



UK HEP System Manager Meeting

19 - 20 June 2008  
RAL

Diego Bellini



## **System Admin Staff:**

- Simon George
- Barry Green
- Diego Bellini (me)  
(start to be operative with new AY 08/09)



## Some General Data:

- ~ 11 PP Academic Staff
- ~ 15 PP Research Staff
- ~ 11 PP Research Students
- ~ 20 desktops (SL4)
- ~ 21 servers (SL4, Win NT, Win 2000 (not longer supported)/2003, Solaris 8)
- ~ 5 laptops at disposition to all the Group
- ~ 32 personal laptop for research purpose



## Grid Systems:

- Two clusters: 'Faraday', 'Newton'

### A. Faraday

- Supplier: Compusys
- Location: RHUL PP computer room
- 4 years old (1 year support remaining)
- 75 worker nodes with Intel Xeon (i686) 3GHz  
x2 cpu/node, 1GB mem/node  
=> 163 kSI2k
- 3 storage nodes, total 8 TB RAID6.
- o/s: RHEL3



## Grid Systems (cont'd) :

### B. Newton

- Supplier: Clustervision
- Location: hosted by Imperial College
- Installed December 07
- 50 worker nodes with 2x Intel E5345 2.3GHz (Clovertown) (total 8 cores), 16GB mem/node  
=> 960 kSI2k
- 15 storage nodes total 320 TB RAID6
- o/s: SL4

## Grid Systems (cont'd) : Faraday and Newton





## Since last September:

- New group web server ([www.pp.rhul.ac.uk](http://www.pp.rhul.ac.uk))
  - based on Twiki
  - conform to new college style
- Set up video conference suite (not widely used yet → not completely tested)
- Migrated last desktop from SL3 to SL4
- Problems with air-conditioning at RHUL
  - main impact on grid farm  
(after two months faulty sensors found)
- Set up a new laptop with SL4 (cont'd)



## New laptop with SL4:



User's requirements:

- use ATLAS Analysis software
  - run on SL4 → install SL4 on new laptop
- light and small

We added:

- main h/w works out of the box
  - so we can run update  
(not worry about sound, bluetooth, ...)

Chosen Model: Lenovo Thinkpad X61s

- Intel Core Duo L7500 1.6Ghz
- 2Gb memory, HD 160Gb, weight 2.33Kg, ~£ 1,250

Why?: same model previously bought with WinXP

→ tested with SL4 live cd



## Problem with the new laptop:

Different wireless card from previous laptop  
Intel 3945 versus Intel 4965 (supported on SL5)

## Solution:

Supported external wireless card  
(not need to recompile drive with kernel update)

## Feedback:

Has anyone found other laptops  
that run SL4 "out of the box" ?



## Plans for the future:

- Rationalize windows systems
- Review and plan SL5 upgrading (desktop and server, laptop)
- Plan and start to implement /home nfs server replacement (cont'd) and related backup system



## **File Server: Current Situation:**

- /home nfs server (4/5 old)
  - hardware:  
SUN E450, 80Gb raid 5, Ethernet 100Mb  
(failed to set up Eth 1Gb)
  - software:  
Solaris 8
- Backup system
  - tape driver for cartridge LT02 (200/400GB)



## File Server: plans

- /home nfs server
  - hardware:  
pc system, few Tb raid 6 or jbod,  
2 Ethernet 1Gb (trunked),
  - software: Solaris 10 with zfs
- Backup system
  - A. first file server
    - everyday day back from mainly /home server with rsync
    - dump of rsync backup
    - rotation of dump files
  - B. second file server (off-site)  
(off-site machine room under construction)
    - storage of dump file → no more tapes



## **File Server: feedback**

Some suggestion about possible configurations ?  
(e.g. h/w RAID6 vs JBOD or RAID6 vs ZRAID (zfs))

Some suggestion on what should we take in  
consideration?

Any experience with Solaris + zfs vs SL5?