IRFU site report

Pierrick Micout

CEA/DSM/IRFU

News from Saclay (IRFU only)

- Computing centers used by IRFU people

- IRFU local computing

- IRFU GRIF sub site

- Windows news

- Revolution for the CEA
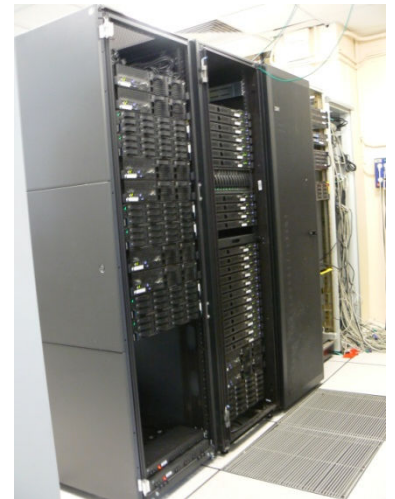
Centralized (scientific) computing

- Inside IRFU, the **HEP** community is using **CC-IN2P3** since 1993 as main computing center; discussions should start next year on renewal of the collaboration between DSM/IRFU and CNRS/IN2P3.

- IRFU **Astrophysics** department is using 3 French Computing Centers :

  - **CCRT** (CEA computing center)
    - **Titane** 300 Tflops Bull NovaScale : combination of 8544 Intel cores (100 Tflops) and 48 GPU nodes (200 Tflops)
    - **Cesium** (graphics cluster)
  - **IDRIS** (CNRS computing center)
    - **Babel**, CNRS/IDRIS, IBM BlueGene/P, 40960 PowerPC cores
  - **CINES** (French computing center for Academia)
    - **Jade**, GENCI/CINES, SGI, 12288 cores
  - Software in F90 and C++ using MPI and OpenMP NVidia CUDA for the hybrid CPU-GPU machines

Local computing

- Some **water cooling** added to one room (parallel machine and Unix storage),
- New **air cooling** system for the backup room,
- Transfer of some IBM x3550 from the GRID site to the **local analysis facility**,
- **New disk server** :
  - DELL PowerEdge 2950
  - 2 Disk arrays MD1000 (15*1TB, RAID 6)
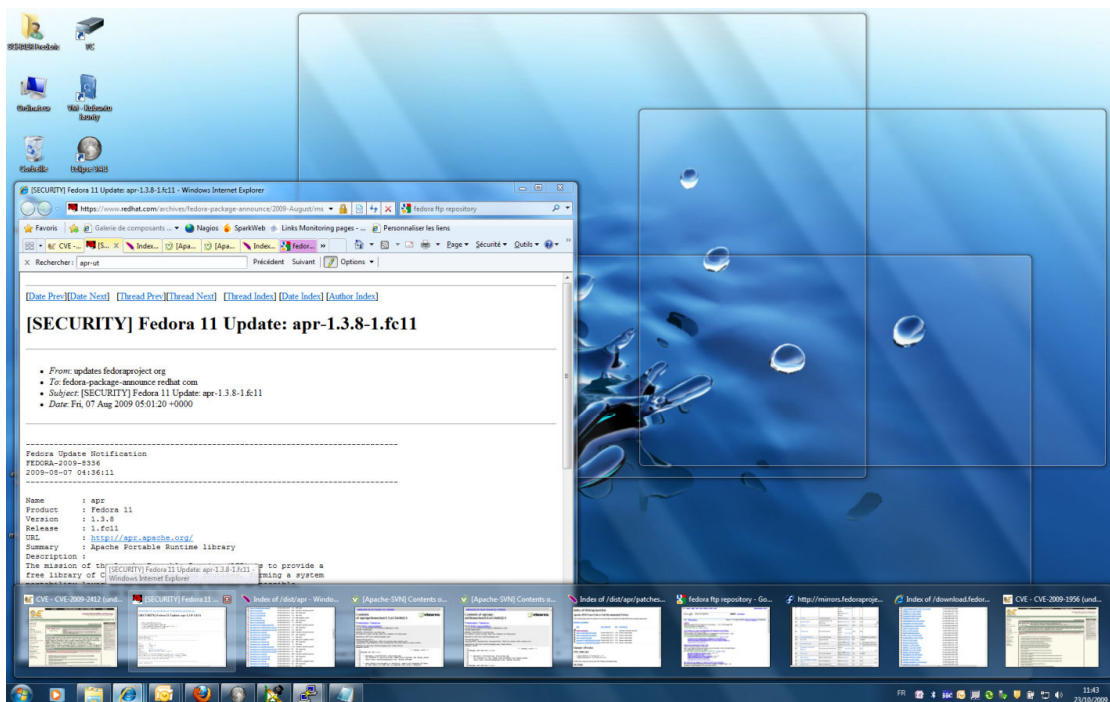- Some tests on a **proof/xrootd** service in collaboration with CC-IN2P3.

IRFU GRIF subsite

- To cope with **the needs for LHC**:
  - **New room** with **water cooled racks**
    - 3 "Emerson/Knürr CoolLoop"
    - 9 "Emerson/Liebert XDFN"
    - 3 Chillers on the roof
  - **450 TB storage** :
    - 13 DELL PowerEdge 2950
    - 26 Disk arrays MD1000 (15*1TB, RAID 6)
  - **42 Fujitsu Siemens** Primergy RX200 S4:
    - 2 Intel L5420 2.5 GHz
    - 16 GB memory
- **CARRIOCAS** project has ended successfully (use of a dedicated link between 4 sites at 40Gb/s)
  - Distributed LUSTRE file system
  - Remote display on a wall image
  - Machines are being incorporated into the GRID network to replace old hardware!

Windows news @IRFU

- First tests with **Windows 7** (Microsoft TAP program)
- All new laptop and desk top machines installed with **Windows 7 64 bits** by default (XP and 32 bits version on demand only).
- **Office 2007** being deployed (on 7 and XP)!

Revolution for the CEA

irfu

cea

saclay

- The CEA periodically **selects a vendor** for three years for laptop, desktop, servers, printers…
- The latest bid for laptop and desktop was won by **Lenovo**…

Any questions?

irf u

cea

saclay