DESY Site Report

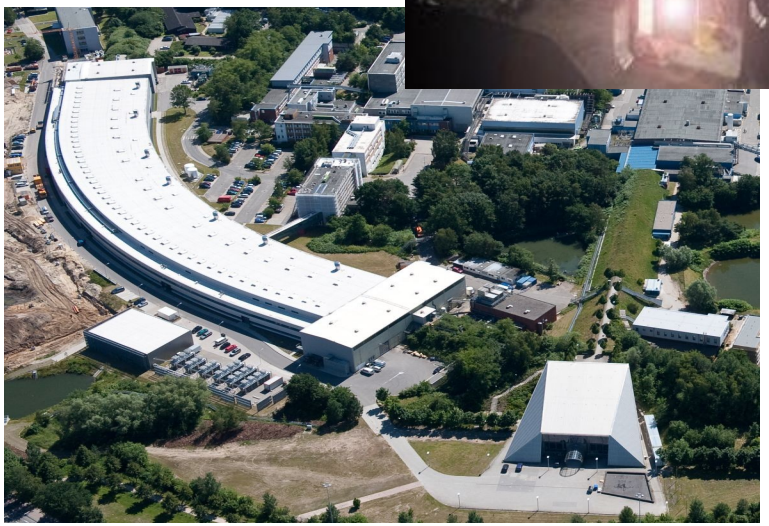
Stephan Wiesand
European AFS & Kerberos Conference
Edinburgh, 2012-10-18

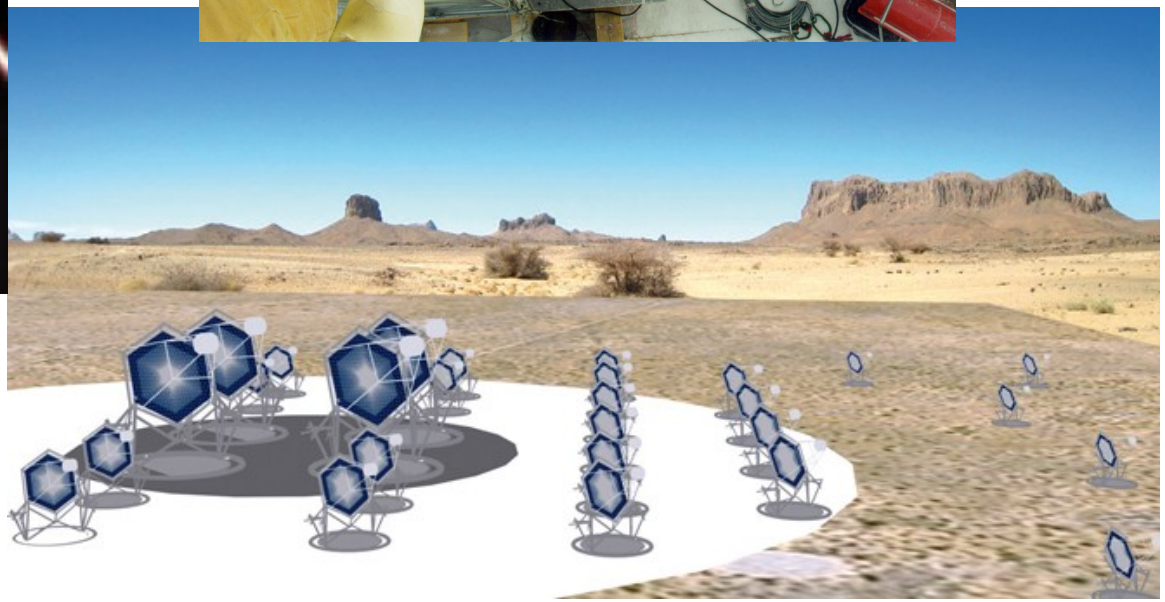
HELMHOLTZ GEMEINSCHAFT

DESY

About DESY

- Publicly funded research lab
  - Particle Accelerators
  - Research with Photons
  - (Astro-)Particle Physics





AFS Use Cases

- home directories, user/group/project space
- software repositories, web/ftp space
- data
  - from measurement & simulation
  - derived datasets
  - images
- access from Unix, Linux, Windows, OS X
  - client available on all systems, except grid nodes
    - *x system: receive it at installation time (exception: grid nodes)
    - Windows: available through central software management
    - OS X clients: install from openafs.org

AFS Cells at DESY

- two sites, three AFS cells
  - Hamburg (desy.de)
    - 145 TB on 27 servers, 30% used, 15k volumes, 5k users
  - Zeuthen (ifh.de)
    - 115 TB on 20 servers, 30% used, 5k volumes, 1k users
  - National Analysis Facility (naf.desy.de), distributed over both sites
    - 40 TB on 8+1 servers, 7% used, 2k volumes, 600 users
- one Heimdal realm per cell
  - Hamburg/Zeuthen realms are in sync, mutual trust
- NAF was an independent facility, but will now be split and integrated into the Hamburg/Zeuthen environments
    - worry: adding more very active users to cells already quite busy
    - is keeping the AFS cell separate and just using the DESY.DE realm the better option?

OpenAFS Versions

- production servers are still 1.4
  - server platform: Scientific Linux 5, amd64
    - still some Solaris servers
- SL5 clients are still 1.4.14
  - + gerrit 3286
- SL6 clients run 1.6.1

Itches

- scalability
  - no problem: # of volumes, users, pts entries
  - big problem: batch computing (throughput, parallelism)
    - hundreds of jobs hammering a single volume
      - volumes are confined to a single vice partition
      - replication is not a solution
    - ever growing number of cores per node
      - tasks per node tends to be proportional to that number