

Summary of the GridKa TAB Strategy Workshop

July 14-15, 2016

Bergische Universität Wuppertal

<https://indico.cern.ch/event/537275>

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[10th Annual Meeting of the Helmholtz
Alliance "Physics at the Terascale"](#)

November 22, 2016

Executive Summary

- The workshop gave an overview of the resource providers and the computing models of the major experiments with an outlook for the following years.
- Technical talks covered the network infrastructure and the use of „opportunistic resources“.
- The role of WLCG and EGI was discussed as well as the resource and funding situation in Germany.
- 3 working groups were identified in order to deal with the topics in a sustainable way.
- The detailed minutes of the workshop are to be presented to the GridKa OB and the GPB meetings in November.
- Participants: 31 people from 10 experiments and 12 institutions from HEP + invited associated communities (HuK/FAIR, AstroParticle).

Session 1: computing models of the experiments/communities

„Do we have to deal with major changes in computing in LHC Run3/4 ?“

- ALICE and LHCb: major upgrade in LS2
 - requires major change in computing
 - online compute farms, online reconstruction, new roles for tier centres
- ATLAS/CMS: major changes in LS3
- experiments more complex after upgrade
 - increased luminosity/data rates, reconstruction more expensive
- flexible vs. specialised tier centres
 - NAFs, Grid: dedicated analysis centres, regional data centres, ...
- opportunistic CPU resources (Cloud (see HNSciCloud) and HPC) – data intensive jobs difficult
 - experiments are preparing to get whatever is possible (at least for MC)

Session 1: computing models of the experiments/communities

- significant software improvements needed
 - performance, thread-safety, memory consumption, adjusting to changing IT landscape (including parallel computing & GPUs)
 - software projects good for visibility of German community
 - leading Helmholtz centre of advantage – example: dCache
- protocol zoo to be reduced, more use of tape (ATLAS)
- reduction of reco paths, miniAODs, nanoAODs
- funding situation: HDF, late funding, resource gaps, manpower critical (local support), flat budget ok for before upgrade, shortage by factor 4-12 (CMS)
 - role of Germany for resource contribution and upgrade activities
- storage effort to be simplified (storage federations, cache storage for smaller sites, remote data access)
 - generic platform for dumping data for small experiments → EGI ?
- roles of EGI and WLCG

Future prospects

The scope of the Wuppertal workshop was to identify topics, issues and problems. HEP and associated communities are now ready for a larger workshop on data intensive science (maybe to be coordinated by e.g. BMBF)

In order to be able to keep the momentum a follow up workshop was suggested by Christian Zeitnitz and KET.

The follow up workshop is planned now at the computing session of the [10th Annual Meeting of the Helmholtz Alliance "Physics at the Terascale"](#) at DESY, coorganised by GridKa TAB, DESY, and the Terascale Alliance.

Tuesday 22 November 2016

13:30 - 16:30 Computing

Computing

- 13:30 **Introduction, scope of the workshop** 10'
- 13:40 **Workgroup 1: Summary Wuppertal meeting computing models** 10'
- 13:50 **Resource management and WLCG – challenges for Run 3** 20'
- 14:10 **Discussion** 20'
- 14:30 **Workgroup 3: Summary Wuppertal meeting additional resources** 10'
- 14:40 **BaWü-Cloud** 15'
- 14:55 **Indigo** 15'
- 15:10 **Discussion** 20'
- 15:30 **Workgroup 2: Summary Wuppertal meeting organisation** 10'
- 15:40 **HEP software foundation and white paper** 15'
- 15:55 **Discussion** 20'
- 16:15 **Summary and outlook** 15'