

# Operations in NDGF-T1 (and SE-SNIC-T2)

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# NDGF & NeIC: Background

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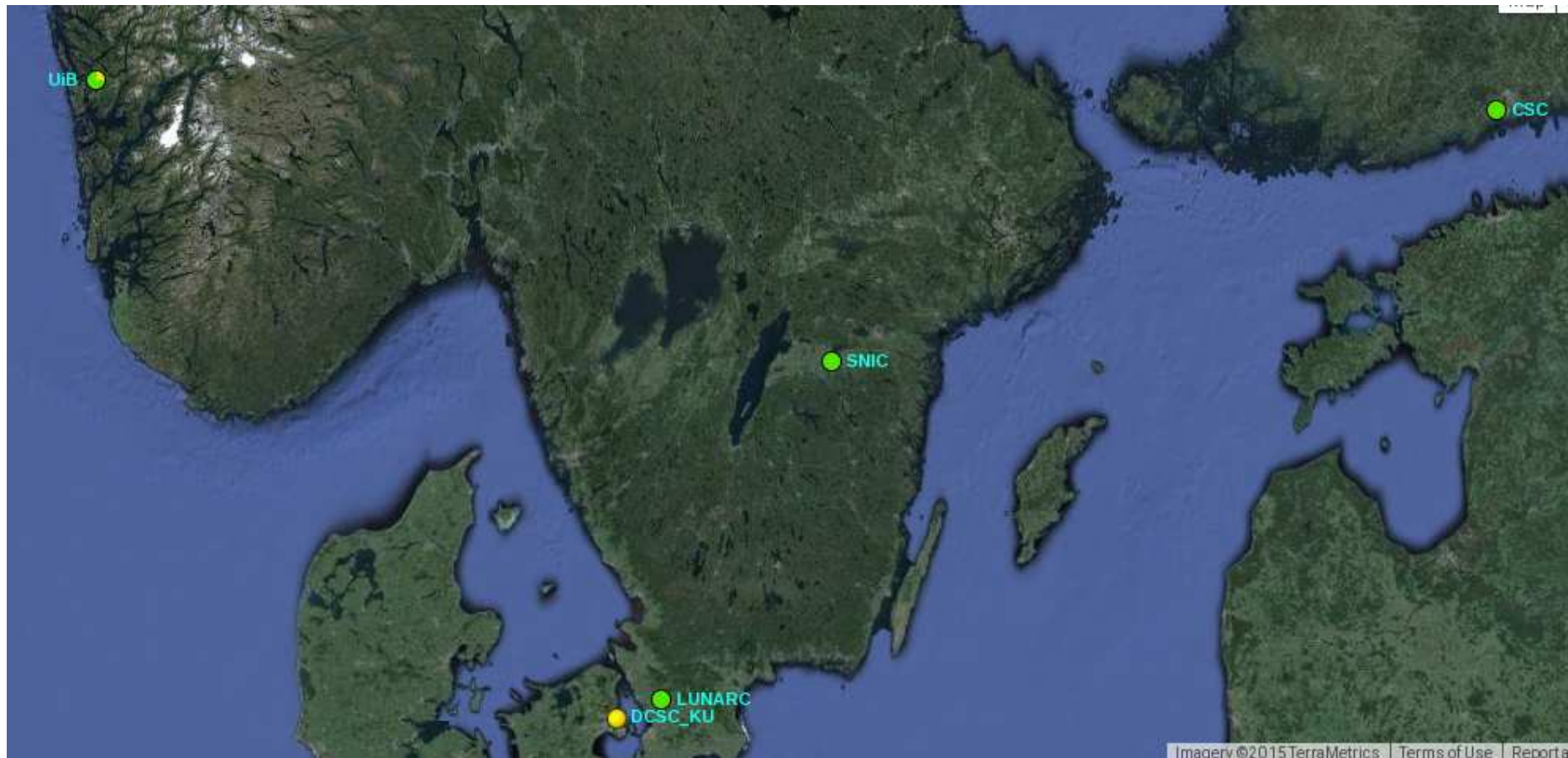
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  - Maintaining NDGF-T1 is a project within NeIC
- In addition to the NDGF-T1, there's a few T2:s in the Nordics
  - FI-HIP-T2 for CMS
  - NO-NORGRID-T2 for ATLAS
  - SE-SNIC-T2 for ALICE and ATLAS
  - Sometimes hard to distinguish from NDGF-T1.
    - For computing, the distinction between Nordic T2:s and NDGF-T1 is mostly a accounting technical thing.



The T2 storages are still separate, though.



# ALICE sites in NDGF



# Sites: Finland

- CSC
  - Owned by Helsinki Institute of Physics (HIP), hosted by CSC
  - Backend: Slurm
  - 768 cores
  - Shared with local ALICE users, and CMS
  - Number of ALICE jobs limited by batch queue system to 600



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  - Should have been decommissioned by the end of last year ...
  - Plan: Replace it with a cloud resource at CSC.
    - This effort currently stalled by bureaucratic problems.



# Sites: Sweden

- SNIC
  - National Supercomputer Center, Linköping, Sweden
  - Big cluster, used for lots of non-WLCG related stuff too
  - Backend: Slurm
  - $\sim 600$  cores shared by ALICE and ATLAS.
- LUNARC
  - Center for scientific and technical computing for research at Lund University, Lund, Sweden
  - Big cluster, used for lots of non-WLCG related stuff too
  - Backend: Slurm
  - $\sim 378$  cores shared by ALICE and ATLAS.





# Sites: Denmark

- DCSC/KU
  - Danish Center for Scientific Computing / Københavns Universitet
  - Backend: ARC / LoadLeveler (Slurm has been promised for about a year ...)
  - 5080 Cores in total
    - 832 cores shared with ATLAS.
  - Fairshare broken  $\Rightarrow$  most resources goes to ~~ATLAS~~ ALICE



# Sites: Norway

- UiB
  - University in Bergen
  - Backend: Slurm
  - 700–800 cores



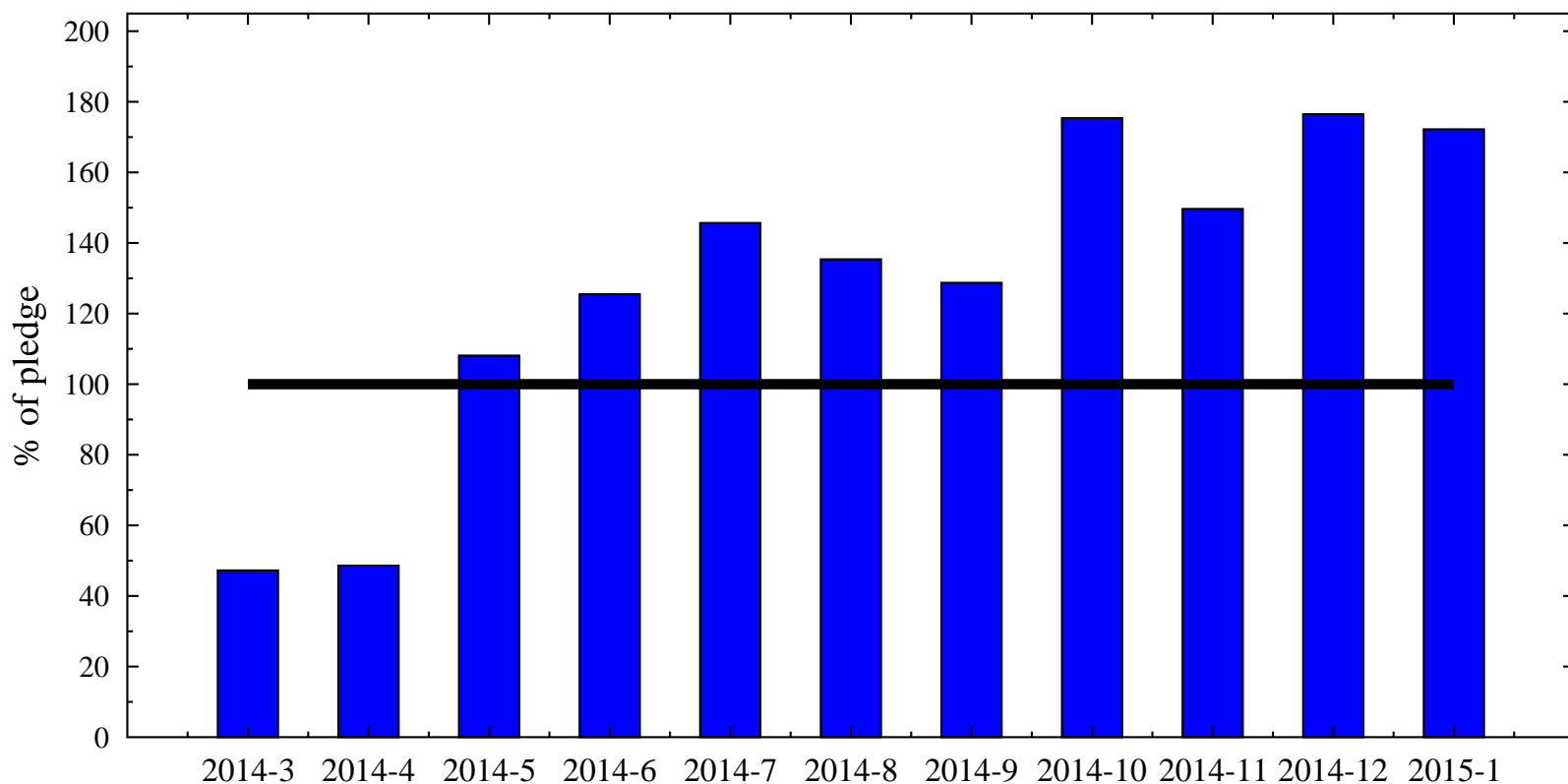
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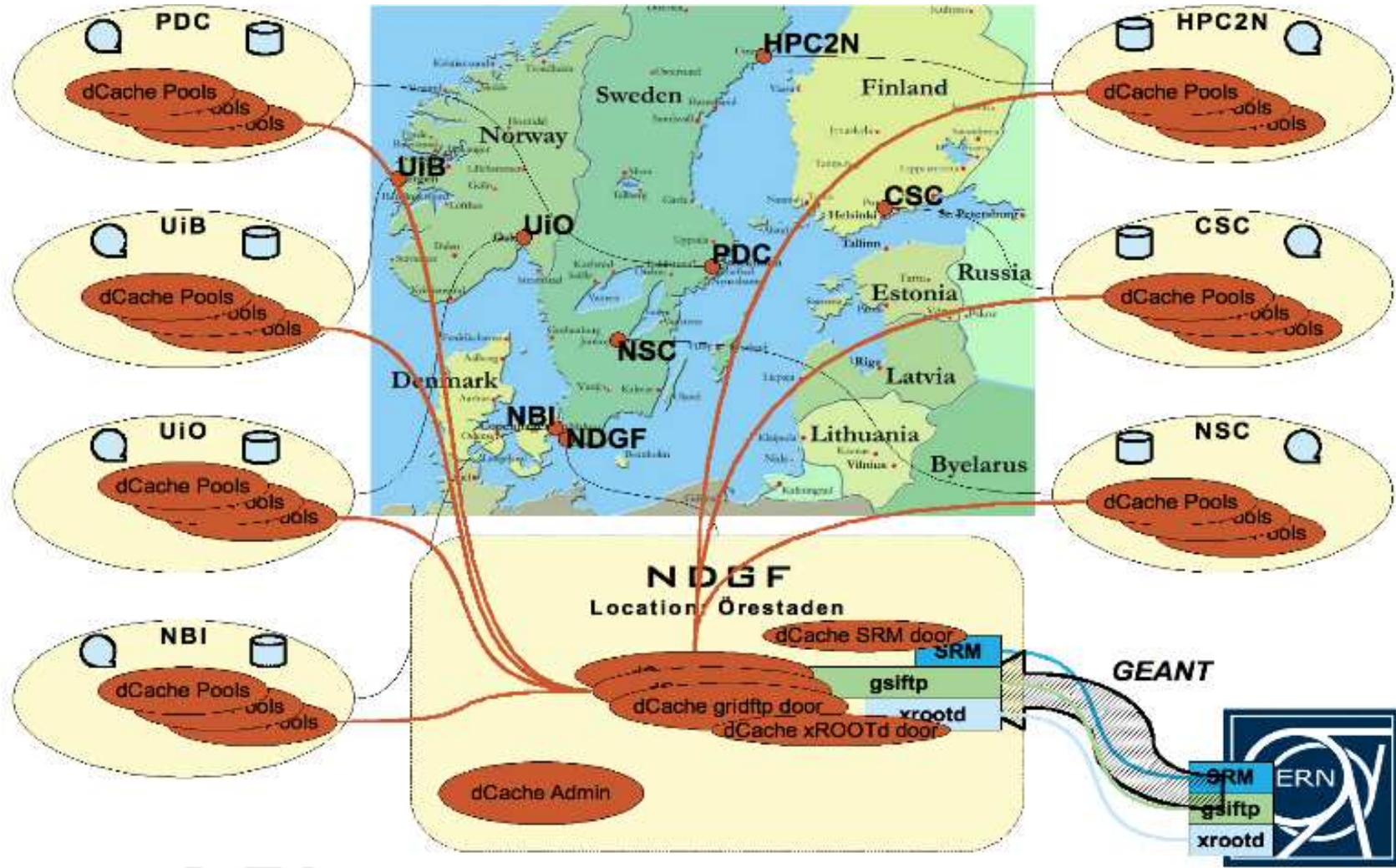
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- Starting May last year, this is no longer the case.
  - Starting end of last spring, all sites have been working most of the time
  - ATLAS has had technical problems in NDGF



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**NDGF Storage**, installed capacity (potentially unreliable numbers!):

- HPC2N: 119 TB, ? TB tape
- CSC: 159 TB disk
- UiB: 836 TB disk, ? TB tape
- DCSC/KU: 181 TB disk, ? TB tape

**SNIC storage:** 400 TB disk



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- (... but this is partly because we've been performing badly for ATLAS)
- Dark cloud on the horizon: CSC. Will we have ALICE running on CSC's cloud system before the old cluster is decommissioned?
- **Questions?**

