Autumn 2016 HEPiX meeting
Lawrence Berkeley National Laboratory (CA), USA

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Grid Deployment Board

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HEPiX

- Global organisation of service managers and support staff providing computing facilities for HEP community
- Most WLCG sites, including WLCG Tier-0, Tier-1 and many Tier-2, represented
- Other communities increasingly interested
  - Bioinformatics, photon science, ITER, …
- Meetings are held twice per year
  - Thus far: spring in Europe, autumn in North America or Asia – being revised
- Reports on status and recent work, work in progress & future plans
  - Usually no showing-off, honest exchange of experiences
- Web site: www.hepix.org

HEPiX Autumn 2016

- Held 17 – 22 October at LBNL (Lawrence Berkeley National Laboratory, Berkeley (CA), USA
  - Just the week after CHEP and the WLCG workshop in San Francisco
- Sponsors: Seagate, Intel, Penguin Computing
- 96 registered participants
  - Many first timers, many old friends
  - 45 from Europe, 33 from North America, 12 from Asia-Pacific, 1 from Israel, 5 from companies
  - 36 different affiliations
  - Participants from photon science, life science, …
- 74 contributions
  - Slots cut down to 25 mins
  - Multiple contributions from Asia-Pacific
- BoF on High-Performance Computing
- Full details: https://indico.cern.ch/e/hepix-fall2016
- Extensive workshop notes in preparation (well, sort of)
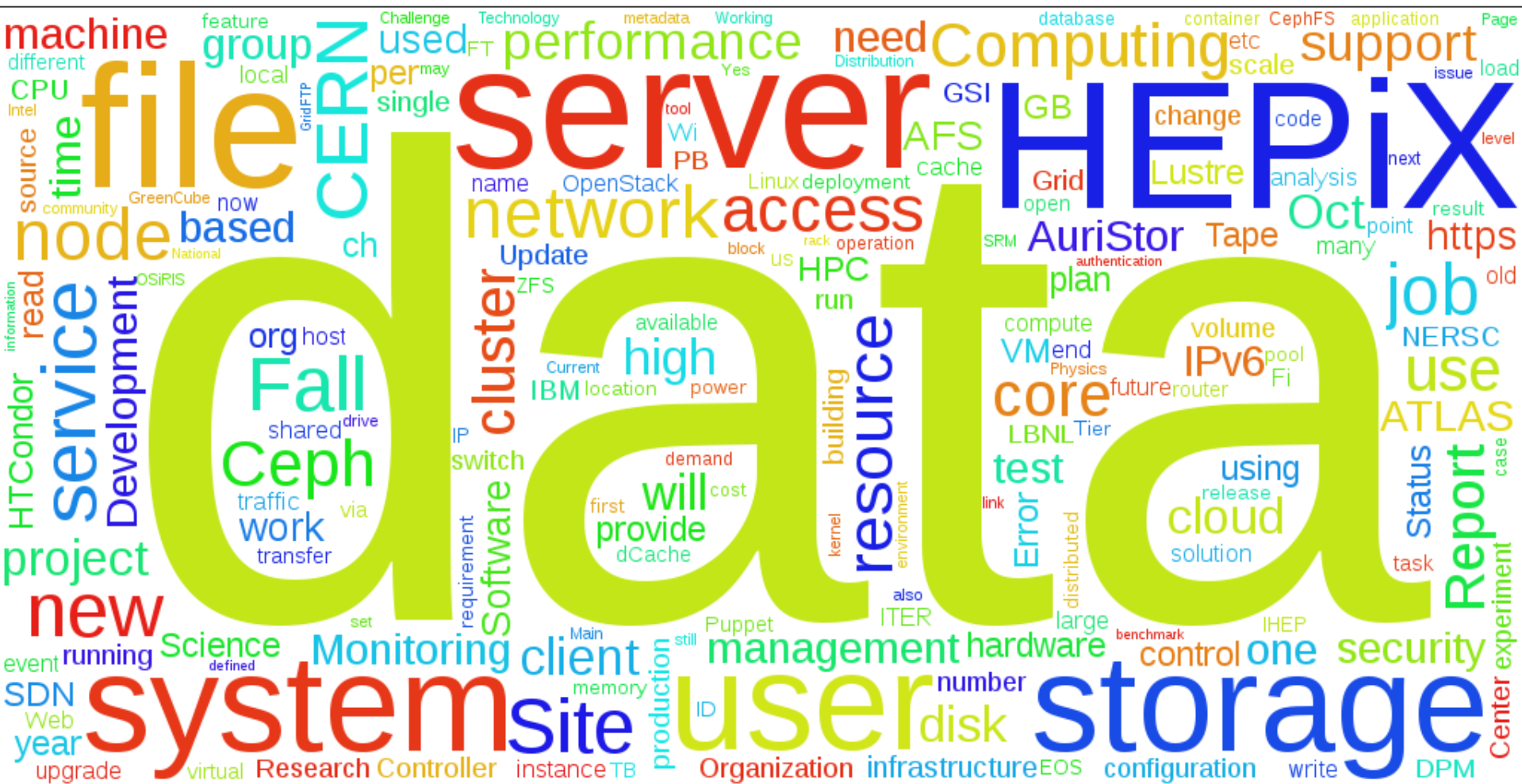
Group Photo
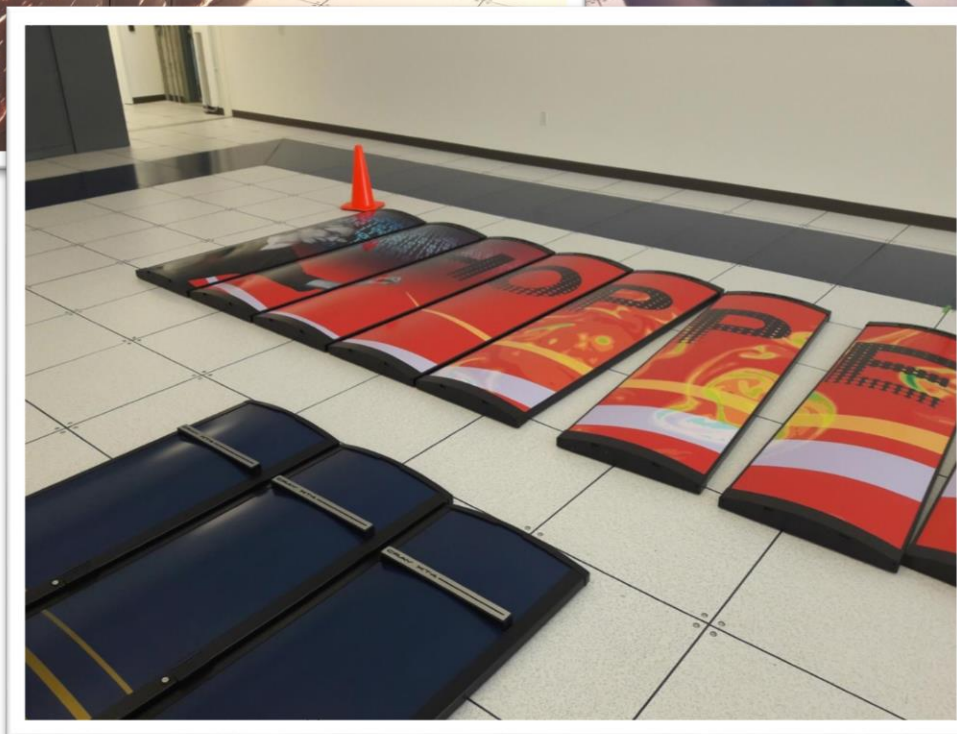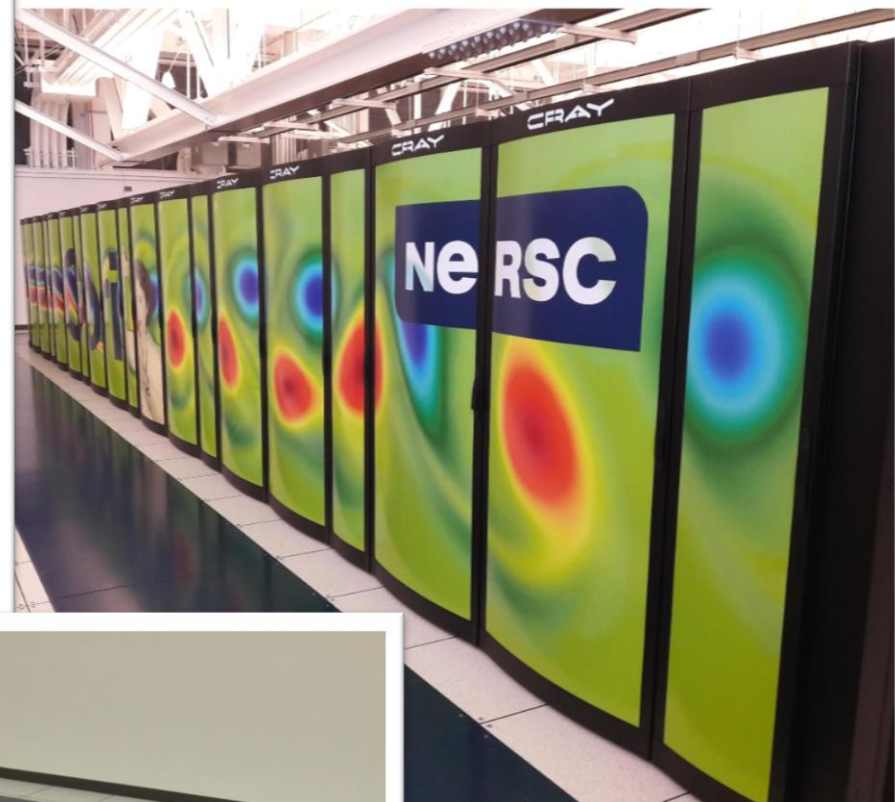
Summary

Jérôme Belleman / CERN

Tracks and Trends… (1)

- Site reports – 25 (!) contributions

  - *Storage: CEPH, GPFS, Hadoop, Dropbox/ownCloud; Lustre widely used (several reports of problems)*
    Slurm for HPC oriented computing being integrated with HTCondor
  - *Openstack/Docker on the rise*
  - *Monitoring and config management: divergence of solutions*
  - *SDN initial deployment*

- Security and networking: 11 contributions

  - *Security: As scary as ever! Attacks targeting corporations – ransomware*
  - *Federated identity management opens new dimension of issues*
  - *Networking: SDN deployed at IHEP*
  - *Research sites and cloud resources*
  - *Network analytics*
  - *HEP support for IPv6 growing*
  - *Wi-Fi infrastructure at CERN*

Tracks and Trends… (2)

- Storage and file systems: 12 contributions
  - *3 dedicated CEPH talks (RAL – 13.6 PB, Australia, BNL, UMich - OSIRIS)*
  - *AFS: provider viewpoint (Auristor), CERN phase-out plans*
  - *ZFS on Linux*
  - *EOS, DPM and FTS*
- Grids/clouds: 8 contributions
  - *Chameleon (ANL), IHEP cloud: Shared facilities for research*
  - *Extending into public clouds: CNAF, KIT, HNSciCloud*
  - *HEP workload on HPC resources (NERSC)*
  - *Container orchestration with Mesos (RAL)*

Tracks and Trends… (3)

- End-user IT services and operating systems: 2 contributions
    - *Scientific Linux*
    - *Mail filtering at DESY (glue around several open-source packages)*
- Computing and batch systems: 6 contributions
    - *Benchmarking WG: Good progress on fast benchmarks, precise benchmark in 2Q2017*
    - *Computing for HEP and for genomics*
    - *HPC: USQCD project*
    - *OpenPower, ARM in the data centre*
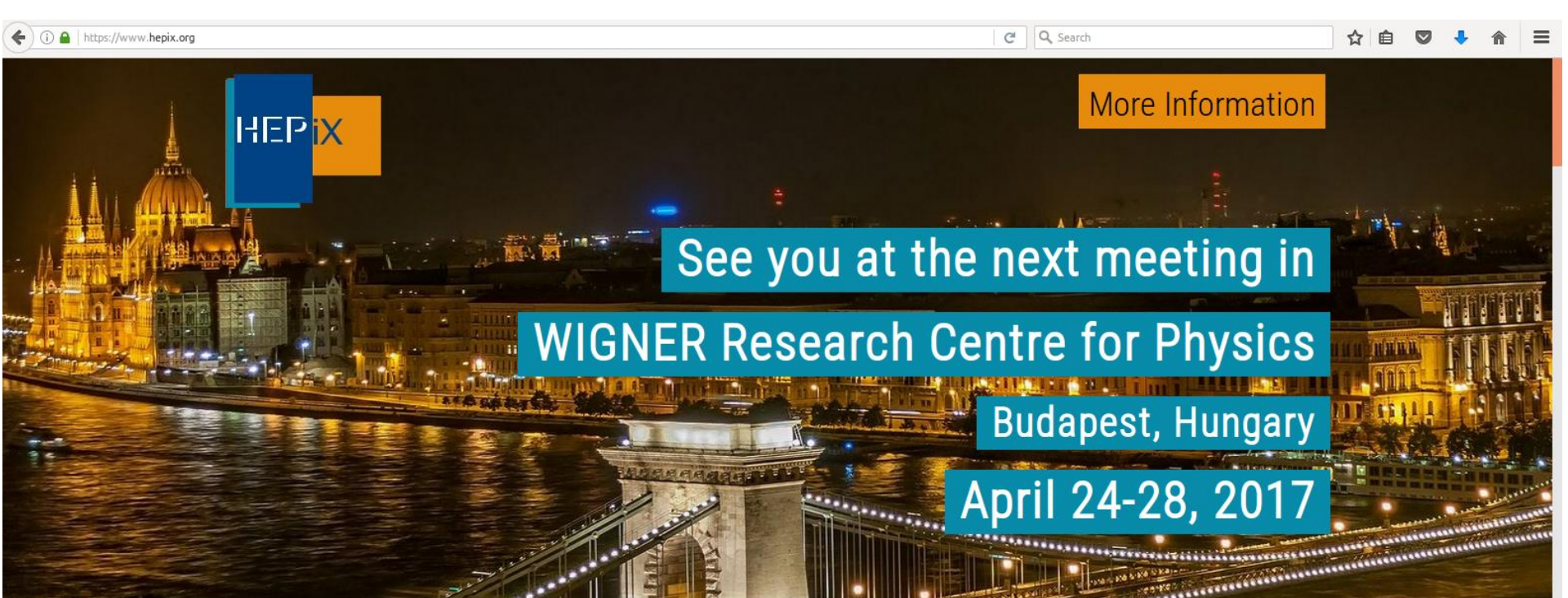   - *HTCondor: Status update; making it provision dynamically cloud resources*

Tracks and Trends… (4)

- IT facilities and business continuity: 4 contributions
    - *CERN: New data centres; OpenCompute*
    - *BNL: Cloud resources vs. dedicated data centres*
    - *GSI: Green cube status*
- Basic IT services: 5 contributions
    - *HTCondor monitoring (BNL)*
    - *Puppet at Australian sites*
    - *ELK deployment at KEK*
    - *Red Hat Satellite (FNAL)*
    - *Load balancing at RAL*

Next meetings

- Spring 2017: Budapest, Hungary
  - 24 – 28 April 2017
- Autumn/Fall 2017: KEK, Tsukuba, Japan
  - 16 – 20 October 2017
- Proposals received for subsequent meetings
- Will need to re-consider swap of European/N-American meeting, Asian labs becoming important contributors to HEPiX

Expressions of interest and proposals are always welcome

Questions, comments?