

# LAL and GRIF Site Report

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# Infrastructure Issues

- LAL cooling infrastructure in a very bad shape...
  - Water chiller installed 4 years ago but almost dead: both condensers perforated...
  - Impossible so far to get any explanation from the manufacturer/maintainer but warranty (1y) expired
  - First attempt to repair one of the condensor this summer failed after 2 months
- Huge impact on LAL computing as this is the only one chiller
  - 50 to 75% of our grid WNs powered off since June
  - Several cooling outage in the last month due to the abnormal operating conditions (various securities)
  - Almost everything except critical services down since yesterday
- Long term solution unclear... but urgent!
  - Temporary solution: rent a chiller?

# Hardware Changes...

- Tru64 cluster decommissioning before June 2012
  - Still hosting critical file systems and the mail service (IMAP)
  - Very aggressive plan to meet the deadline
- Sun Cluster about to be “decommissionned” too
  - Never managed to get it reliable enough to take over Tru64 role
  - JBOD/disk firmware upgrade required but severe failure trying to do it this summer: 2 days of unscheduled down time, no explanation from Oracle for the problem
- NetApp being put in production
  - FA3200 (60 TB) bought and delivered in September
  - Will be the core file system server where high availability is required
  - Will also provide HA iSCSI for virtual machines

# ... Hardware Changes

- HP blade for capacity/performance storage
  - High density disk racks (MD600): 70 disks in 5U
    - 200 TB (usable) in RAID6
  - N+1 server configuration with easy swap capabilities
    - 4+1 servers
  - Both for grid and for internal usage
  - 1 issue (already) with integrated 10 GbE switch: price of SFP+ connectors
    - Restricted to HP (and other expensive) SFP+
    - Interested by any experience on how to disable the check?
- StratusLab private cloud for service virtualization
  - Starting with web servers and other simple services
  - Want to replace physics group old HW (5+ year) by virtual machines
  - Quattor used to generate the "golden images"
  - More at next HEPiX?

- Most systems running SL  $\geq$  5.3
  - Still a few SL4 servers, no known problems to upgrade them (except time!)
  - Beginning to deploy SL6 servers for new service machines
- Monthly deployment of errata if no urgent CVE
  - Done by one person for the whole GRIF every month
  - Rotating task among 4/5 people
  - Done with Quattor: errata templates fed back to the community

# Windows

- About to migrate our current AD to a new domain part of IN2P3-wide AD
  - Distinct for historical reason: LAL was the first to start with AD, IN2P3 AD based on LAL experience
  - Moving from 1 AD to another one is a complex operation
- Step 1: rename current domain to another name
  - Goal: free the domain name to use it for the new domain
  - The action with the most impact: do it first
  - Planned November 7
- Step 2: create the new domain in IN2P3 AD
  - Must allow for a transition period after renaming old domain: planned in December
  - Trust relationship between domains: transparent to users
- Step 3: migrate resources from old to new domain
  - Start with servers and new resources
  - May last 1 year... but no impact on users



# GRIF Update

- More resources... despite funding issues
  - 30K HS06, 2.2 PB of disks
  - Running smoothly except LAL (cooling problem)
- LHCONE
  - GRIF connected to prototype in production since mid-October
  - Migration went very smoothly: dynamic route advertizing
  - Should help to overcome limitation on general purpose connection for some GRIF sites
- Gnodal switches GS7200 at Irfu (2)
  - High-performance, low latency, level 2 only switches
  - High density: 72 ports per switches (1U)
  - Can be aggregated to form a bigger switch
  - Much lower price/port than level 2/3 solutions
  - Used by CCRT super computing center

# LAL Staff Changes

- 2 senior people + 1 sysadmin left operation team
  - René Bilhaut retired
- 2 new person joined as a replacement
  - Valérie Givaudan is the new head of operation group
- 1 open position: recruitment in progress, one person expected in December
  - Currently understaffed: progress on projets very slow
- Strong focus on improving internal processes
  - ITIL-based evaluation of our practices
  - Improved tracking of incidents and actions
  - More collective handling of various issues and tasks
  - Get more people involved in the documentation effort
    - Wiki based (Trac) for many years