

WIGNER Datacenter Site report

HEPIX Spring 2014, Annecy

Szabolcs Hernath
hernath.szabolcs@wigner.mta.hu

WDC Infrastructure

- 4x 300 m² whitespace, 1MW blocks
- 2x 10 kV power input (120/10 independent)
- (4+1)x 2 MW transformers (10/0.4)
- 4x 2 MW diesel generators (8 hrs. fuel tank)
- 4x 2 MW (A+B) UPS for IT (10 min.)
- UPS for critical infrastructure systems
- 14x 400 kW IT chillers (2x (N+1), 12/18°C freecooling)
- Integrated facility management: EBI
- 24/7 infrastructure op. (9 FTE)
- 9x5 hosting operation (2.5 FTE)

WIGNER DC commissioning

- 2012.12.31. First block ready
- 2013.05.31. Construction finished (4 blocks)
- 2013.06.13. Inauguration ceremony
- 2013.07.04. Commissioning start
- 2013.10.31. Facility management commissioned
- 2014.05.31. All permits obtained

CERN@WIGNER (Tier-0 hosting)

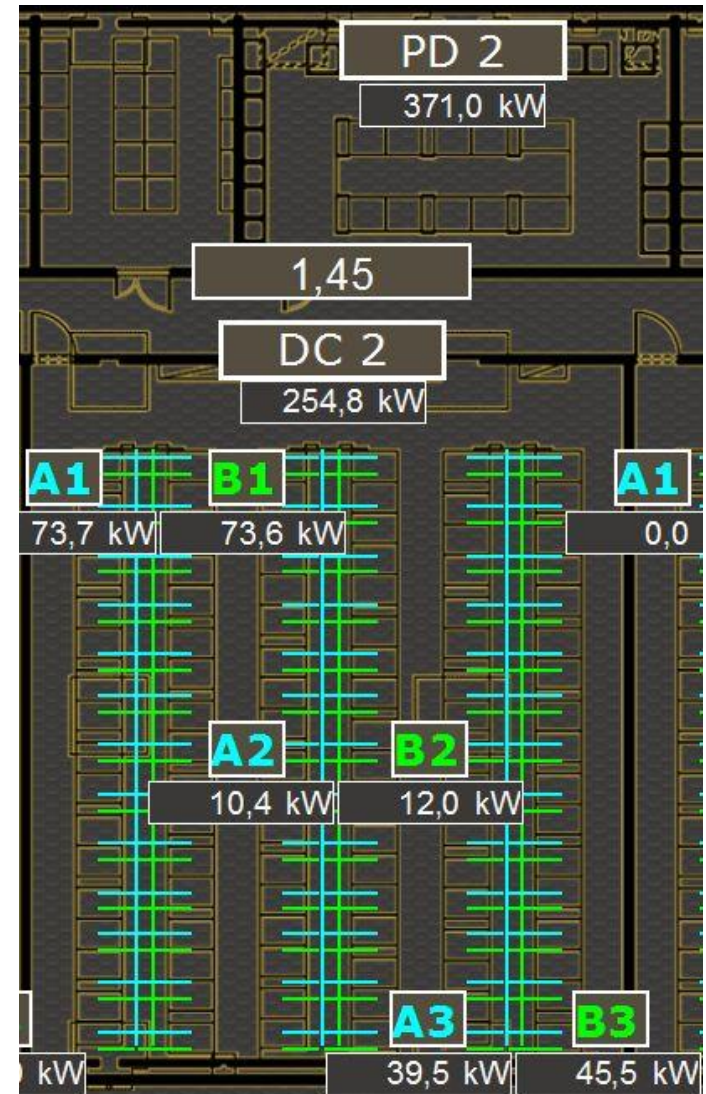
- 2013.01.23. Network Core (2x 100 Gbps), CS servers (2 racks)
- 2013.02.15. AFS servers (1 rack)
- 2013.04.15. Cloud servers (20 racks)
- 2013.05.15. GEANT+ 1Gbps
- 2013.10.31. AFS servers (2 racks)
- 2014.03.21. Cloud servers (20 racks)

Operational experience (problems)

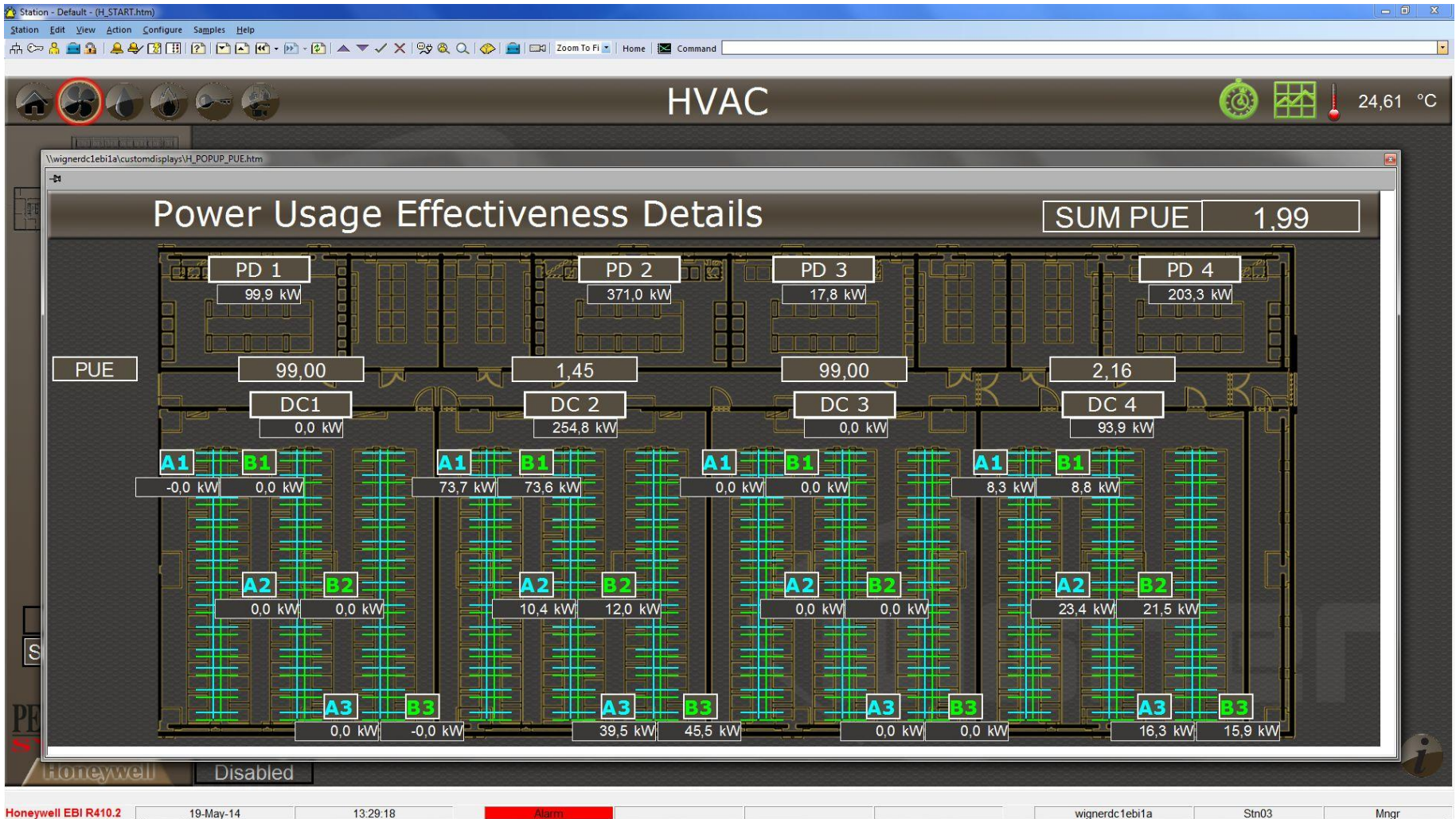
- Problem #1: hosting during construction
- Problem #2: infrastructure risks during construction
- Problem #3: continuous issues with EBI
- Problem #4: PUE
- Problem #5: continuous issues with GEANT 100 Gbps network
- Other issues (ServerLift, Rittal racks)

WDC Power & PUE

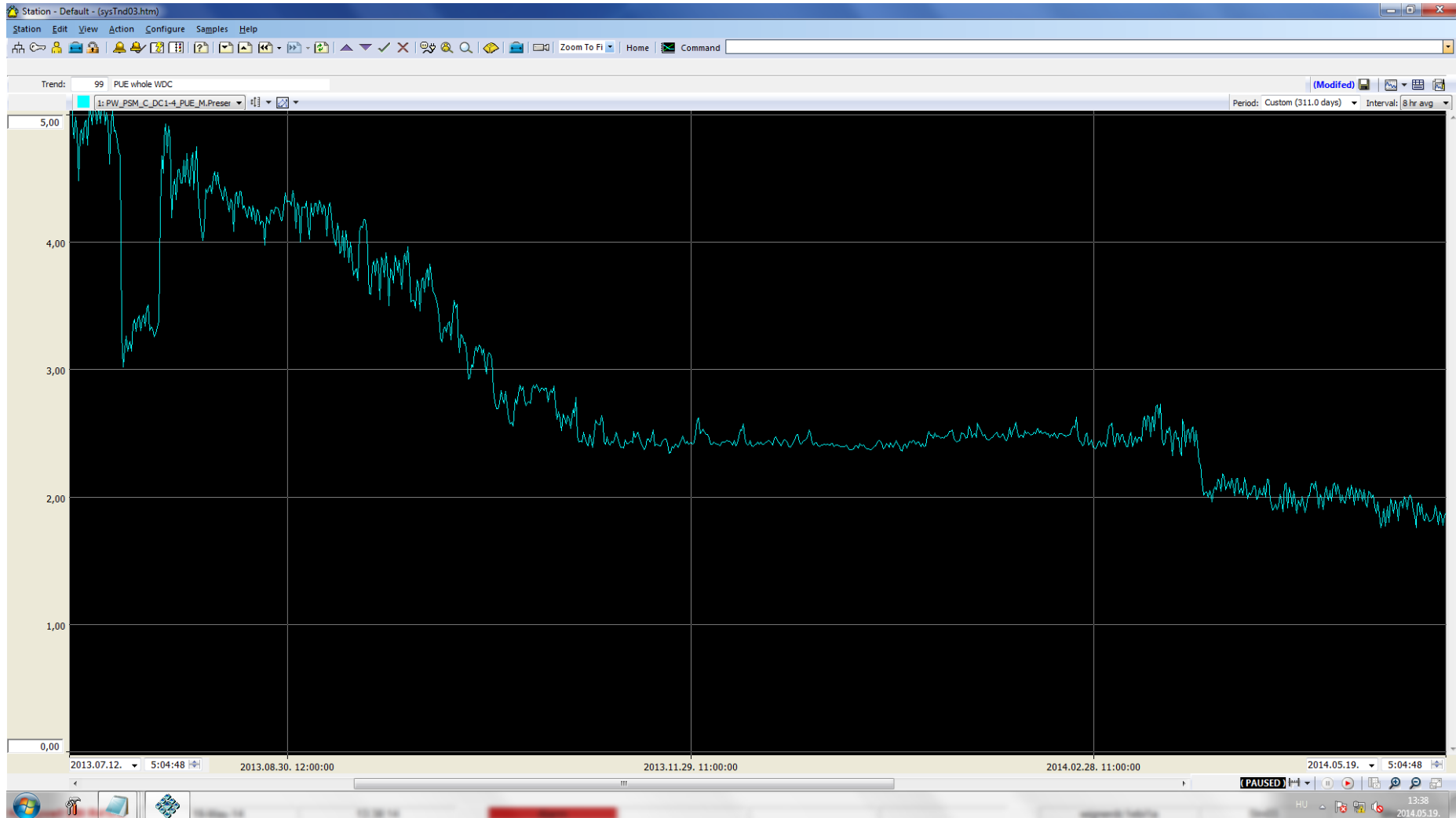
- Balance A/B power
- Balance 3 phases
- Understand the cause for underutilization
- Understand capacitive and inductive loss
- Reduce other consumption



WDC Power & PUE



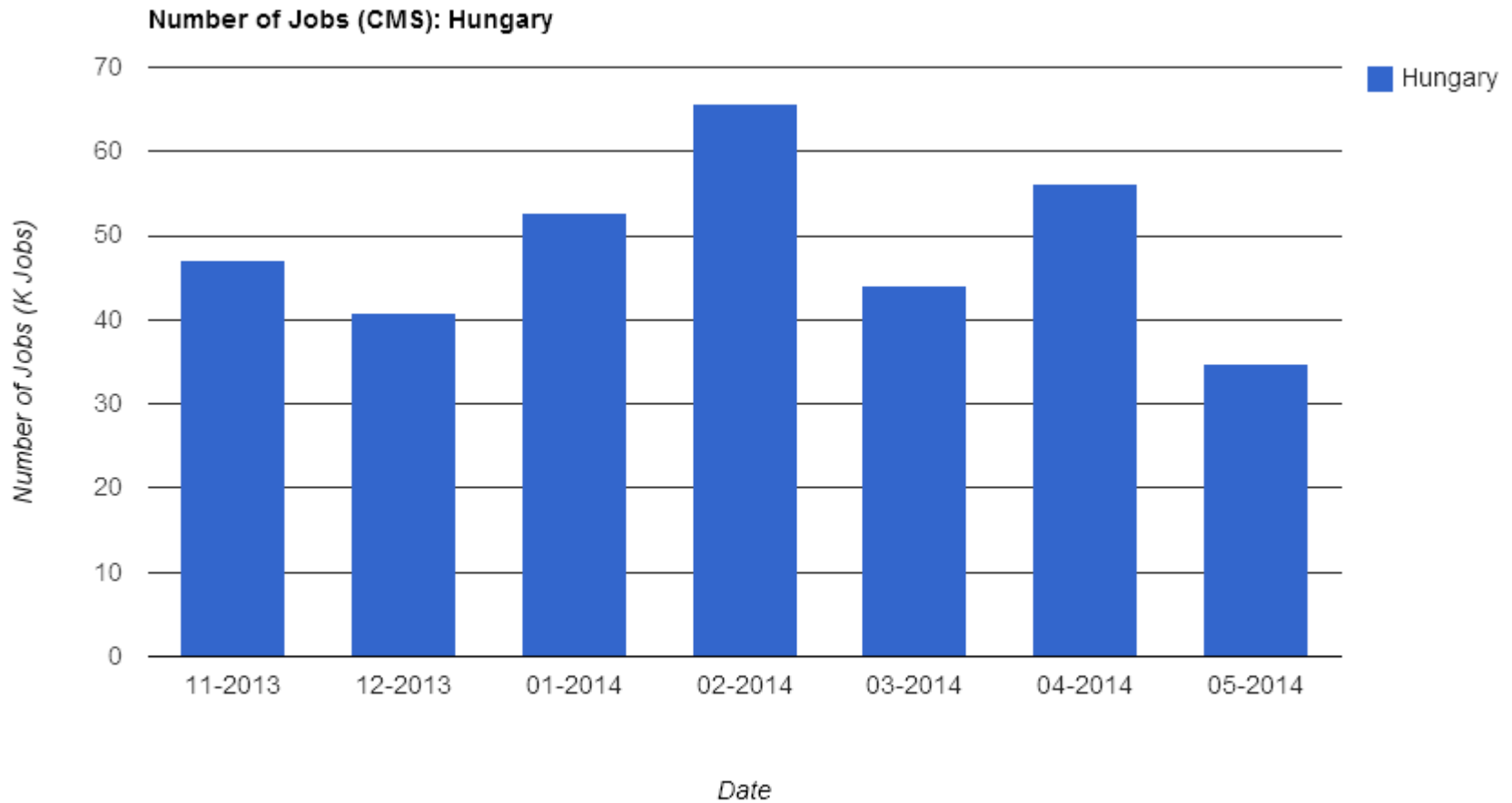
WDC Power & PUE



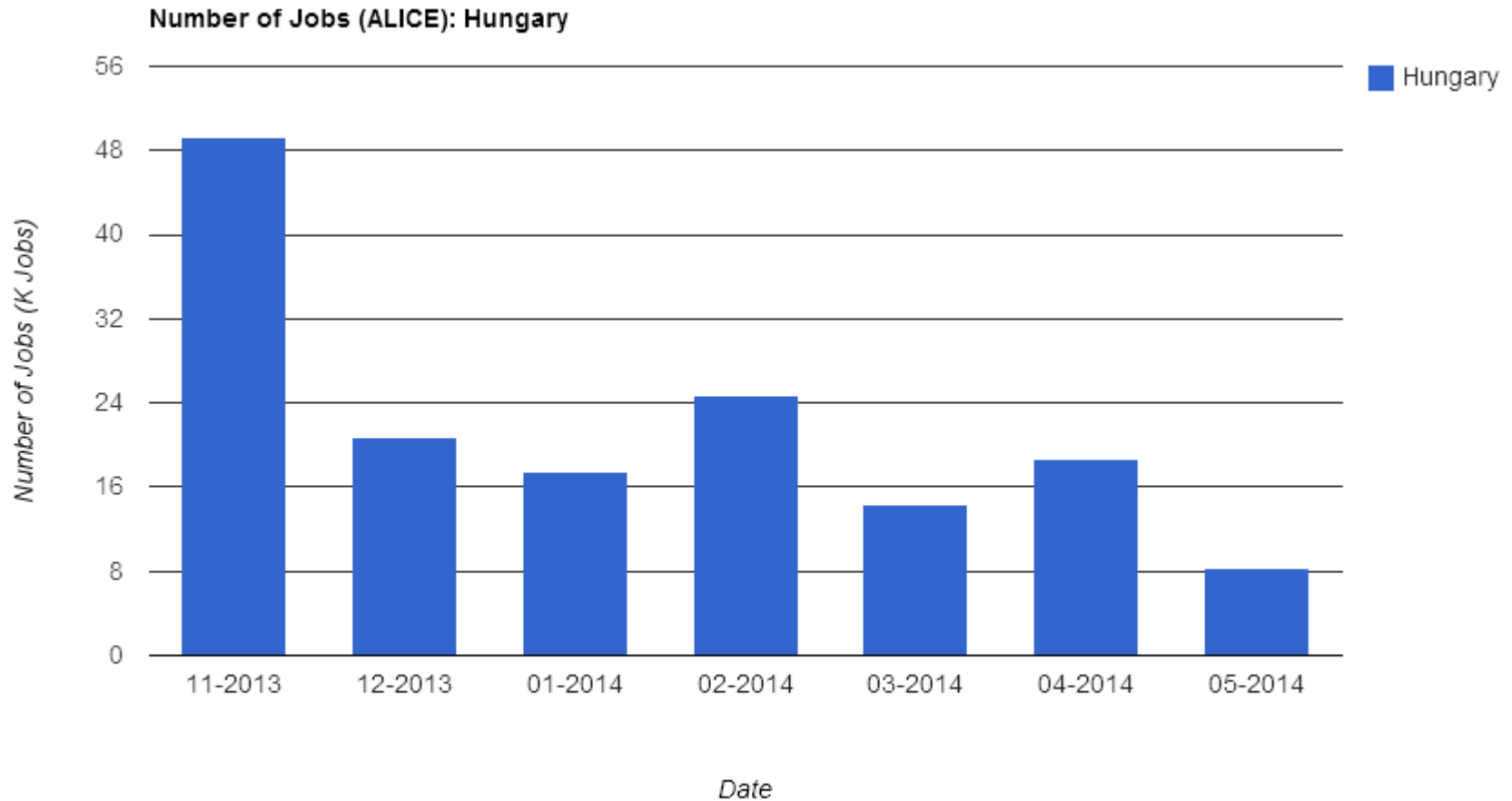
Tier-2 site report

- Tier-2 for CMS & ALICE (since 2004)
- CPU: 674 (520 WN / 124 service / 30 storage)
- Storage: 273 TB (CMS) + 113 TB (ALICE)
- OS: SLC 6.3, MW: EMI-3
- Network: 10G internal, 1G->10G WAN

CMS jobs (6 months)



ALICE jobs (6 months)



Tier-2 CPUtime (2013)

CESGA EGL View: / normcpu / 2013:1-2013:12 / VO-DATE / custom (x) / GRBAR-LIN / i

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