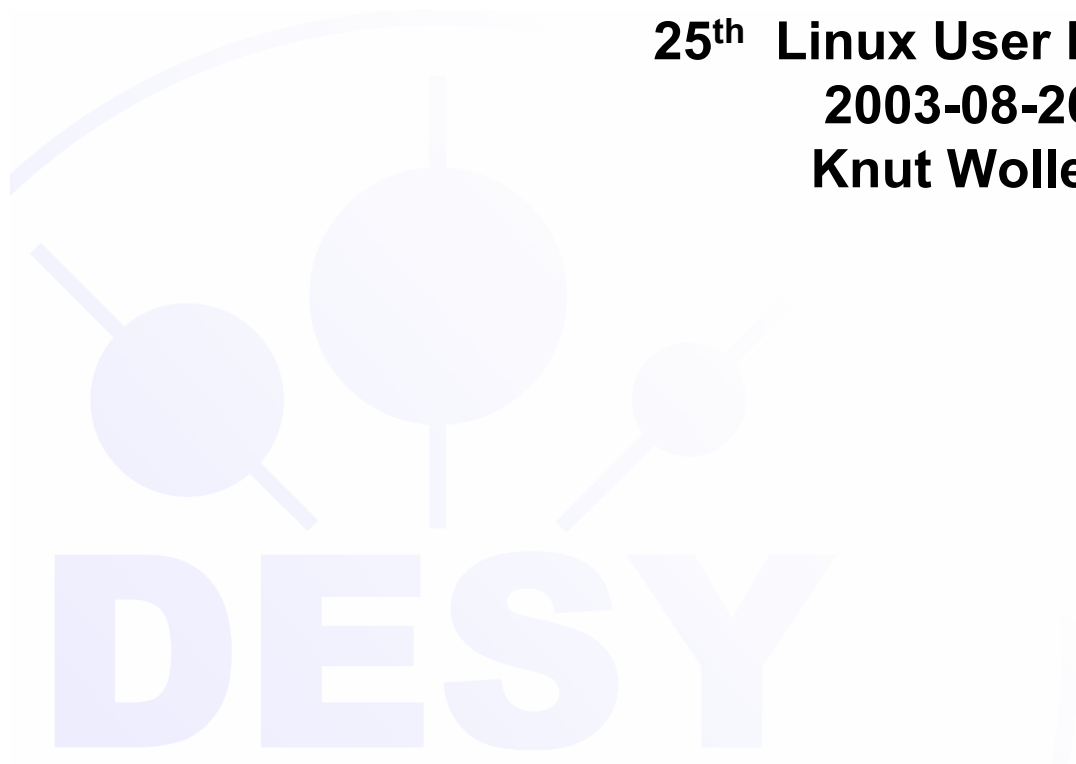




HAMBURG • ZEUTHEN

Hardware News

25th Linux User Meeting
2003-08-26
Knut Woller



DESY



Standard PC 0803 - Specs

- **Mainboard Intel D865-PERL, LoB, SoB**
- **Intel P4 2.4 GHz or higher, Hyperthreading**
- **Arctic Cooling Super Silent 4 TC**
- **2 DDR RAM 256MB (non ECC)**
- **Seagate ST360014A 60 GB 7200RPM**
- **DVD ROM Pioneer 106S**
- **1.44MB 3.5" Floppy**
- **LAN on board Intel 82562EZ, 10/100, PXE**
- **ATI Xpert 2000 32 MB AGP Graphics Adaptor**
- **Sound on Board SoundMAX 4 XL, AD1985**
- **Keyboard Cherry G80-3000 PS/2 no click, German or US**
- **Mouse Logitech Pilot+ optical USB, PS/2 Adaptor**
- **Desktop or Minitower, 300W, Low Noise Fan**
- **OS-Default is Windows XP**



Standard PC 0803 - Features

- **Intel Hardware (better Linux drivers, better vendor support, longer product lifetimes)**
- **Low Noise Disk and CPU Cooler**
- **Higher Memory Bandwidth (Dual Channel DDR)**
- **Larger Disk (less noise than 40GB model)**
- **Front Panel USB and FireWire**
- **USB Mouse**
- **Significantly cheaper**
- **DL4 with new kernel works (except sound)**



SPC Delivery Delays

- **We are currently out of stock (and have been for weeks)**
- **Workshops orders have piled up**
- **DESY is going through tender procedure with the new specs**
- **Tender deadline today**
- **Expect order placed next week**
- **Delivery hopefully by mid September**

DESY



Notebook Standardization

- **Vendor presentations with Dell, HP, Fujitsu-Siemens, Toshiba**
- **Waiting for complete product lines based on Centrino technology**
- **Try to select and contract one vendor by the end of the year**
- **Until then: Dell D-Series recommended**
- **See <http://www-it.desy.de/systems/services/s-pc>**



dCache Server Solutions

- Most of the dCache read pool is running on DELFI servers
- DELFI features:
 - Low cost controllers and disks
 - Integrated storage server, capacity oriented
- DELFI flaws:
 - Storage tied closely to server
 - I/O bottlenecks in PCI and Gigabit Ethernet bandwidth
 - Disk capacity has grown much faster than CPU power
 - 3ware Controller port density and throughput is limited

Large Disk DELFIs typically have a mismatch of CPU power and storage capacity. Strong coupling of storage and server reduces cost and uptime.

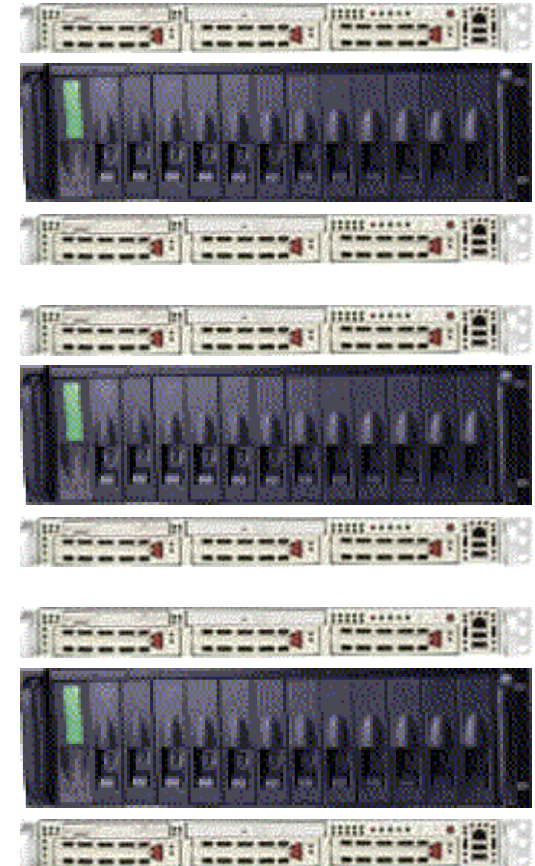
dCache Server Solutions

- **Idea:**
 - **Use large (12 or more) SCSI to IDE RAID array on performant controller (Infortrend or Accusys), allowing for hot spare**
 - **Attach two servers per storage unit (access redundancy, double bandwidth)**
- **Hardware slightly more expensive**
- **Units (servers and RAIDs) are well tested configurations with warranty and optional service contracts**
- **Servers need not be Intel-based**

dCache Server Solutions Example

- **AU Oxygen 320 RAID**
 - Up to 3.6 TB Capacity (12x300GB)
 - RAID 0, 0+1, 1, 3, 5
 - Up to 1GB SDRAM Cache
 - U160 SCSI SCSI (or FC) Host Channel
 - Redundant Hot Swap Power and Fans
 - 3 Years Express Service (next day parts)

- **Supermicro Superserver 6013P-8**
 - Dual Xeon up to 3.06 GHz
 - Up to 12 GB DDR ECC RAM
 - Intel E7501 Chip Set
 - Up to three U320 SCSI Disks
 - Dual Intel Gigabit (Copper)





dCache Server Solutions Status

- **Four Intel nodes with two RAIDs in test operation**
- **20 SPARC nodes (SunFire V210) with 10 RAIDs delivered for central pool, in preparation**
- **We believe that read pool performance, stability and availability will be significantly higher than with DELFI servers**
- **We encourage you to not buy DELFI servers for dCache any longer**