Status Report KIT

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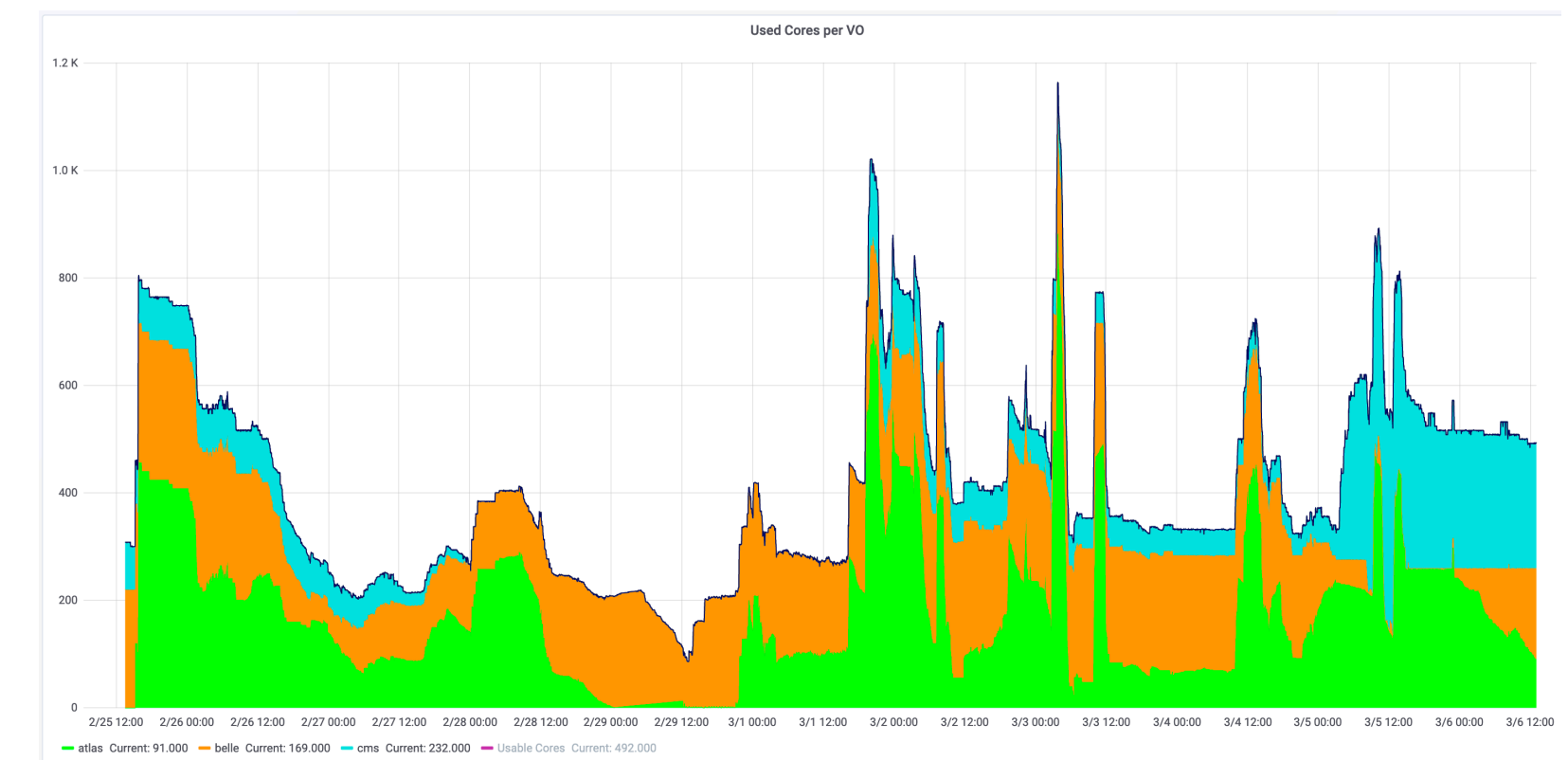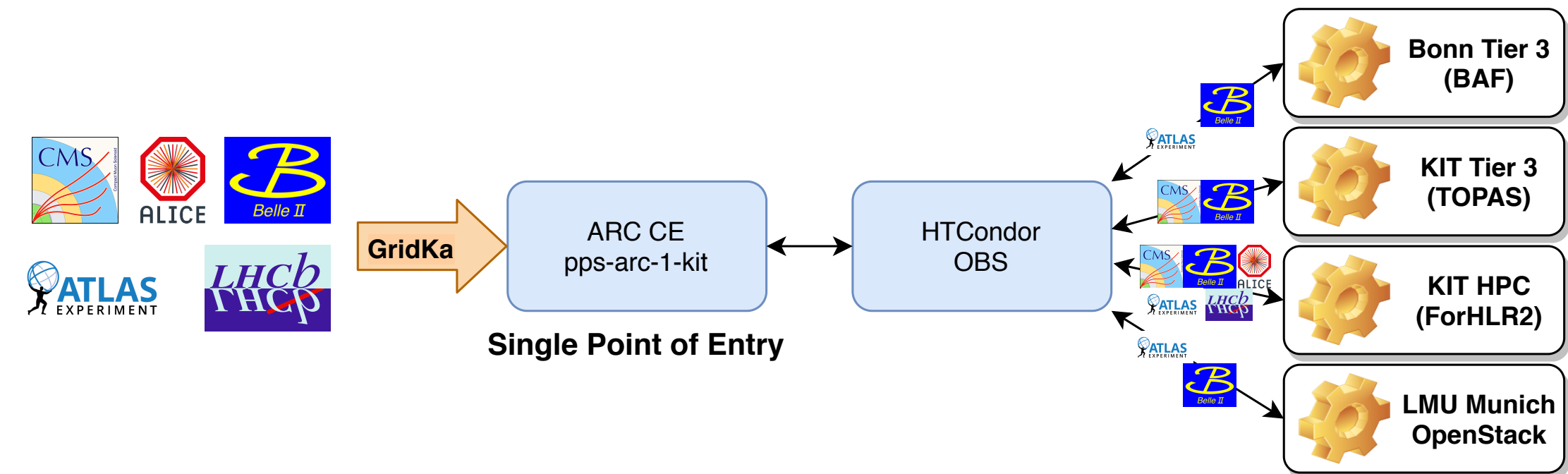INSTITUTE OF PARTICLE PHYSICS (ETP) & STEINBUCH CENTRE FOR COMPUTING (SCC)

Dynamic On-demand Provisioning of Resources

Developments:

- `COBalD/TARDIS` resource manager developed @ KIT (recently released 0.3.0)

- Single point of entry for WLCG jobs@GridKa (dedicated ARC CE), supports multiple VOs

- Support for various cloud APIs and batch systems, easily extendable

- Software is ready to be used by our partners

- Already used in Bonn, KIT, Freiburg and Munich

Community Workshops:

- Cloud Workshop in AC (Feb. 2020)
  - Lightweight T2 operation (Host Grid CE @ KIT)
  - Integrate opportunistic resources in T2@AC (e.g. RWTH HPC, FZ Juelich HPC)

Single Point of Entry

COBalD — DOI 10.5281/zenodo.3469929

TARDIS — DOI 10.5281/zenodo.3257718

Ready to include more resources!

Distributed Coordinated Caching

- XRootD proxy based caching enabled (KIT T3 & Nemo HPC Freiburg)
  - Not sufficient to study complexity of DCC
- XRootD monitoring has been developed and deployed @ KIT
  - Study cacheability of workflows
  - Collect data as input for simulations
- Simulation of distributed coordinated caching
  - Cache coordination
    - Developed the LAPIS scheduling simulator
    - Performed functionality cross checks
  - Caching algorithms
    - Study impact of different algorithms on cache performance

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