Some Remarks on BELLE(2) Computing @ DESY

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DESY Grid Center: **Grid + NAF**

- Grid and NAF are two completely separated systems

- The DESY Grid system is part of a *global infrastructure*
  - concept of Virtual Organization (VO)
  - access is remote-like even within DESY

- The NAF is a *local system in DESY*
  - AFS, large distributed scratch space (SONAS)

- Grid & NAF access the DESY mass *storage system*
  - as a tier-2 DESY hosts analysis data
  - DESY is well connected to the world
Data files are supposed to be stored in dCache:

- /pnfs/desy.de/belle
- /pnfs/desy.de/belle/belle1
- /pnfs/desy.de/belle/belle2
- /pnfs/desy.de/belle/belle2/DESY

Scratch space on the NAF is big but limited:

- /nfs/dust/belle1
- /nfs/dust/belle2
- ~ 1TB per user

AFS space is not suitable for data:

- /afs/desy.de/user/g/gellrich
- Code, configs
Belle(2): BELLE Storage Status

> Data files are supposed to be stored in dCache:

- Total available: 500TB
- 470 TB /pnfs/desy.de/belle
- 258 TB /pnfs/desy.de/belle/belle1
- 212 TB /pnfs/desy.de/belle/belle2

> BELLE1:

- 136 TB /pnfs/desy.de/belle/belle1/mc
- 122 TB /pnfs/desy.de/belle/belle1/b*
- 3.7TB /pnfs/desy.de/belle/belle1/DESY/belle2

> BELLE2:

- 171 TB /pnfs/desy.de/belle/belle2/TMP
- 35 TB /pnfs/desy.de/belle/belle2/users
Belle(2): Technical aspects

- **Grid:**
  - Hundreds of CPUs in Grid cluster (not *bird!*)
  - `voms-proxy-init -voms belle:/belle`
  - `arcsub -c grid-arc4.desy.de <job.xrsl>`
  - `srm://dcache-se-desy.desy.de/pnfs/desy.de/belle/belle2/DESY/x`
  - *clients*: `gfal_copy`, `srmcp`, `lcg-cp`, `dccp`

- **NAF:**
  - NAF Wiki: [http://naf.desy.de](http://naf.desy.de)
  - *bird* cluster (not Grid!)
  - `nafhh-belle01: ls -l /pnfs/desy.de/belle/belle2/`

- **Data Management:**
  - How to get data (MC) from KEK? (→ BELLE2 Computing)
  - Where to store local data?