

German HEP Computing Preparing for the High-Luminosity LHC Era

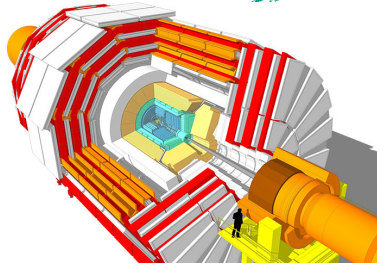
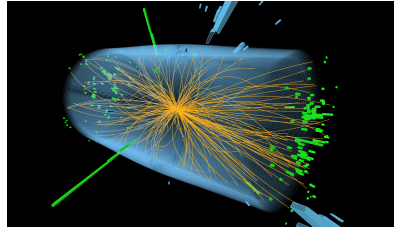
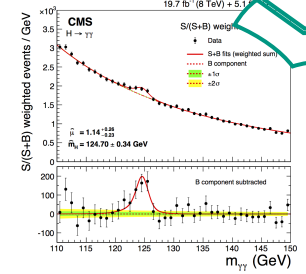
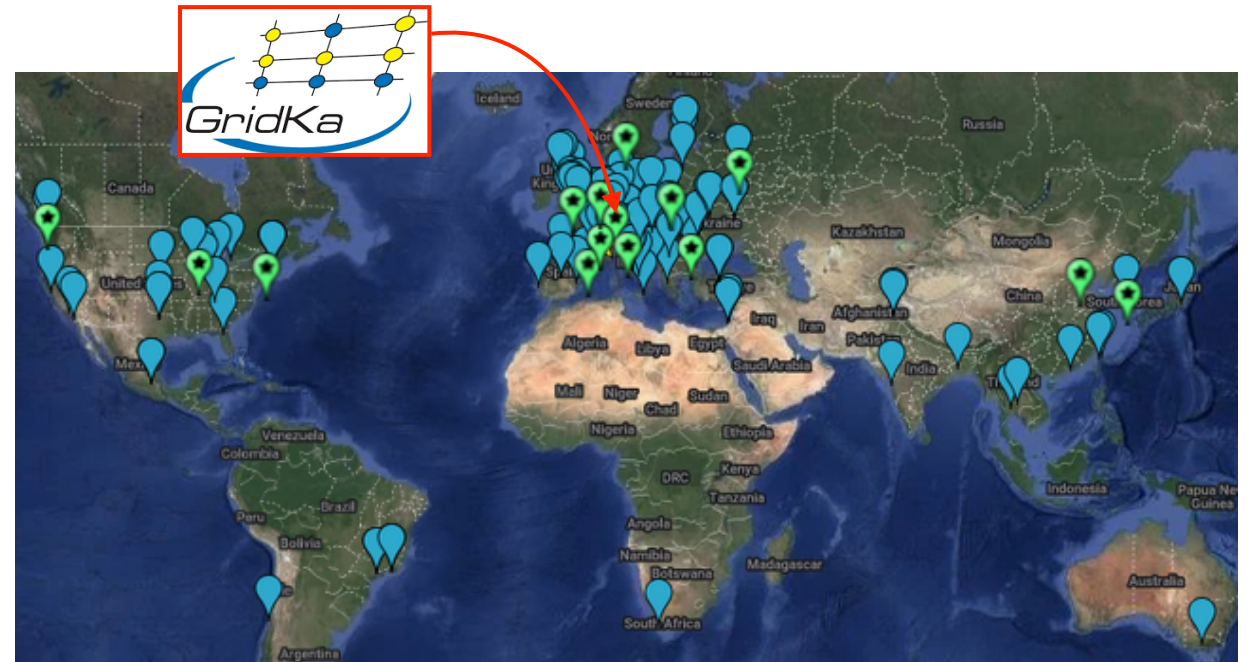
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Matter and Universe Days 2026, GSI Darmstadt



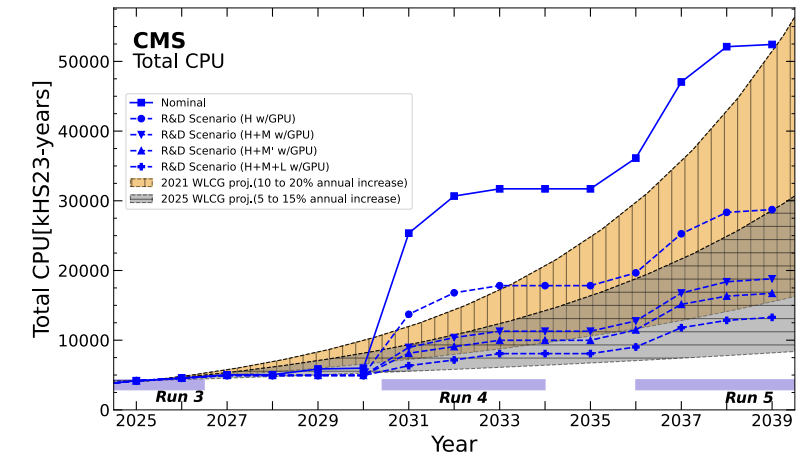
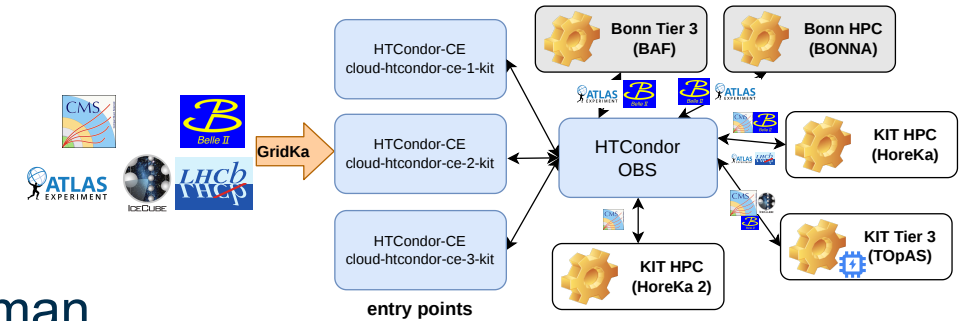
GridKa: Enabling High-Throughput Computing for Data-intensive Science

- German Tier 1 multi-VO site in the WLCG and beyond
- GridKa provides
 - 15% of the computing power
 - 15% of the disk storage
 - 13% of the tape storage
 - ... capacity of the WLCG
- Resources are provided for all LHC experiments and other physics experiments
- Trusted partner in WLCG with with an excellent performance:
More than 99% availability and reliability

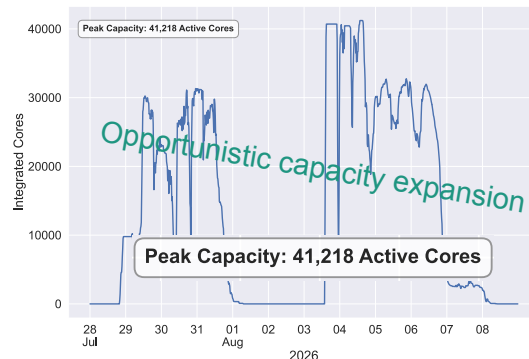


Opportunistic Compute Usage: Smart Resource Scheduling

- Studies project significant resource shortage in the upcoming years for LHC experiments
- Opportunistic usage of available non-HEP resources could mitigate this
- Resource scheduling non-trivial: Framework for resource acquisition COBaID/TARDIS developed at KIT
 - In operation since multiple years throughout several German HEP-computing locations



Burst into NHR-HPC cluster



Renewable energy aware resource scheduling

