

Status progress since last meeting

- ➔ **Fairly stable operations of both clusters** (`ce01.lhep.unibe.ch`; `ce02.lhep.unibe.ch`)
- ➔ **ARC upgraded to 4.1.0-1.el6** (smooth upgrade on live system)
Mandatory since ATLAS ops moved to Rucio as DDM tool in May, making the previous version of ARC obsolete.
- ➔ **ANALY_UNIBE-LHEP, UNIBE-LHEP, UNIBE-LHEP-UBELIX PanDA queues created in AGIS, added to HammerCloud**, following the commissioning of the new ATLAS Control Tower developed by Andrej, running in CERN, which has many new functionalities, e.g.:
 - Now PanDA queues at each ARC site rather than have all sites grouped under ARC and ARC_T2 PanDA queues
 - Can be tested by HammerCloud functional tests (automated auto-exclusion, whitelisting)
 - Automated exclusion from production and analysis in case of GOCDDB downtime
 - Can use the DATADISK and SCRATCHDISK at the local site, rather than only use the ND T1 SE
- ➔ **Both clusters commissioned for ATLAS analysis payloads and Multi-core ATHENA workloads**
- ➔ **DPM SE re-configured for xrootd data access for ATLAS, joined the German Federation (FAX)**
 - <http://dashb-atlas-ssb.cern.ch/dashboard/request.py/siteview#currentView=FAX+endpoints&fullscreen=true&highlight=false>
 - DPM versions from epel: 1.8.8-4.el5 (head node), 1.8.8-4.el6.x86_64 (disk servers)
- ➔ **New ARC CE (ce03) setup, SLURM master and 1 WN (all VMs) as testbed for HPC submission**
- ➔ **GIIS (`giis.lhep.unibe.ch`) and VOMS (`voms.lhep.unibe.ch`) services commissioned and in production**
 - Clients and ARC CEs configurations needed change to point to them (was `giis.smscg.ch` – `voms.smscg.ch`)



HammerCloud Gangarobot

History Legend



Historic view for "panda_queues_all" from 00:00 01.04.2014 to 00:00 17.08.2014

Show entries

Search:

PANDA queue	SITE Name	TIER	CLOUD	History plot time bin = 276 hours	offline		brokeroff		online		NoQueue		test	
					%	count	%	count	%	count	%	count	%	count
ANALY_LUNARC	SE-SNIC-T2	T2	ND		0.02	1	0	0	52.7	63	0	0	9.04	80
ANALY_SiNET	SINET	T2D	ND		0.05	1	0	0	63.86	166	0	0	12.02	6
ANALY_UNIBE-LHEP	UNIBE-LHEP	T2	ND		6.19	2	0	0	54.57	49	0	0	18.32	131
ANALY_UPPMAX	SE-SNIC-T2	T2	ND		0.09	2	59.1	35	0.47	28	0	0	0.52	79
LUNARC	SE-SNIC-T2	T2	ND		0.01	1	0	0	47.45	33	0	0	8.32	8
SINET	SINET	T2D	ND		0.02	1	0	0	56.49	71	0	0	13.54	56
UNIBE-LHEP	UNIBE-LHEP	T2	ND		0.03	1	0	0	51.87	27	0	0	2.41	16
UNIBE-LHEP-UBELIX	UNIBE-LHEP	T2	ND		0.03	1	0	0	53.46	35	0	0	0.81	2

Showing 1 to 8 of 8 entries

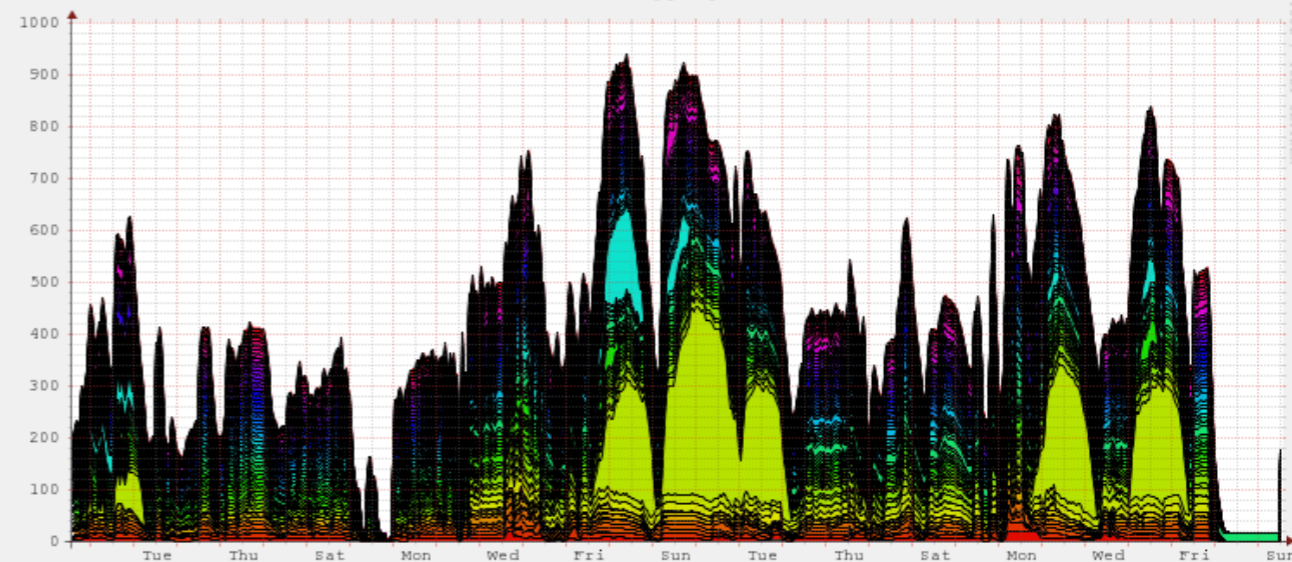
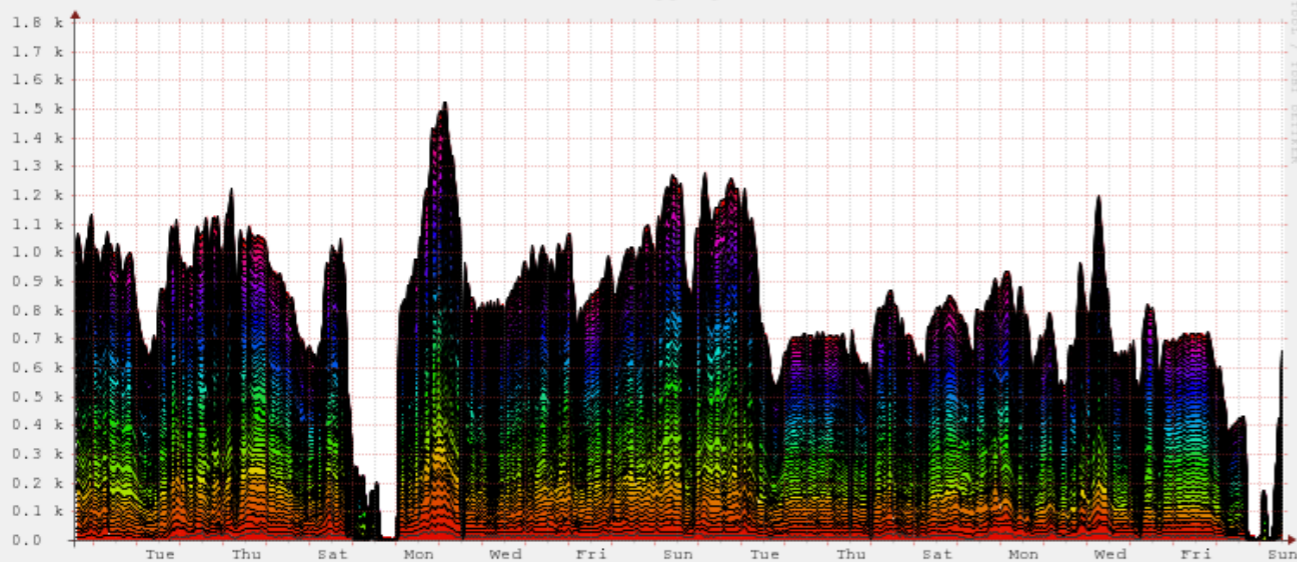
First Previous 1 Next Last

ce01

ce02

UNIBE-LHEP WLCG Cluster aggregated load_one last month

UNIBE-LHEP WLCG Cluster aggregated load_one last month



- | | | | | | |
|--|----------------|---------------|----------------|---------------|----------------|
| wn-2-11.local | wn-2-83.local | wn-2-32.local | wn-2-53.local | wn-2-74.local | wn-2-95.local |
| wn-2-44.local | wn-2-65.local | wn-2-6.local | wn-2-14.local | wn-2-86.local | wn-2-35.local |
| wn-2-56.local | wn-2-77.local | wn-2-26.local | mds-2-1.local | wn-2-47.local | nfs-2-1.local |
| wn-2-17.local | oss-2-6.local | wn-2-89.local | wn-2-59.local | wn-2-29.local | oss-2-14.local |
| wn-2-90.local | wn-2-60.local | wn-2-1.local | wn-2-81.local | wn-2-30.local | wn-2-51.local |
| wn-2-72.local | wn-2-21.local | wn-2-63.local | wn-2-4.local | wn-2-12.local | oss-2-1.local |
| wn-2-84.local | wn-2-33.local | wn-2-54.local | wn-2-75.local | wn-2-24.local | wn-2-45.local |
| wn-2-66.local | wn-2-7.local | wn-2-15.local | oss-2-4.local | wn-2-87.local | wn-2-57.local |
| wn-2-27.local | wn-2-48.local | wn-2-69.local | oss-2-15.local | wn-2-70.local | wn-2-91.local |
| wn-2-40.local | wn-2-61.local | wn-2-2.local | wn-2-10.local | wn-2-82.local | wn-2-31.local |
| wn-2-52.local | wn-2-73.local | wn-2-22.local | wn-2-94.local | wn-2-43.local | wn-2-64.local |
| wn-2-5.localtd> <td>wn-2-13.local</td> <td>wn-2-85.local</td> <td>wn-2-34.local</td> <td>wn-2-55.local</td> <td>wn-2-76.local</td> | wn-2-13.local | wn-2-85.local | wn-2-34.local | wn-2-55.local | wn-2-76.local |
| wn-2-25.local | ce01.local | wn-2-46.local | wn-2-67.local | wn-2-16.local | wn-2-88.local |
| wn-2-37.local | oss-2-10.local | wn-2-58.local | wn-2-79.local | wn-2-49.local | wn-2-19.local |
| wn-2-80.local | wn-2-50.local | wn-2-71.local | wn-2-20.local | wn-2-92.local | wn-2-41.local |
| wn-2-62.local | | | | wn-2-3.local | |

Avg Total: -nan Current Total: -nan
 Avg Average: -nan Current Average: -nan

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|----------------|----------------|----------------|---------------|---------------|---------------|
| wn-0-45.local | wn-1-13.local | wn-0-6.local | wn-0-15.local | oss-0-3.local | wn-0-36.local |
| wn-0-57.local | wn-0-27.local | mds-0-1.local | wn-1-16.local | wn-0-9.local | wn-0-18.local |
| oss-0-6.local | wn-0-39.local | oss-0-12.local | ce02.local | wn-1-2.local | wn-1-19.local |
| oss-0-9.local | wn-1-5.local | wn-0-40.local | wn-1-8.local | wn-0-1.local | wn-0-61.local |
| wn-0-10.local | wn-0-31.local | wn-0-52.local | wn-1-20.local | wn-0-22.local | wn-0-43.local |
| wn-1-11.local | wn-0-4.local | wn-0-13.local | oss-0-1.local | wn-0-34.local | wn-0-55.local |
| wn-0-25.local | wn-0-46.local | wn-1-14.local | wn-0-7.local | wn-0-16.local | oss-0-4.local |
| wn-0-37.local | oss-0-10.local | wn-0-58.local | wn-0-28.local | wn-0-49.local | wn-1-17.local |
| wn-0-19.local | wn-1-3.local | wn-0-50.local | wn-0-20.local | wn-0-41.local | wn-0-62.local |
| wn-0-2.local | wn-0-11.local | wn-0-32.local | wn-0-53.local | wn-0-23.local | wn-0-44.local |
| wn-1-12.local | wn-0-5.local | wn-0-14.local | oss-0-2.local | wn-0-35.local | wn-0-56.local |
| wn-0-26.local | wn-0-47.local | wn-0-8.local | wn-0-17.local | oss-0-5.local | wn-0-38.local |
| oss-0-11.local | wn-0-59.local | wn-0-29.local | wn-1-1.local | wn-1-18.local | oss-0-8.local |
| wn-1-4.local | wn-0-60.local | wn-0-30.local | wn-0-51.local | wn-0-42.local | wn-1-10.local |
| wn-0-3.local | wn-0-12.local | wn-0-33.local | wn-0-54.local | wn-0-24.local | |

Avg Total: -nan Current Total: -nan
 Avg Average: -nan Current Average: -nan

Issues and mitigations (1/3)

➔ **Issues with stale files in ARC sessiondir.** These are files left over by failed jobs, which end up clogging up the directory => the Infosys becomes very slow/unresponsive, clusters not visible in GIIS

Mitigation: Added a weekly cron to perform a cleanup

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➔ **Issues with large amount of files in ARC sessiondir.** These are files related to jobs not retrieved by the users => the Infosys becomes very slow/unresponsive, clusters not visible in GIIS

Solution: Asked t2k.org users to retrieve/clean up their job outputs

➔ **Lustre MDS glitch on Fri 16th May on the ce01 cluster** caused the cluster to hang for some hours.

Solution: kill all jobs, unmount all clients, stop all OSTs. Power-cycle the MDS (stopping the MDT (unmount) would not work). Recovery took ~1.5h

➔ **EGI ops availability/reliability 33% in April**

probe org.sam.SRM-GetURLs-/ops/NGI/Germany failing, causing all the other SRM probes to go to Unknown state.

Solution: The problem self-resolved on 2nd May (no changes on the SE).

Could not request availability/reliability re-calculation

Issues and mitigations (2/3)

➔ **Middleware issues:**

- ▶ **GLUE2 Validator Warnings due to a minor ARC infosys bug** (also in latest version 4.1.0-1.el6)
(https://xgus.ggus.eu/ngi_ch/?mode=ticket_info&ticket_id=314)

Mitigation: **patched SGEmod.pm**

- ▶ **bdii service crashed on the site-bdii** (one-time occurrence)

left behind the slapd process running, preventing the restart cron from fixing it within the 15min window.

Solution: **following Nagios alert, restarted services manually**

- ▶ **xrootd broken (segfaults) in May**

Solution: **upgrade DPM to latest version 1.8.8**

- ▶ **a-rex crashes regularly on the ce02 cluster** (on average twice a month)

Solution: **issue not investigated/resolved. Following Nagios alerts, restart service manually**

Issues and mitigations (3/3)

➔ Accounting issues:

▶ Migration from ur-logger/SGAS to Jura/APEL nightmarish

Migration scheme: ur-logger/SGAS => Jura/SGAS => Jura/APEL

Timeline: started migration in March 2014, completed by end of June 2014

Issues: complex mechanism, poor documentation, poor support (ARC), obscure operational changes (APEL), etc

Outcome: migration accomplished, but loss of accounted job records for some periods.

- ▶ Cross-check against batch server records not possible; gridengine does not account properly for multi-core jobs
- ▶ Attempted a cross-check against ATLAS own accounting: **found little sensible correlation**
- ▶ Estimated a ~10% loss over about 4 months

▶ **Recovery plans (?)**: in principle some of the lost records have an archive copy.

- ▶ A procedure exists to re-create appropriately formatted job records from archived records.
- ▶ Complex/clumsy. Will attempt only if time allows.



CPU HEPSP06 Hours
727 Hours from 2014-07-19 to 2014-08-19 UTC

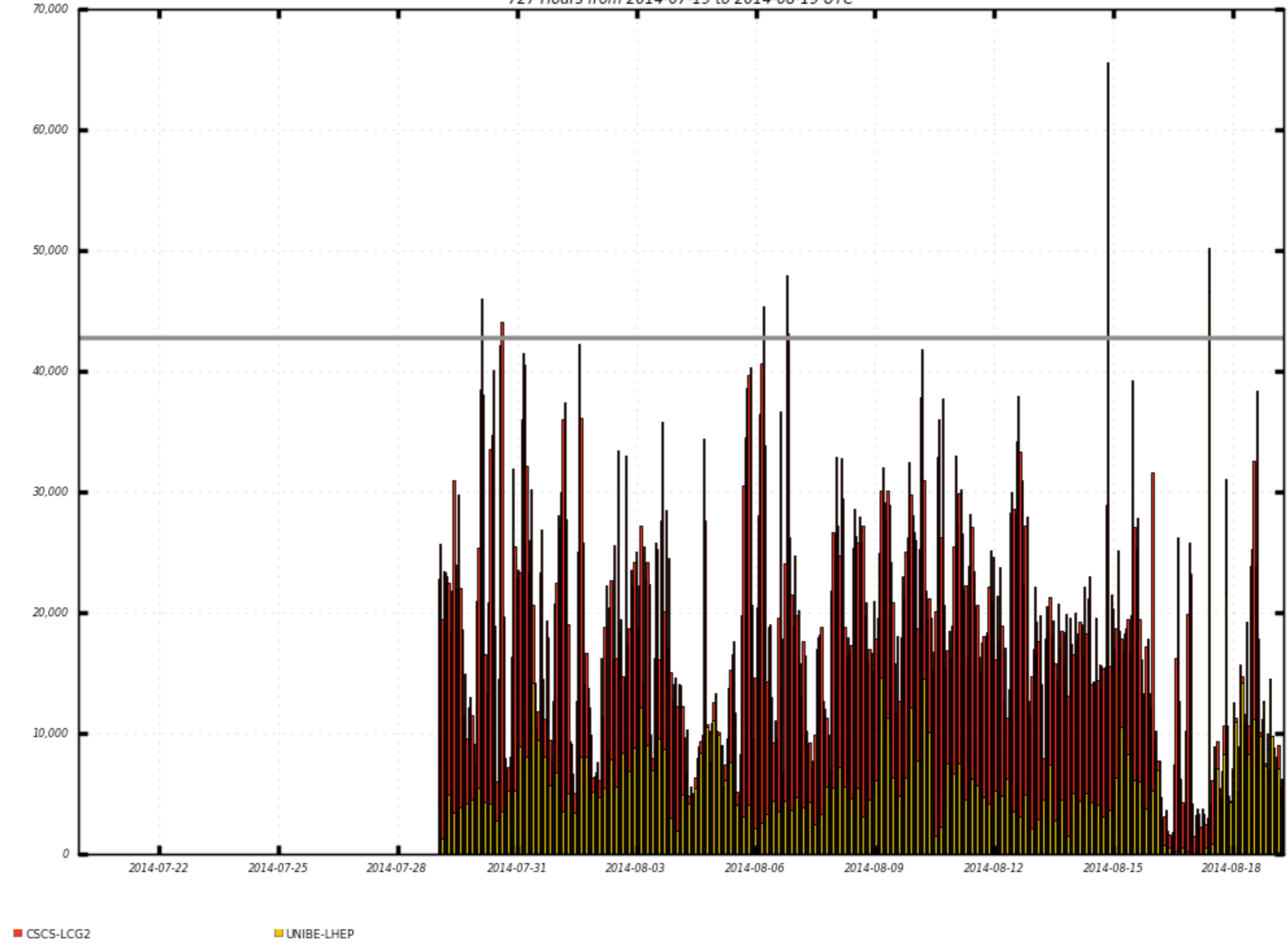


Chart showing the Cumulative Normalised CPU time (HEPSPEC06) grouped by SITE and DATE (only information about LHC VOs is returned).

Developed by CESGA EGI View: / normcpu+HEPSPEC06 / 2013:1-2014:8 / SITE-DATE / lhc (x) / GRBAR-LIN / i

2014-08-19 00:01

