Belle II @ DESY

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DESY

31st B2GM
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DESY: Introduction

> Belle II @ DESY:

- Belle II Collaborative Services (B2CS)
- **Grid site**
- Analysis Facility (NAF)

> MoU:

- MoU signed and handed to Takanori Hara
- DESY pledges for the next years approved by directorate

> Strategy:

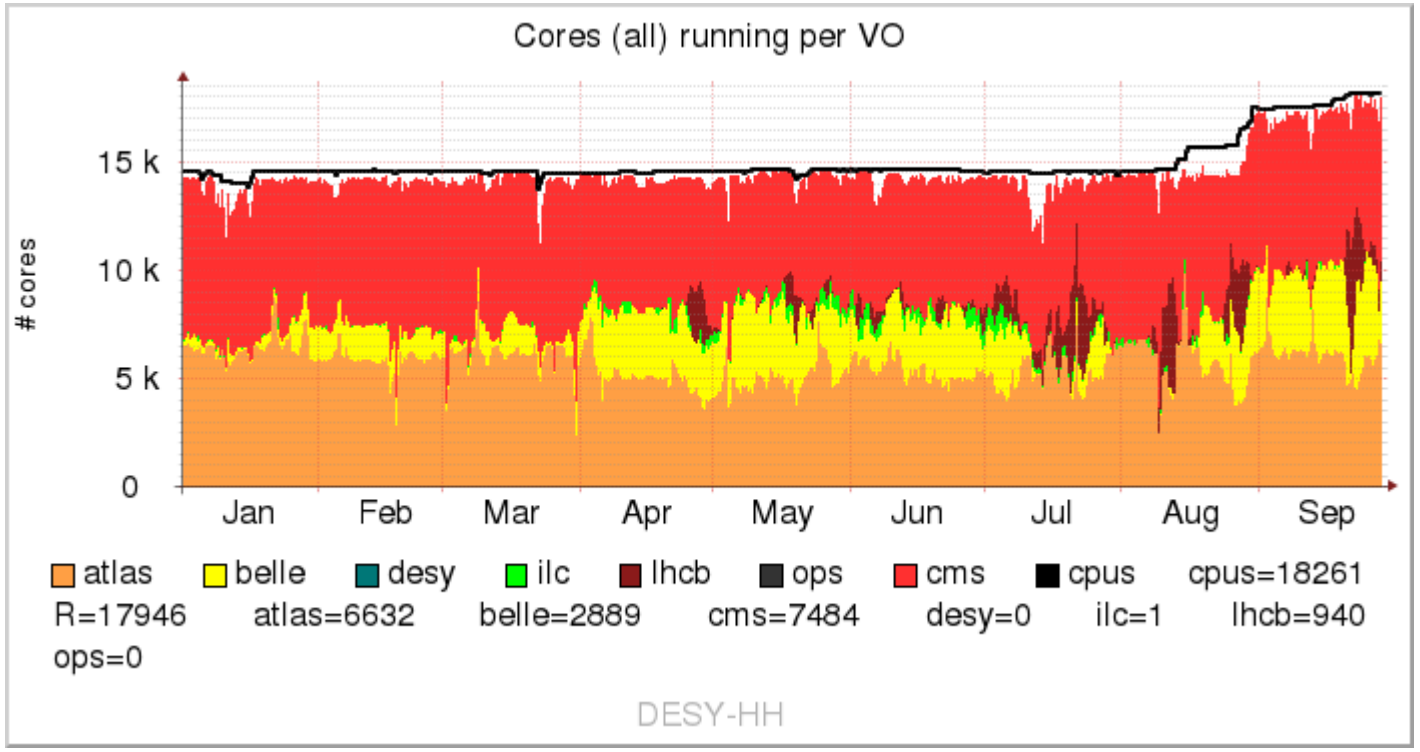
- Pledged resources are always in warranty

> Planning for 2019:

- We are buying additional CPU resources to meet the WLCG/Belle II pledges
- EL7

DESY: Computing

- Batch: **HTCondor** (2 ARC-CEs)(WLCG) (200kHS06) (30% Belle II)
- DESY-HH 2018: ATLAS (35%), CMS (38%), **Belle II** (21%), LHCb (2%), ILC (2%)
- **Memory** 4GB/job / **Scratch** 20GB/job
- **CVMFS** (6 Squids) + **database proxy** server (frontier_squid)
- Mainly **EL7**; still some SL6 batch nodes (queue: “gridsl6”); singularity worked on



DESY: Storage

- SRM: dcache-se-desy.desy.de
  - SRM, XROOTD, HTTP, GSIDCAP, NFS4, IPv6 not yet but will come
  - No space tokens
  - Belle II production SE (no Bellle (I) anymore)
- Pledges:
  - 50% of German pledges
  - 2018: 0.29 PB
  - 2019: 1.22 PB
  - 2020: 2.51 PB
- Currently installed:
  - 389TB (~95% filled) distributed over ~30 pool nodes
- DESY applied as Raw Data Center in MoU
  - Tape library operation since decades
  - Capacity O(10PB)

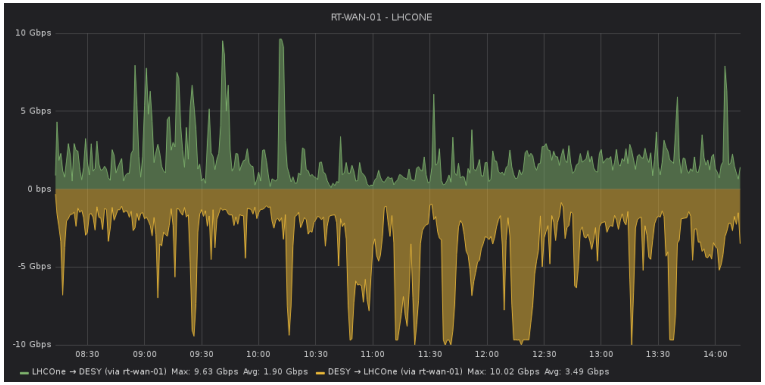
DESY: Network

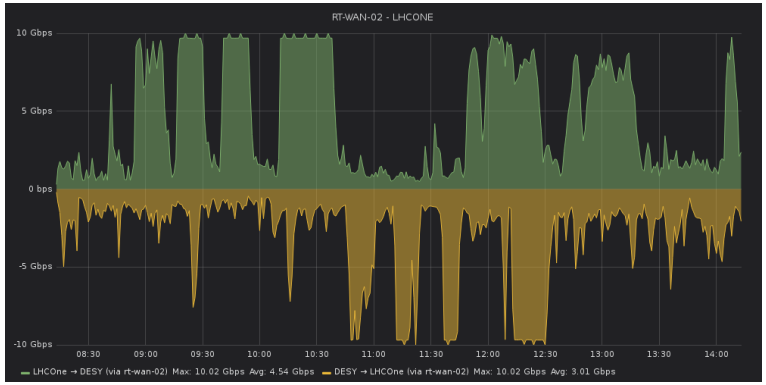
> WAN @ DESY:

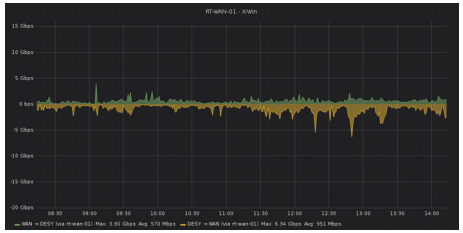
- X-WIN 2 x 15 Gbit/s
- LHCone 2 x 10 Gbit/s (WLCG and Belle II)

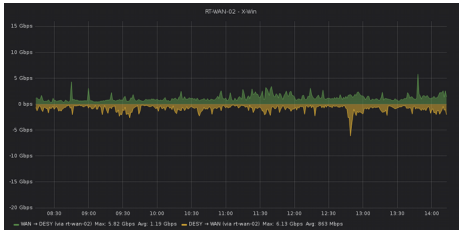
> Data Challenge 2018: (Thanks to Silvio Pardi!)

- KEK → DESY: <=9.7Gbit/s DESY → KEK: <=7.6 Gbit/s









DESY: Remarks

- Jobs are transient – data is persistent … Management of data on the SEs is crucial!
  - Who writes where?
  - Cleaning-up strategy?
  - Quotas?

- Analysis Facility (NAF):
  - The NAF is open for Belle II (see confluence how to prepare account)
  - HTcondor based; direct access to dcache SE; scratch space

  - Users ask for data
  - Analyses on-going
  - So far copied mDST of the various productions
  - (FTS) transfer speed crucially depends on file size (preferably o(GB))
  - Strategy for the future?