UNIBE-LHEP site report

Status since last f2f meeting - Operations

➡ Systems re-deployed (`ce01, ce02`)

- Transition to ROCKS 6.2 => deployment of new hardware
- New Lustre servers (for ce01) => decommissioning of ailing Thumpers
- Transition from GridEngine to SLURM => remarkable system stability (memory management)
- Re-gained stability, deployed new HW and restored some of the old HW as well

➡ New ARC CE for a Cloud resource (`ce04`)

- Targeting the SWITCHengines cloud infrastructure
- ARC+ssh modification used to target Todi at CSCS in early 2015
- Leveraging knowledge of the ATLAS DC frameworks to exploit "non WLCG standard" resources

➡ ARC bugfixes (finally stable!)

- `5.0.3-1.el6.x86_64 on ce01`
- `5.0.4-1.el6.x86_64 on ce02`
- `5.0.5-1.el6.x86_64 on ce04` => works with latest version of openldap for EL6

➡ Storage operation stable

- 550 TB (350 pledged)

➡ Integrated uboone VO

- US glideins factories integrated seamlessly with the ARC CEs

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HammerCloud Gangarobot

History Legend

offline | brokeroff | online | NoQueue | test

Historic view for "panda_queues_all"
from 00:00 01.09.2015 to 00:00 09.03.2016

Show 100 entries — Search:

PANDA queue	SITE Name	TIER	CLOUD	History plot time bin = 380 hours	offline		brokeroff		online		NoQueue		test	
					%	count	%	count	%	count	%	count	%	count
ANALY_UNIBE-LHEP	UNIBE-LHEP	T2	ND		0	0	0	0	35.32	38	0	0	58.88	47
ANALY_UNIBE-LHEP-UBELIX	UNIBE-LHEP	T2	ND		0	0	0	0	92.79	31	0	0	1.41	11
UNIBE-LHEP	UNIBE-LHEP	T2	ND		0.42	1	0	0	86.42	53	0	0	7.37	32
UNIBE-LHEP-UBELIX	UNIBE-LHEP	T2	ND		0.42	1	0	0	92.17	29	0	0	1.62	8
UNIBE-LHEP-UBELIX_MCORE	UNIBE-LHEP	T2	ND		0.42	1	0	0	93.22	24	0	0	0.57	3
UNIBE-LHEP_MCORE	UNIBE-LHEP	T2	ND		0.42	1	0	0	91.24	25	0	0	2.54	5

Showing 1 to 6 of 6 entries — First Previous 1 Next Last

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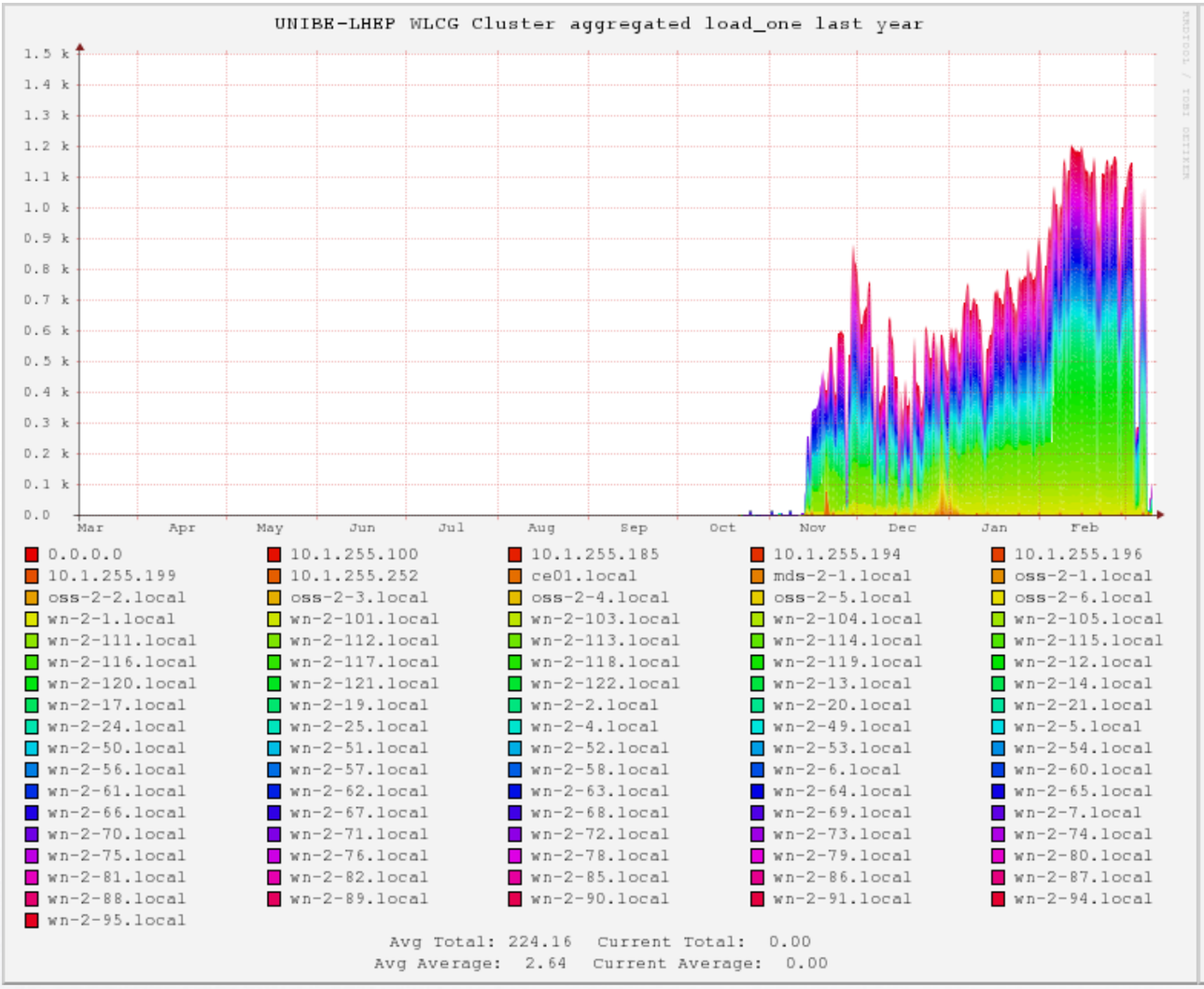
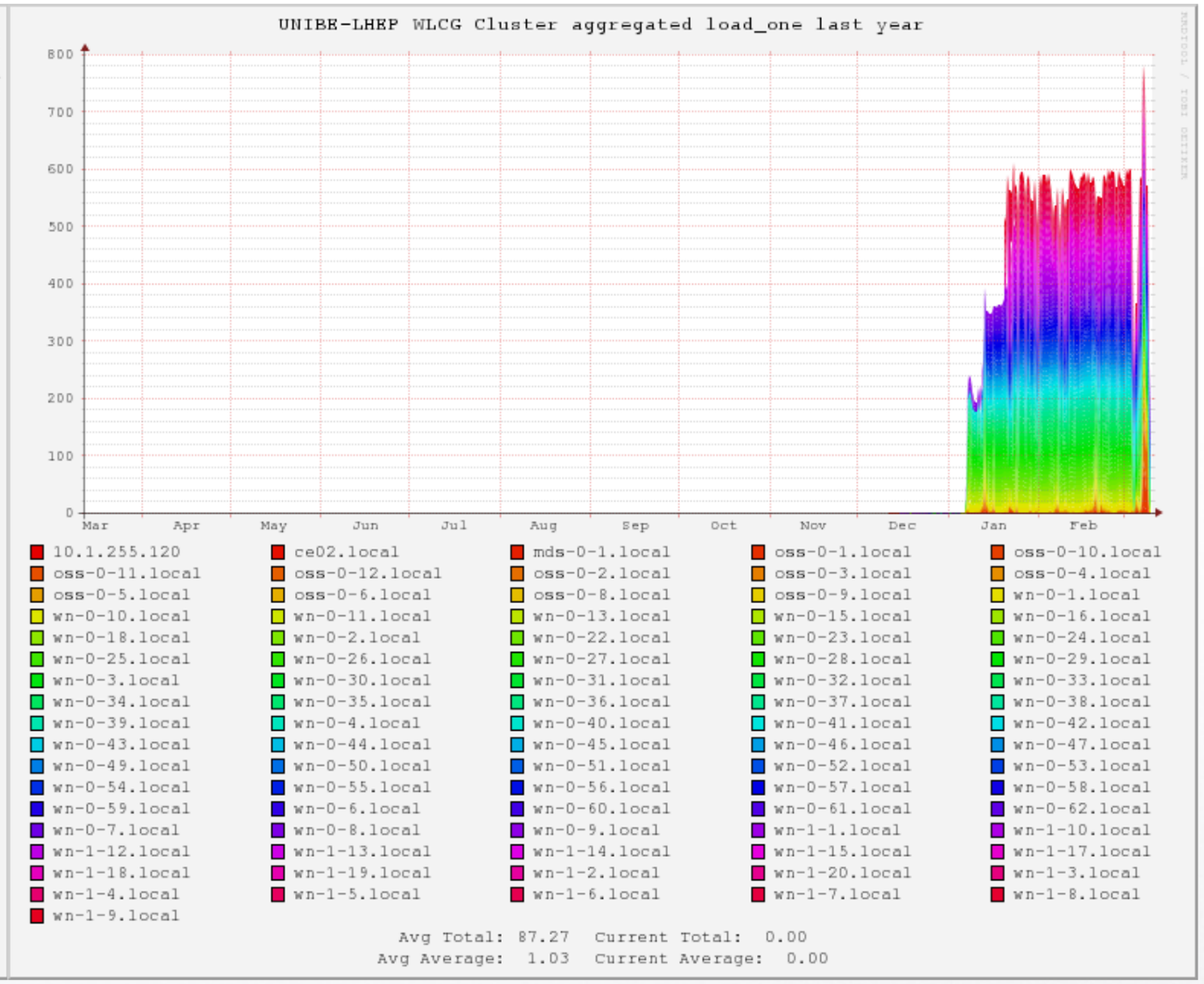
Add HS06 capacity here

ce01 11.85-HEP-SPEC06



Nodes: 67
Cores: 1100
Installed Capacity: 13038 HS06

ce02 8.52-HEP-SPEC06



Nodes: 82
Cores: 816
Installed Capacity: 6956

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Issues and mitigations (0/0)

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Outstanding work (urgent)

➡ **Upgrade DPM head node to SLC6**

> Only SLC5 machine at UNIBE-LHEP
> Upgrade complicated by migration to puppet as configuration tool (yaim no longer supported)
> Further complication is the site-bdii service on the same machine
> Started development on a VM
> In principle all ingredients are there, but….

➡ **Provide the monthly storage dumps to ATLAS**

> Requested for performing consistency checks and automated cleanup of "Dark data"

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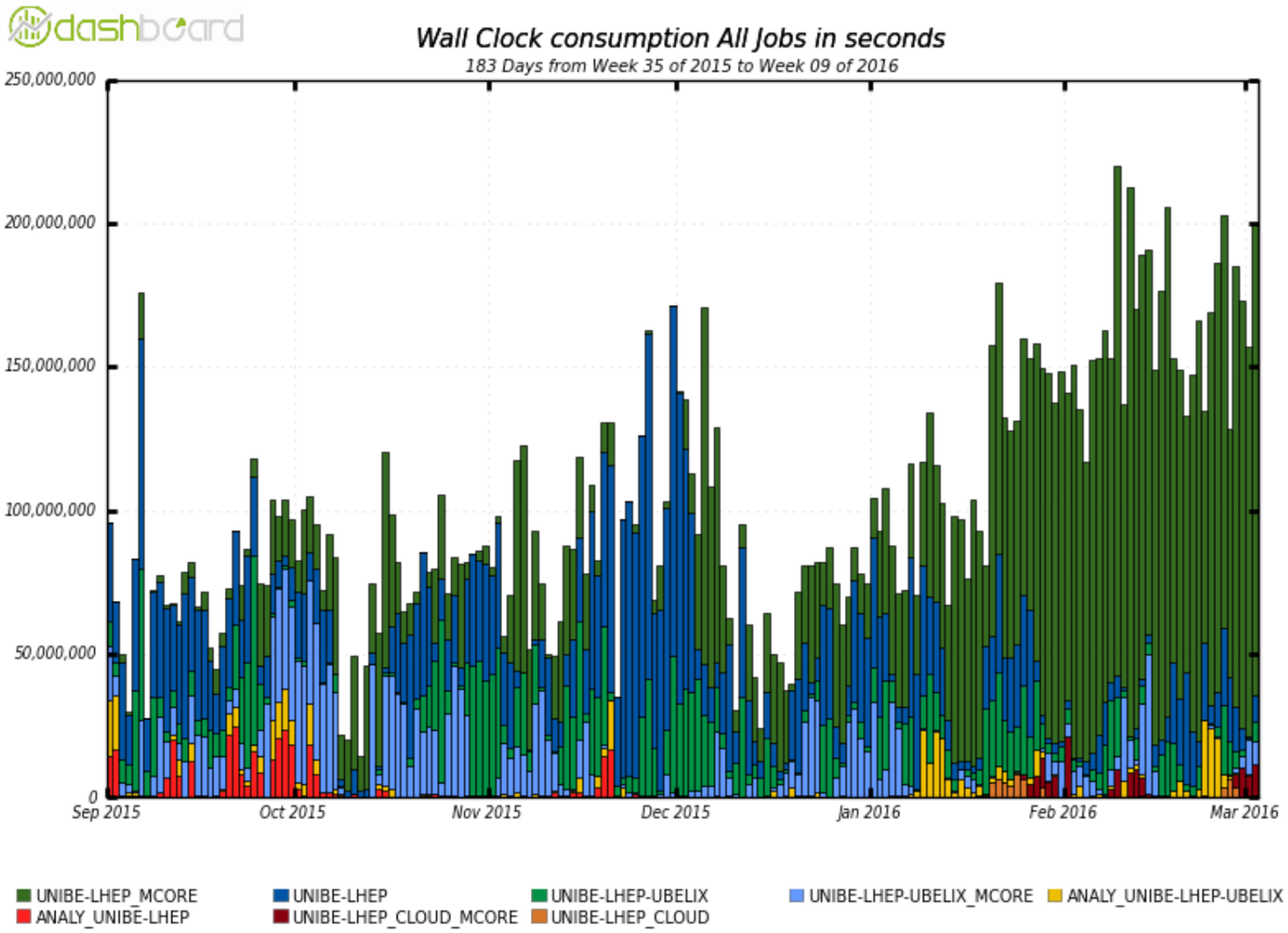

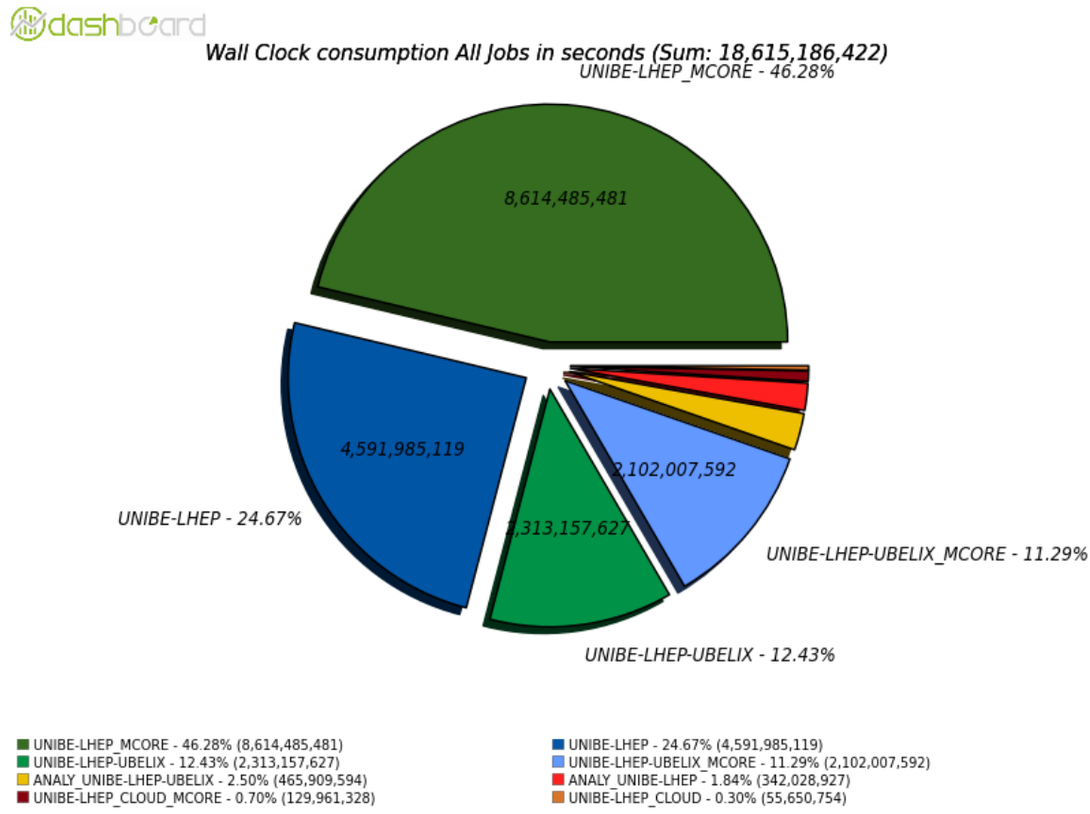

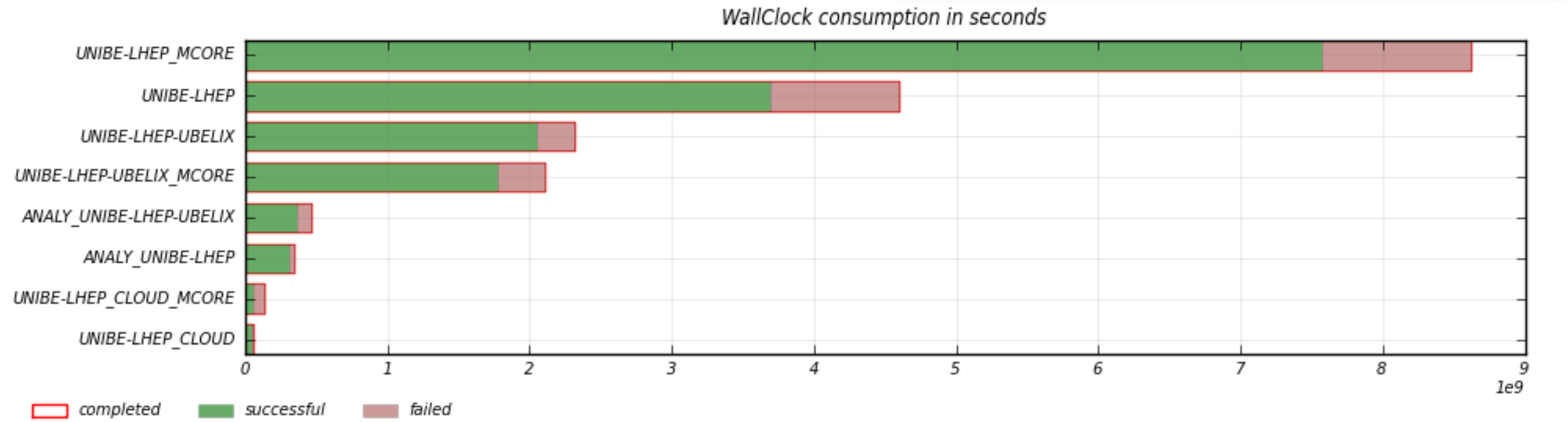

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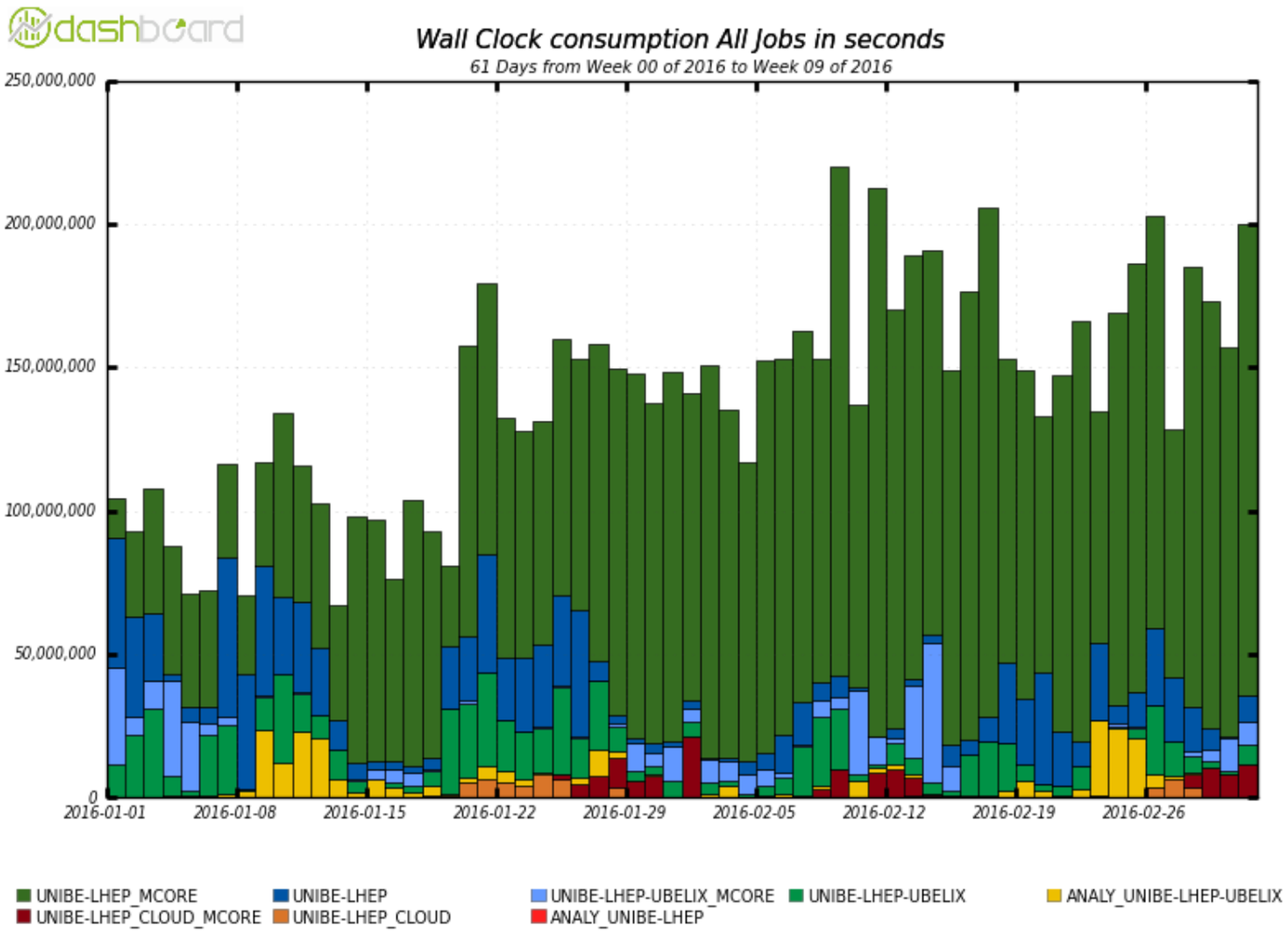

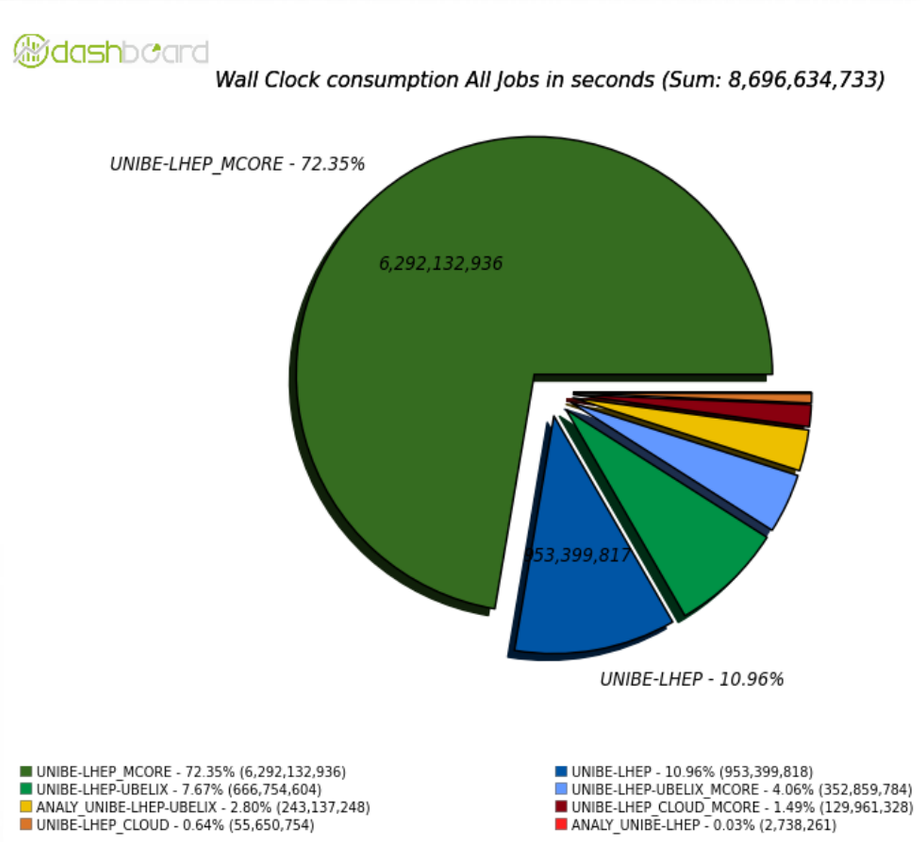

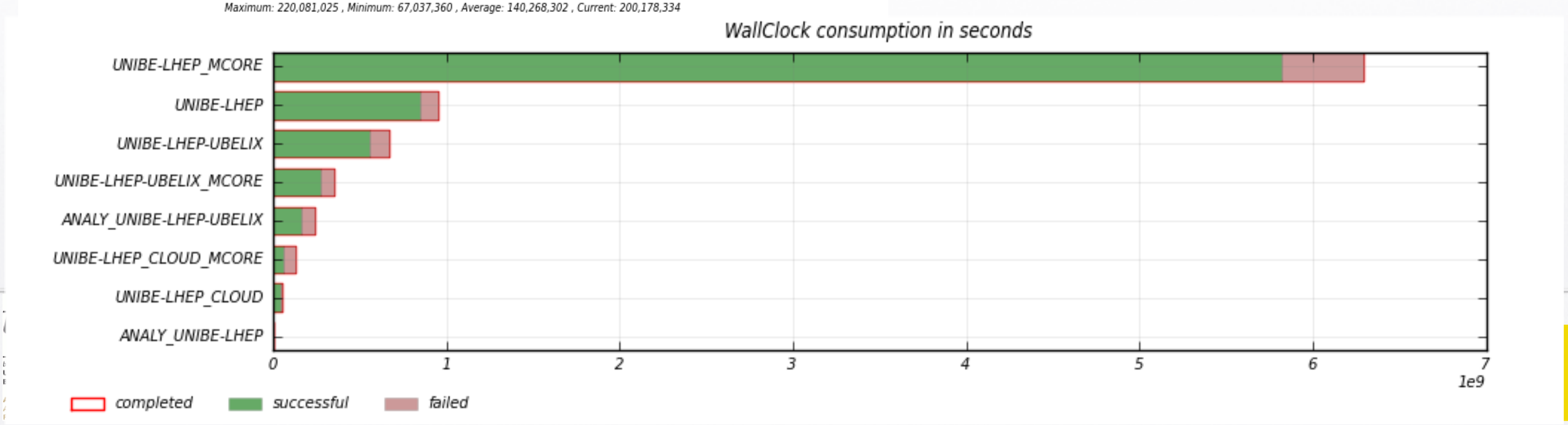

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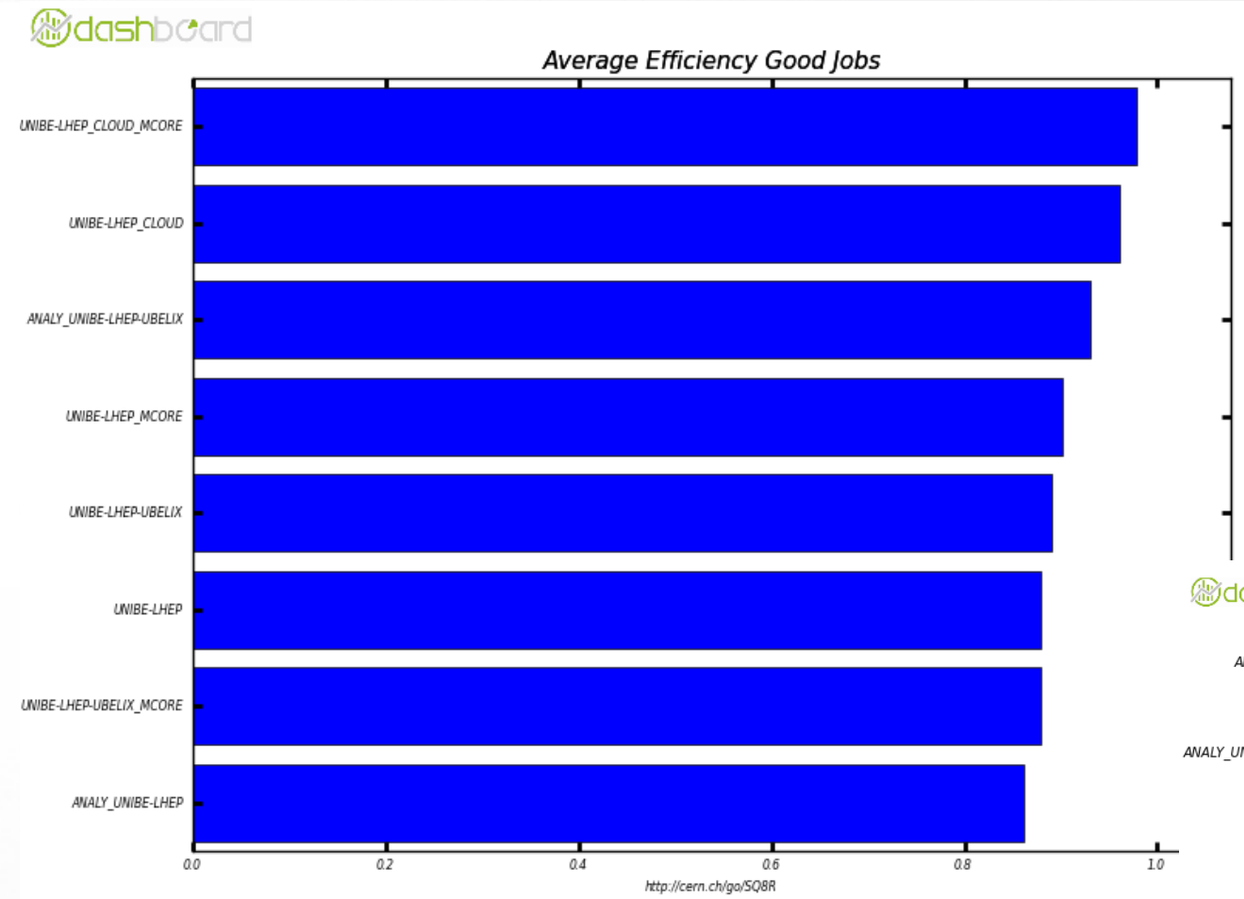

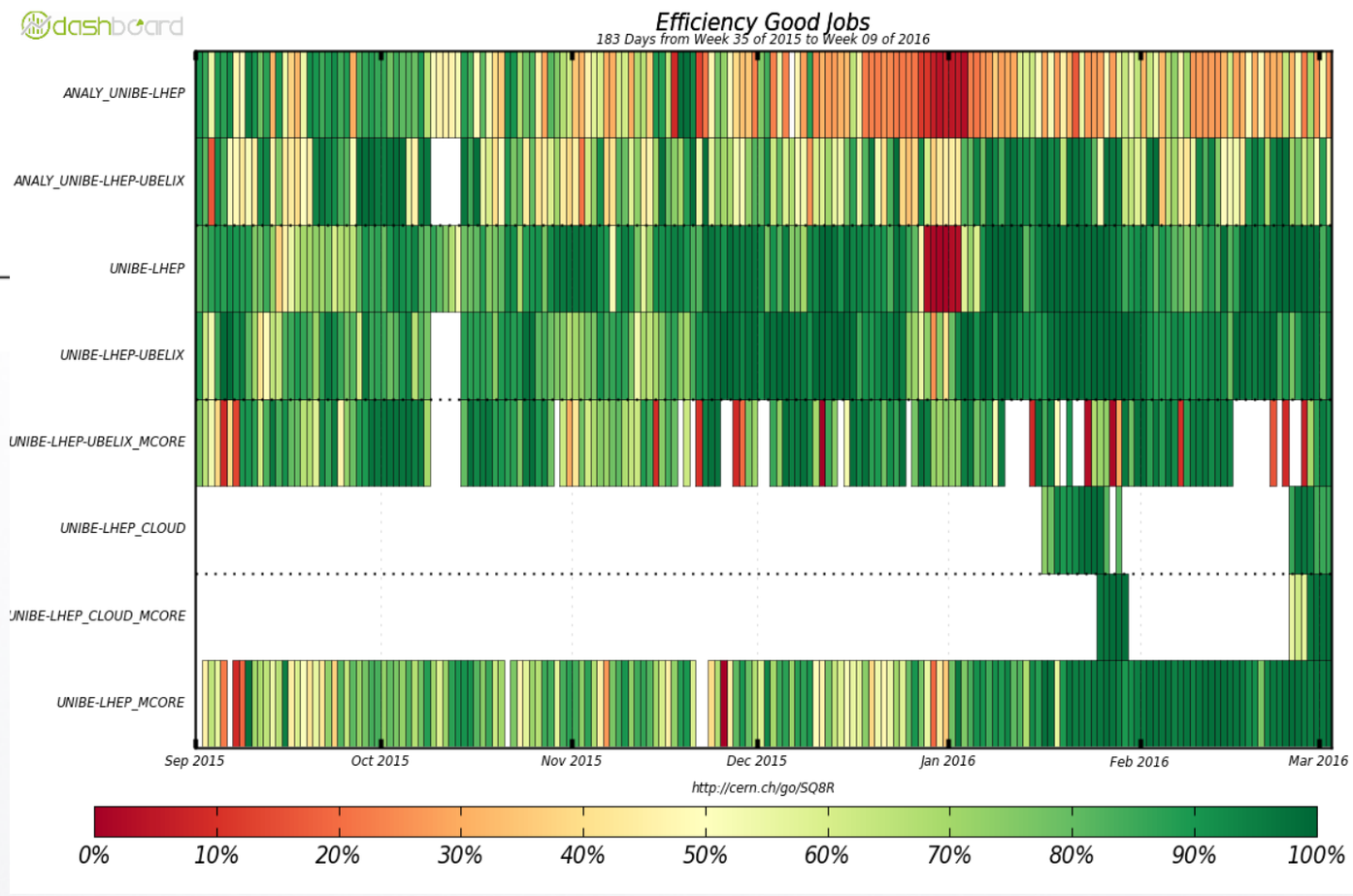

CSCS-TODI

CSCS-LCG2

UNIBE-LHEP-UBELIX

UNIBE-LHEP

UNIBE-LHEP-UBELIX_MCORE

CSCS-LCG2_MCORE

ARC_MCORE

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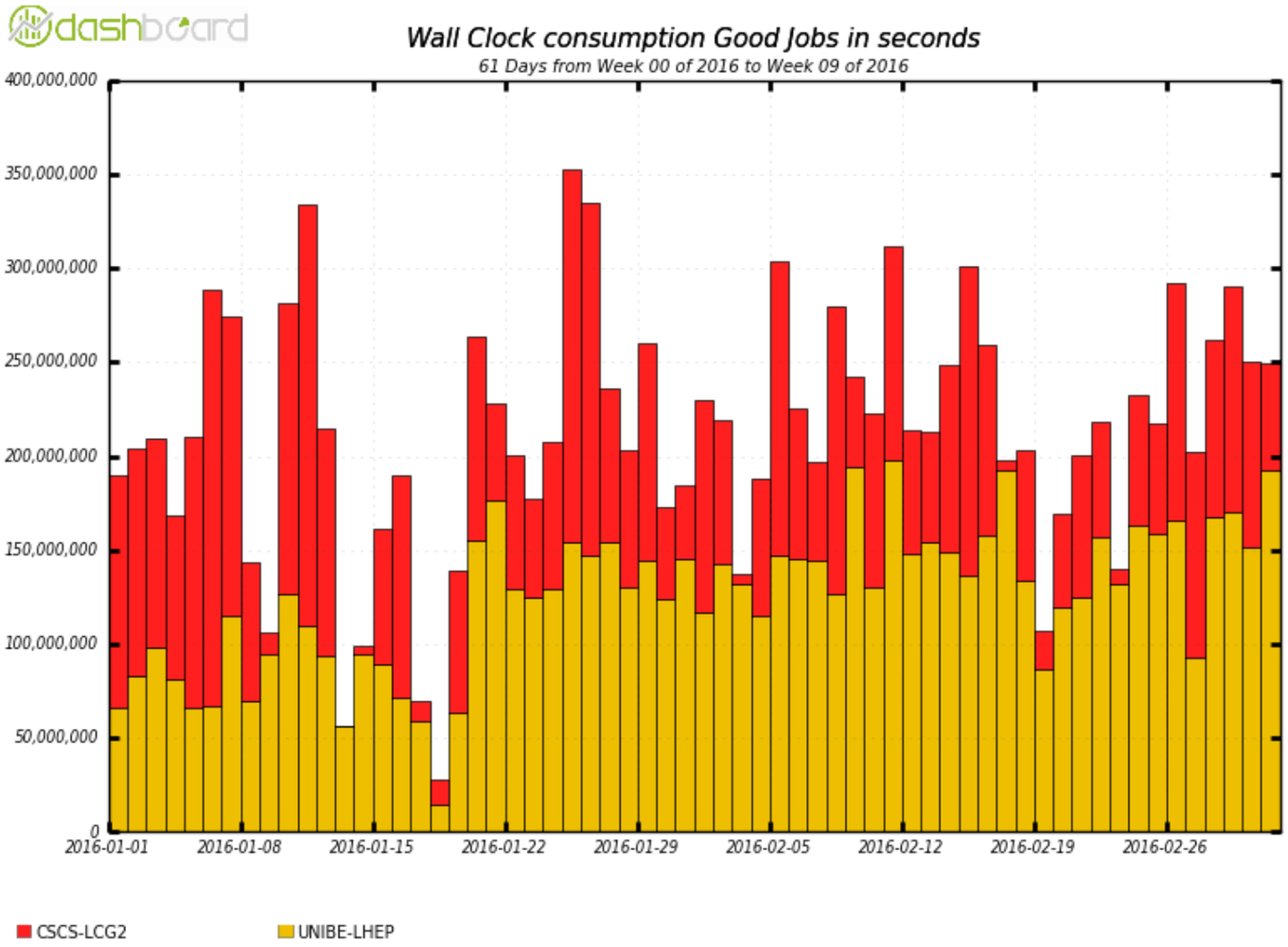

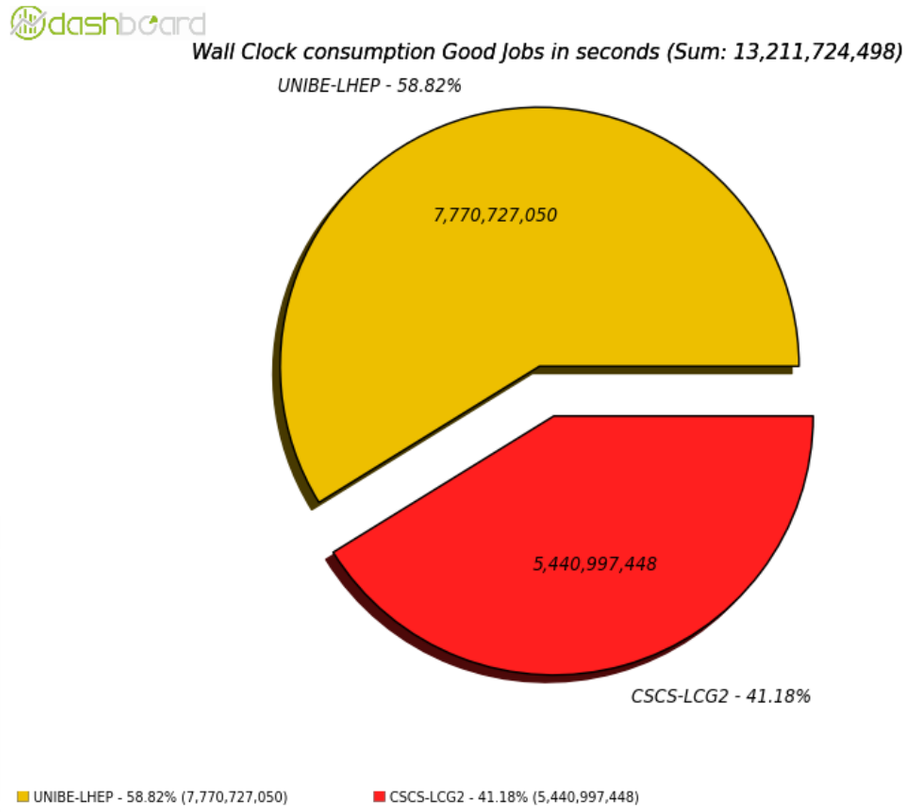

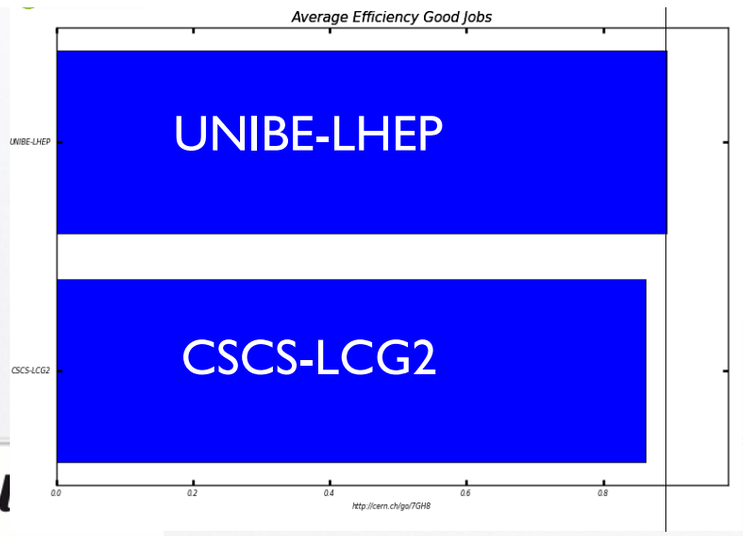

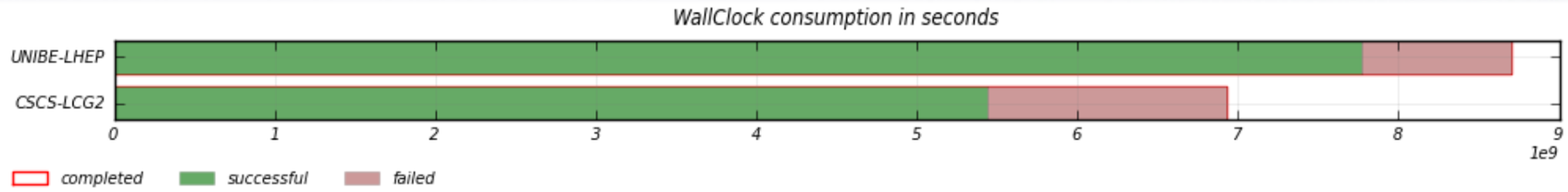

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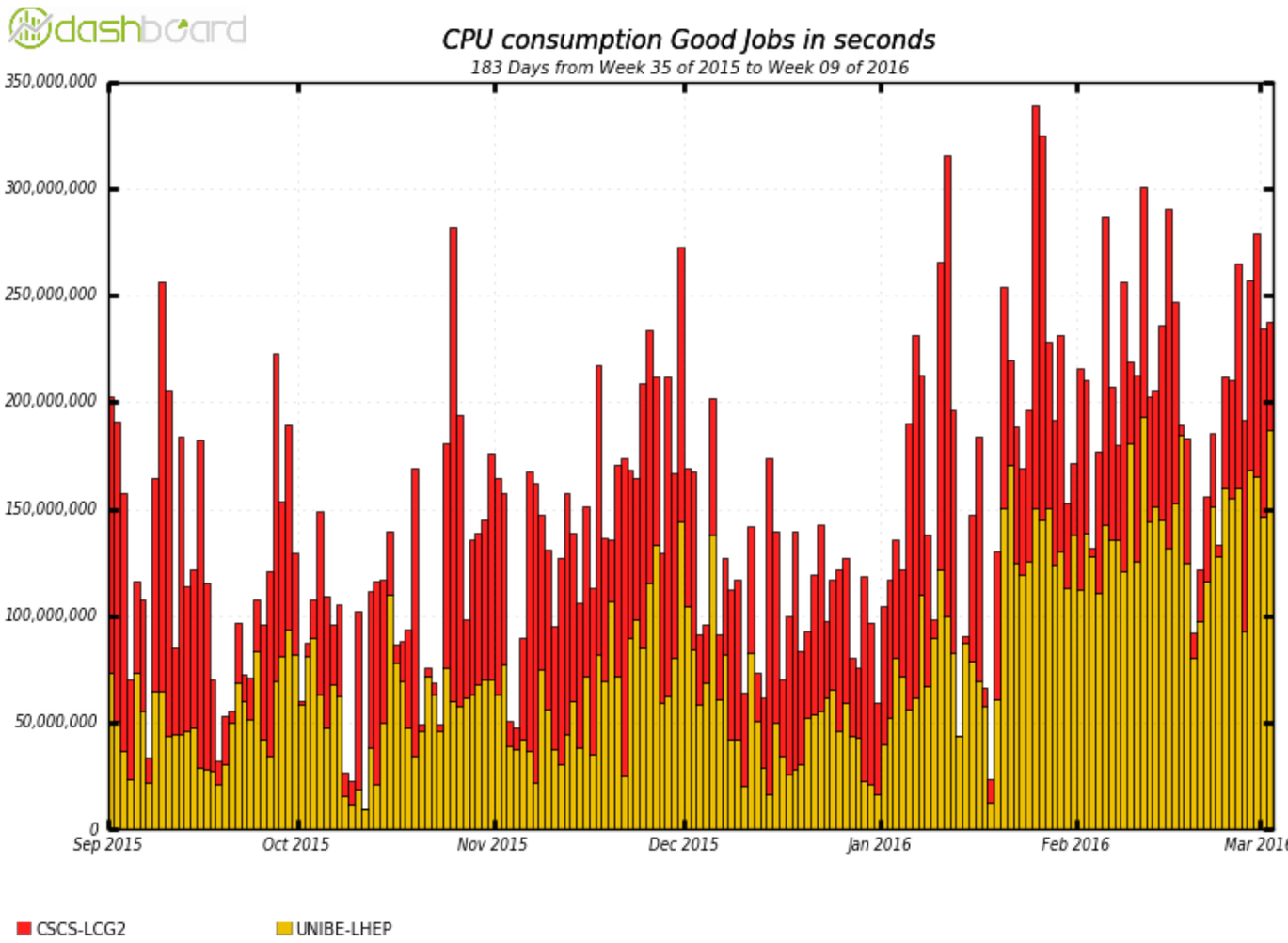

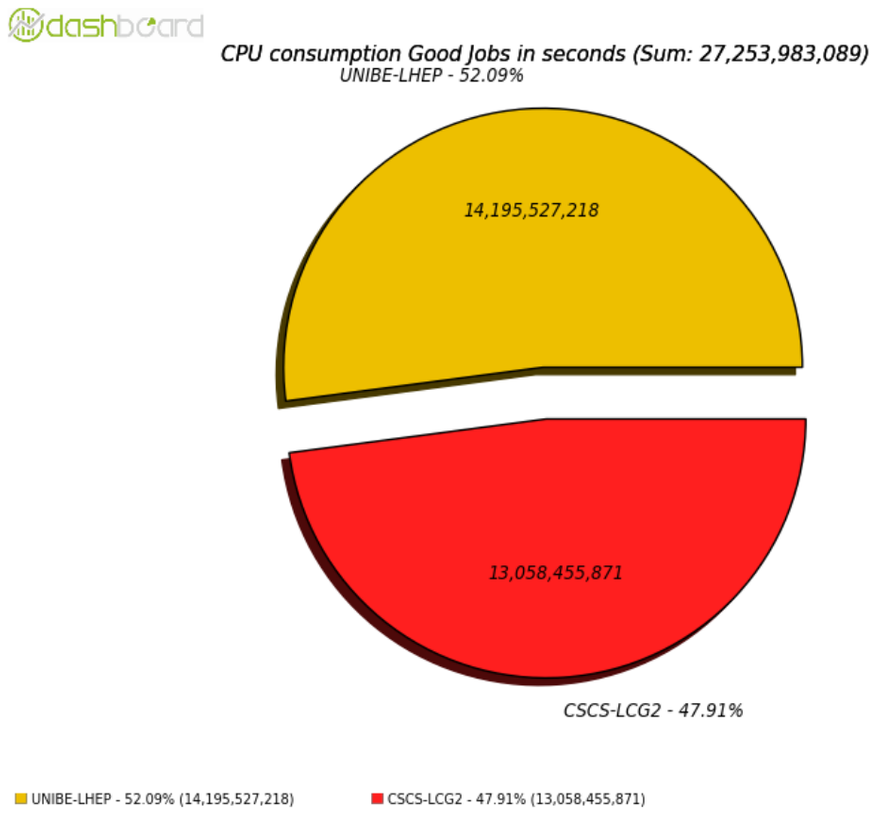

TIER2 by SITE and VO.

LHC VOs. September 2015 - February 2016.

The following table shows the distribution of grouped by SITE and VO (only information about **LHC VOs** is returned).

by SITE and VO					
SITE	**atlas**	**cms**	**lhcb**	**Total**	**%**
CSCS-LCG2	35,976,172	9,329,928	392,425	**45,698,524**	**53.70%**
UNIBE-LHEP	39,406,075	0	0	**39,406,075**	**46.30%**
Total	**75,382,247**	**9,329,928**	**392,425**	**85,104,599**	
Percentage	**88.58%**	**10.96%**	**0.46%**		

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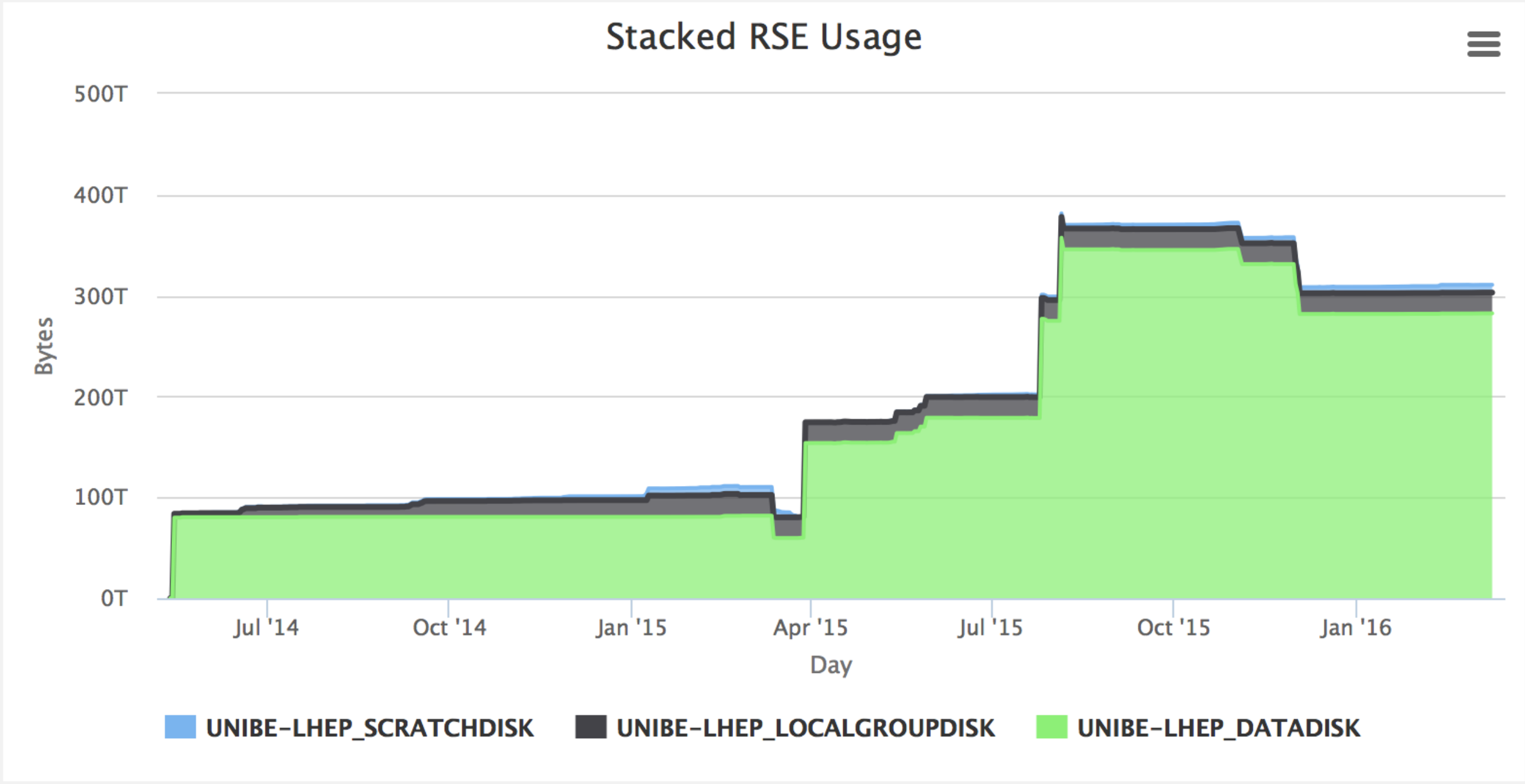

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Plans for the future

➡ **Increase CPU capacity (subject to funding)**

➡ **Old nodes won't die, we'll let them run until possible**

> Quite useful to absorbe non ATLAS requests (t2k.org,uboone)

> e.g. can offer 8GB/core slots to e.g. uboone "efficiently"

➡ **Refine SLURM configuration?**

- Keep it simple:
  - > one partition
  - > no memory limit enforcement (so far)
  - > this works very well so far (also thanks to the evolution of the ATLAS framework)

➡ **Continue opportunistic resource exploitation**

- Cloud:
  - > Consolidate experience in exploiting opportunistic resources
  - > Learn how to be as efficient as possible with manpower investment cut to the bone
  - > Current price model is not favourable, but who knows what future holds

- BOINC (in the spare time)
  - > Launch a campaign to exploit departmental machines
  - > "Plug&Play", could use the existing ARC CE's for BOINC at CERN