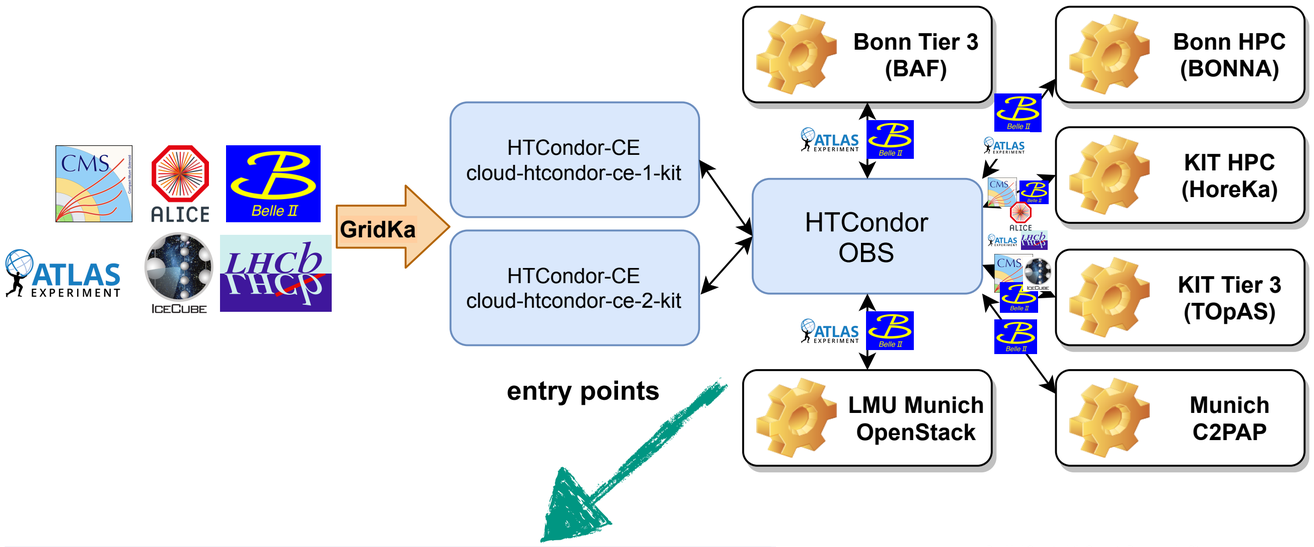
Karlsruhe Institute of Technology

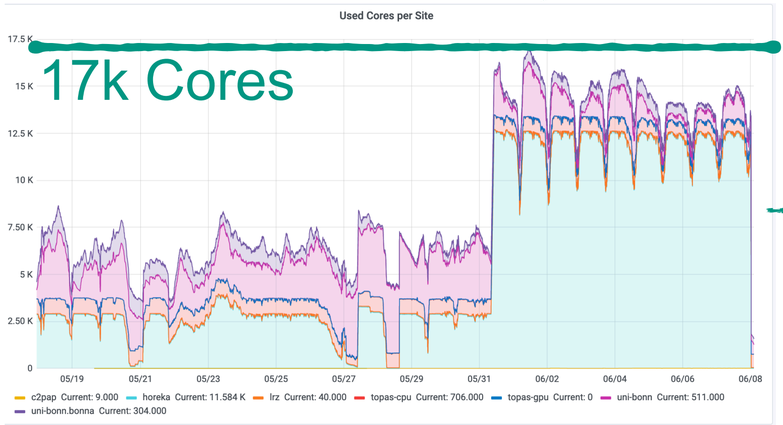
Status & Plans KIT

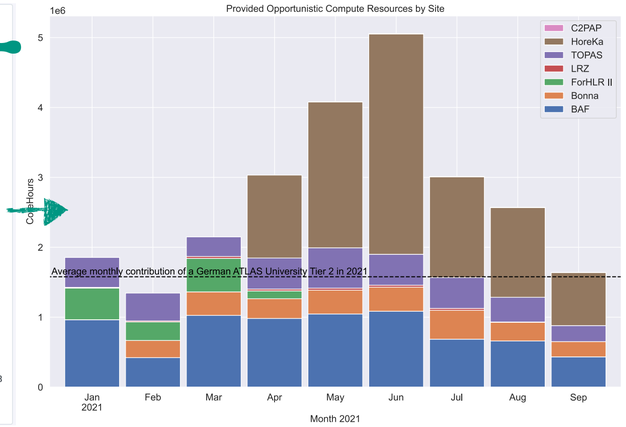
Manuel Giffels for the KIT Computing Team

FIDIUM Kickoff Meeting, 16.12.2021

Topic 1 - „Opportunistic Resources“ - Status







- Experiment-agnostic ecosystem providing single point of entry to plethora of resources (HPCs, Tier-3s and Clouds)
- Dynamic, on demand provisioning and transparent integration using `COBaLD/TARDIS`
- Stable operation since ~ 3 years
- Toped the 17k-core mark during HoreKa scale test
- In total ~24.5 million core hours provided in [01/2021 - 09/2021]
- GPUs integrated via TOpAS (32 NVidia V100/ 24 NVidia A100)
- Fruitful collaboration (U Bonn, U Freiburg, KIT, LMU, RWTH Aachen and U Wuppertal)

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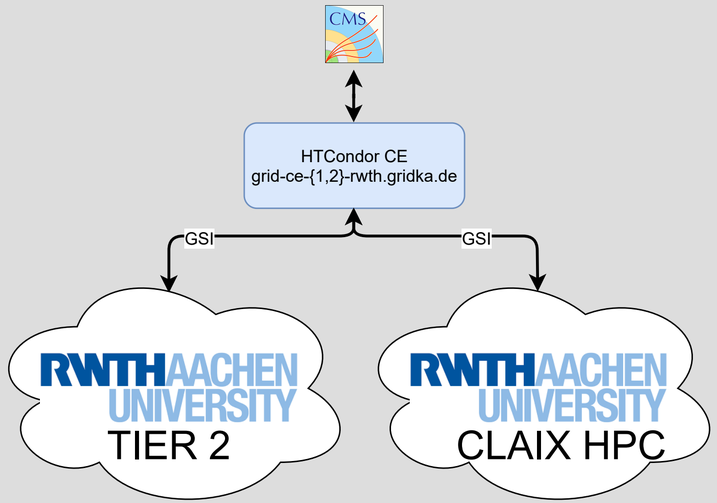
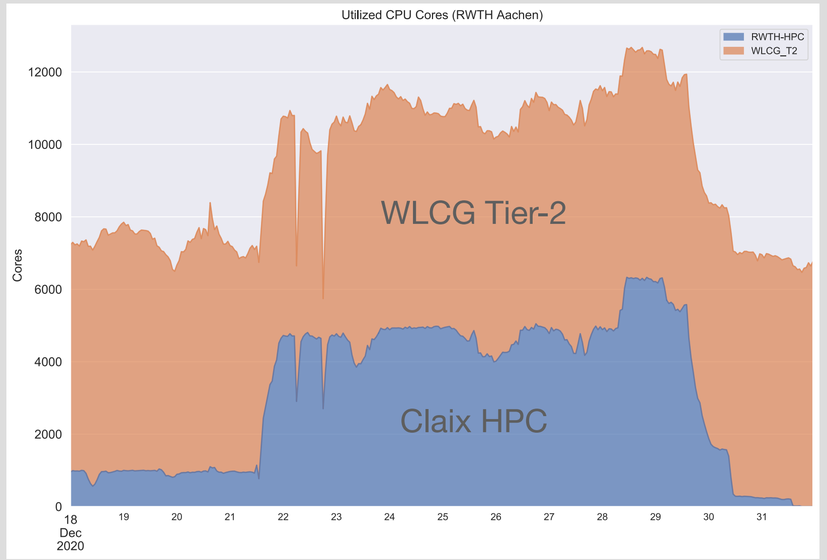
Bonn Tier 3 (BAF)

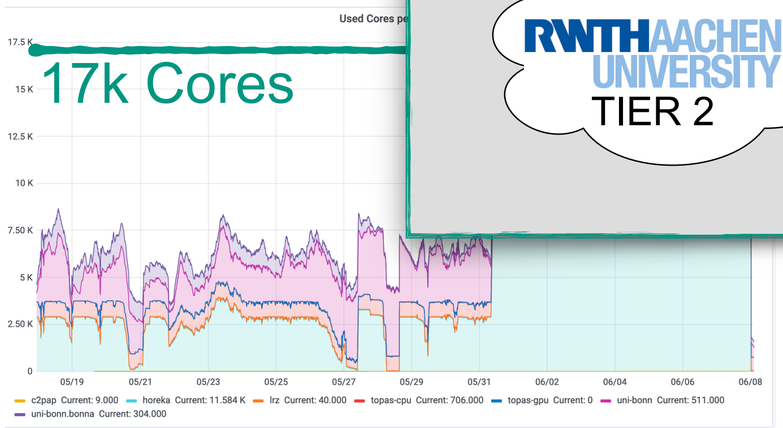
Bonn HPC (BONNA)

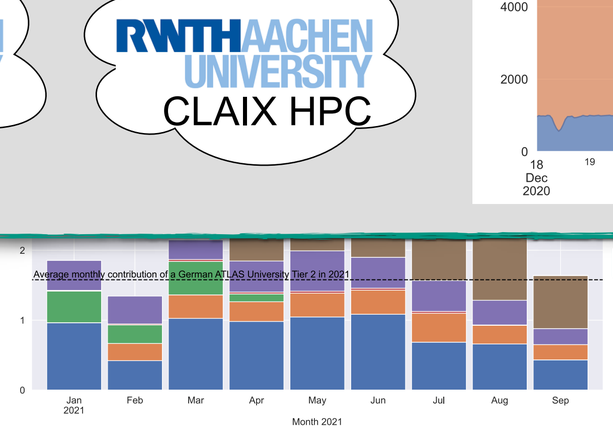
GridKa

Similar setup deployed at RWTH Aachen Tier-2 center









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Topic 1 „Opportunistic Resources“ - Plans

Work Plan (Proposal):

- **Work Package 1**
  - Development, maintenance and extension of `COBalD/TARDIS` and the ecosystem around
  - Automated scaling of peripheral services (Squids, etc.) using `COBalD/TARDIS`
  - Scheduling on job characteristics (e.g. I/O needs, workflow type, etc.)
  - Data locality aware scheduling
- **Work Package 2**
  - Accounting, in particular the integration into WLCG Accounting (APEL)

We are looking forward to a successful collaboration with all partners & associates!