



The DESY Grid Center.



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DESY Grid Center

All VOs supported on one **common** Grid infrastructure. Virtual **sharing** of the DESY Grid Resources by all VOs.

HEP

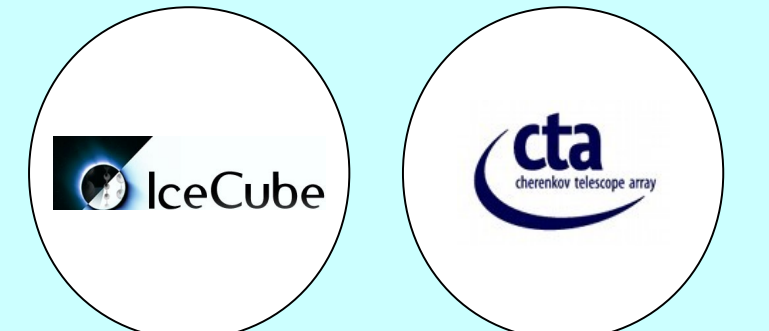


Photons



DORIS
FLASH
PETRA3
CFEL
XFEL

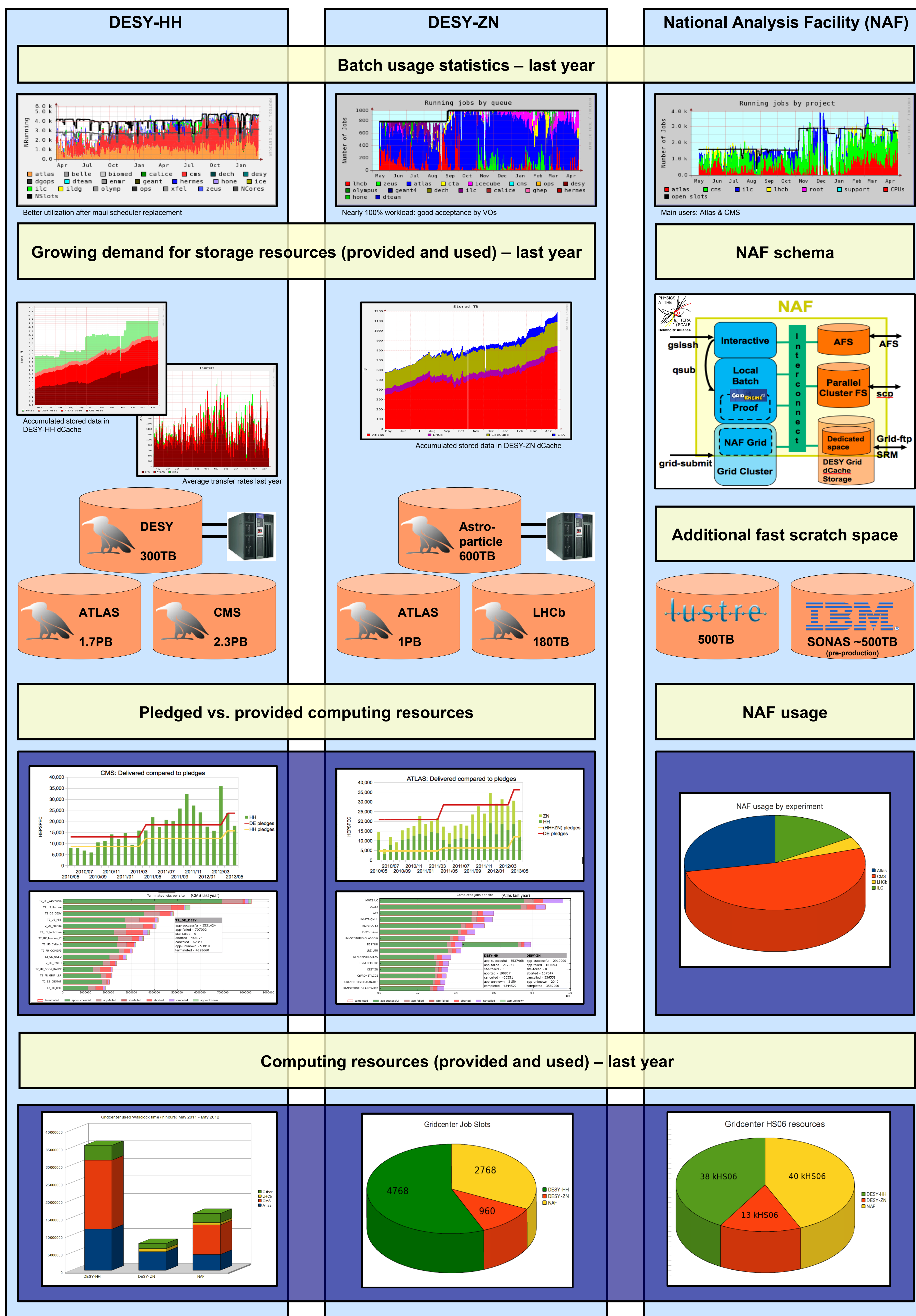
Astroparticle



Theory



Bio Users



National Analysis Facility (NAF)

- Provide members of German institutes with a generic multi-purpose analysis facility: Atlas, CMS, LHCb and ILC current users
- Built, hosted and operated by DESY (Hamburg and Zeuthen)
- Complementary access to storage
- Tightly coupled to existing storage: Tier-2 dCache share which hosts analysis data
- Extension of existing Grid infrastructure
- Additional interactive resources: ~3000 cores & ~500 TB Lustre file system
- Purchased high-performance storage system Sonas as replacement for Lustre
- Support and documentation in close collaboration with experiments
- Used by ~20 German institutes

Grid

The DESY Grid Infrastructure is based on the most recent **EMI** middleware. It contains all node types to make up a **complete** Grid infrastructure.

Core services are Workload Management Systems (**WMS**), Information Index (**BDII**), Proxy Server (**PX**), Catalog Services (**LFC**), VO Management (**VOMS**).

Resources are published by the site Information Service (**GIIS**) and provided by Computing Elements (**CE**) with Worker Nodes (**WN**), and dCache-based Storage Elements (**SE**) as a front-end to the hierarchical mass storage system.

Photon science

DESY is the home for current (**PETRAIII**, **FLASH**) and future (**xfel.eu**) photon accelerators and huge photon community groups (**HASYLAB**, **CFEL**)

Tier-0 for HERA, ILC & Calice

DESY hosts a **Tier-0** for the **HERA**, **ILC** and **Calice** collaborations.

Icecube Tier-1

The Zeuthen site operates as a **Tier-1 centre** for the **IceCube** project. It hosts half of the Monte Carlo data and all of the second-level data. In addition, it acts as a backup for the Tier-0 site in Madison, USA.

Tier-2 for CMS / Atlas

The DESY **CMS Tier-2** is the biggest in Europe. The **Atlas Tier-2** is one of the biggest computing and storage providers worldwide.

Summing up:

- more than **6 Petabyte** hosted in **6 dCache** instances, **Lustre & SONAS**
- the two grid sites and the NAF host more than **8000 cpu cores (92 kHS06)** and support **23 VOs** altogether
- the DESY Grid Center is **one of the largest user analysis facilities** connected to the Grid **worldwide**