Compared to previous month, similar total usage, but more than doubled analysis volume
- Fraction of total jobs: cream 23.2%, ARC 24.5%, lcg-CE 51.3%

CSCS report (February)
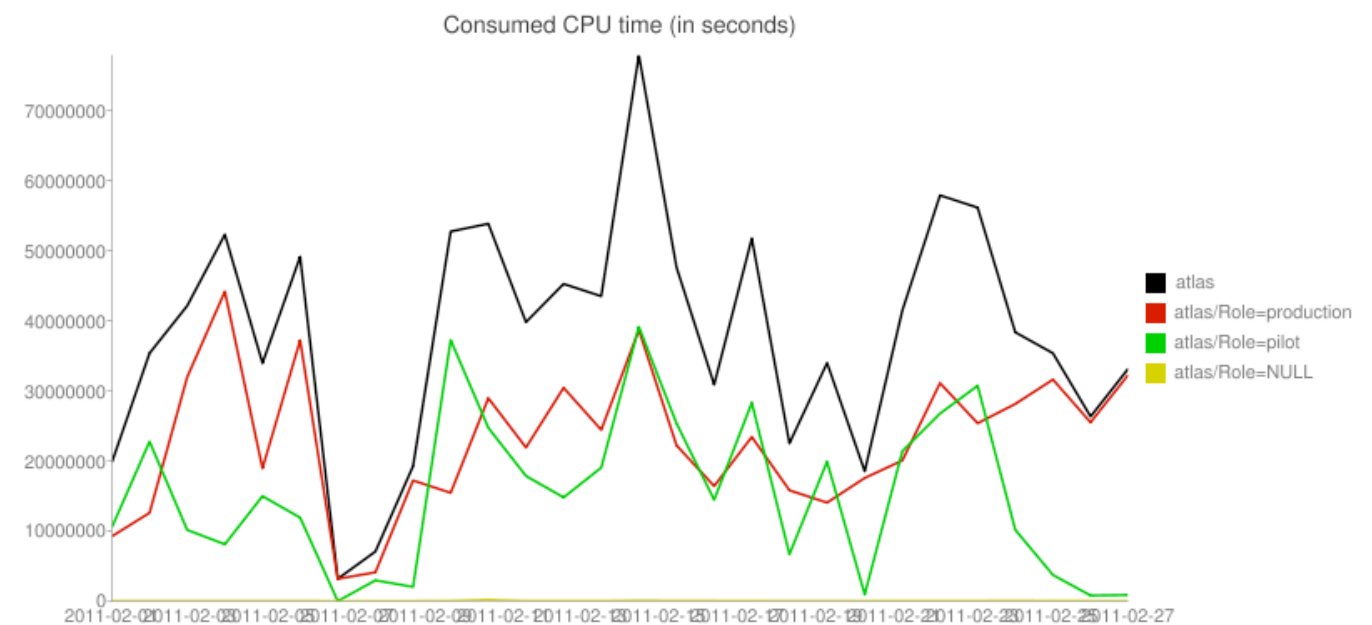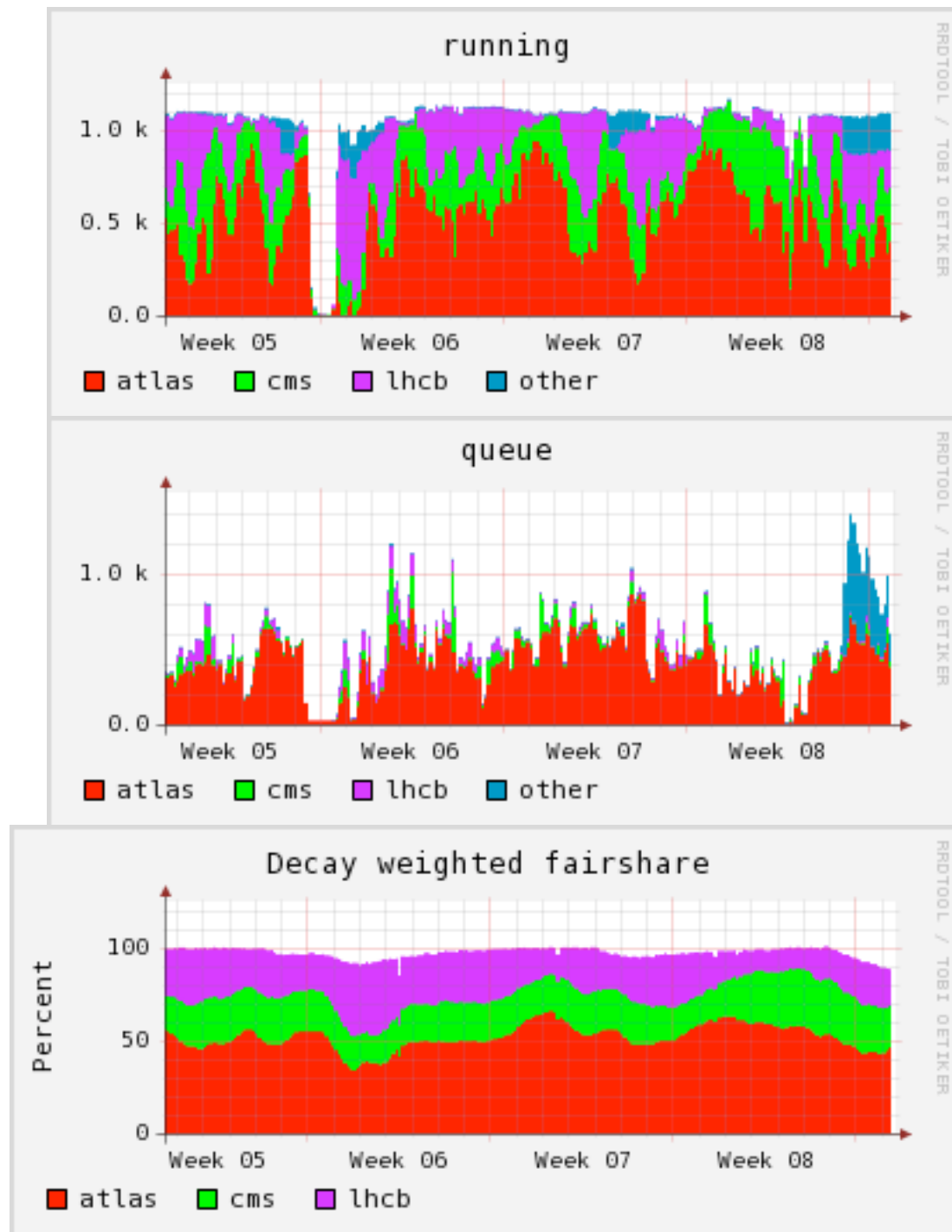
Nominal fair-shares:
atlas=40:cms=40:lhcb=20

CSCS report (February)

Disk: http://bourricot.cern.ch/dq2/accounting/t2_reports/FZKSITES/

Report for FZKSITES (UTC 2011-03-01 11:55:03.247962)

Site	Used(G)	Free(G)	Total(G)	%
CSCS-LCG2_DATADISK	154091	180908	334999	45
CSCS-LCG2_GROUPDISK	17095	22905	40000	42
CSCS-LCG2_HOTDISK	824	176	1000	82
CSCS-LCG2_LOCALGROUPDISK	9533	467	10000	95
CSCS-LCG2_PRODDISK	1013	8987	10000	10
CSCS-LCG2_SCRATCHDISK	12589	5410	17999	69

Totals (TB)	**195.1**	**218.8**	**414**	**47.1**
(previous month)	(186.2)	(127.8)	(314)	

- New disk came online on 2 Feb 2011 (100TiB)
- ~50TB should additionally come in the next few weeks

CSCS report (February)

General news

- Smooth operation during February

- Upgrade of cream01 to 3.2.10-0 just completed

- cream02 upgrade on 7 March (downtime announced in GOCDB for the node)

- Moab scheduler updated to v 6.1 (decouples client queries from scheduling process)

- <u>New hardware to be put online (will likely have this online before next meeting)</u>:

  2000 HEP-SPEC06 (~20% increase in capacity)
  Total capacity will be 13488 HEP-SPEC06 with fair shares atlas=40:cms=40:lhcb=20
  (AMD Opteron 6172 @ 2.1GHz with 3GB of memory per job slot)

  New 10TB GPFS shared file system (in addition to the existing 10TB Lustre area)

  ~50 TB more storage

- Establishing timeline for full decommissioning lcg-CEs, will need input from ATLAS on this

CSCS report (February)

General news

- Observed sizeable number of (analy) jobs killed for exceeding 3GB vmem limit (limit is `1.5 * required_mem` with `required_mem` defaulting to 2GB)

  => In February estimated ~5% of ATLAS WallTime wasted

  => Not a huge problem per se, but undesirable nevertheless (specially from user point of view)

  => Some WN HW peculiarity involved
  current WNs with 2GB RAM/job slot; no local disk; use shared FS for scratch; almost no local space for swap
  new WNs will have 3GB RAM and 3GB swap per job slot

  => Got valuable feedback from Rod about real life memory usage of jobs (also feedback
  from sites who apply limits has been appreciated)

  => We are discussing a possible solution to prevent this from occurring again in the future
  e.g. creating a shared swap space for the "old" WNs as a safety net, could allow raising the vmem limit to
  >=4GB (New WNs come with their own swap per node on local disks)

  => Question: is it likely (or technically possible) to expect in the longer term that jobs will
  be submitted with a memory request that is passed through the MW to the batch system?