Linux User Meeting.

Linux Status Report

Hardware, Clusters, Distributions

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37th Linux User Meeting
2008-10-29

Agenda

1. K. Woller: Linux Status

   > Hardware

      > Standards and Ordering procedures

   > Clusters

      > PAL and BIRD

   > Distributions

      > SL Roadmaps, News, and Policy Changes

2. F. Schlünzen: Software

3. T. Finnern: HEPiX Report

4. Miscellaneous

Hardware: DELL Launches E Family Notebooks

> D series still available until end 2008

> Main Features (see www.dell.com):
  - Day batteries (claimed up to 19h)
  - Centrino 2 chipset,
  - Numerous options

> We have ordered E-series test models
  - Not yet listed in AMS; SPC is waiting for DELL

> Linux compatility not clear yet
  - Expect temporary problems with WLAN
  - Leading edge distros will be first to run (Ubuntu, Fedora)

Migration Scenario:

D430 → E4200	12" 0 spindle ULV	
E4300	13" 2 spindle	
D630 → E6400	14" 2 spindle	
D630 → E6500	15" 2 spindle	

Status: Obsolete!

Source: Internet

	CY'08–Q1			CY'08–Q2			CY'08–Q3			CY'08–Q4			CY'09–Q1		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar

Ultra Portable

D430

E4300 Intel Montevina, SV, 13" Wide 2-Spindle

E4200 Intel Montevina, ULV, 12.1" Wide, 0-spindle

XT2 Convertible Tablet

XT Convertible Tablet

Mainstream

D830

E6500 Intel Montevina, 15.4" Wide L

E6400 Intel Montevina, 14.1"

E6400 ATG Semi-rugged

D630/D630c

ATG D630 Semi-rugged

D630 XFR Fully-rugged

Essential

E5500 Intel Montevina, 15.4" Wide L
E5500a AMD, 15.4" Wide LCD

E5400 Intel Montevina, 14.1" Wide LCD
E5400a AMD, 14.1" Wide LCD

D531

D530

All announced early, but delayed by months due to chipset problems.

Server „Best Buys" in Fall 2008

> ## Compute Nodes:

- DELL PowerEdge 1950 (1u, 2x3.5"disks, 2xQuadcore Intel CPU, up to 64GB)

- DELL PowerEdge M600 (Blade, 2x2.5"disks, 2xQuadcore Intel CPU, up to 32GB)

> ## Workgroup Server

- DELL PowerEdge 2950 (2u, 6x3.5" or 8x2.5"disks, 2xQuadcore Intel CPU, up to 64GB)

- DELL PowerEdge R805 (2u, 2x3.5" disks, 2xQuadcore AMD CPU, up to 128GB)

- DELL PowerEdge 1950 + MD1000 Storage Array (15x3,5" disk)

> ## Storage Server

- DELL PowerEdge 1950 + MD1000 Storage Array (15x3,5" disk)

- SUNFire X4540 „Thor" (2xQuadcore AMD, 64GB, 48x3.5" disks)

For consultation and quotations: e-mail it-sales@desy.de

Order Procedures

> In preparation for e.biss, IT and V4 have tendered for frame contracts

- Server prices went down by 20% in January 2008. notebooks by 15% in May.

> Current contract partners are

- Notebooks: DELL

- Desktops: Comptronic

- Displays: Comptronic

- Servers: DELL, MCS (SUN), Comptronic

> For all of these, no BA is required

- BAs for contract partners will be converted to order calls by V4 and/or IT

- Notebooks, desktops, displays, and small servers can be ordered through AMS

- For larger systems (300+ €), contact it-sales@desy.de

> Procedures are supposed to change once e.biss is established

- We´ll keep you informed

Pal Cluster

> „Publically Available Linux"

- Intended for users whose groups don´t run their own compute clusters

- Light weight interactive use only

  - Mai, Web, Code development, batch submission etc.

- AFS file system, no NFS data store

- Accessible for all AFS users

> System Setup since August 2008:

- Operating System: Scientific Linux DESY 5 (SLD5), 64bit version
  Number of nodes: 4
  CPU cores per node: 8
  Core clock frequency: 2.5 GHz
  Memory per core: 2 GB
  Local scratch space: 100 GB

 **http://www-it.desy.de → Services → Login → Unix Login Cluster**

BIRD Cluster

> „Batch Infrastructure Resource at DESY"

- Batch System: SGE (Sun Grid Engine)

> Local (i.e. non-GRID) batch farm for AFS users

- Requires enabling of „batch" ressource in the DESY registry
- Jobs can be submitted from PAL or selected group specific hosts

> Integration of isolated work group clusters foreseen (and encouraged)

- Including NFS mounts (but no FC or IB storage) and server hardware „donations"
- Fair share algorithms apply

> Currently more than 120 cores running SLD4 and SLD3

- 1-2GB memory per core
- SLD5 token extension is work in progress

http://www-it.desy.de → Services → Batch Systems → SGE

Red Hat Lifecycle and Support Policies
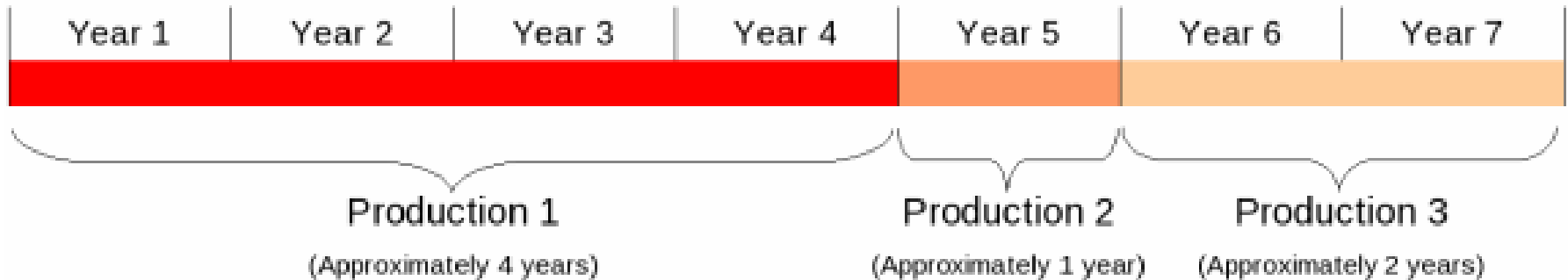
https://www.redhat.com/security/updates/errata/ defines a modified policy:

> Support cycle extended to seven years (see above)

> *"commercially reasonable efforts to maintain binary compatibility"*

> *"Errata may contain security and bug fixes, as well as feature enhancements."*

Such enhancements may break compatibility with your applications or environments. One example is Firefox3 in RHEL 4.7 and 5.2

DESY Hamburg Production Releases

> SLD 4.6 is default for SL4 installations (32 and 64 bit)

- SLD 4.7 is available on request to linux@desy.de

> SLD 5.1 is default for SL5 installations (32 and 64 bit)

- SLD 5.2 is available on request to linux@desy.de

> SLD 4.7 and 5.2 come with Firefox3

- Including a few open issues with caching, printing and certificates
- See F. Schlünzen´s contribution

Scientific Linux 5.x				
Release	**Arch**	**Release Date**	**Release Notes**	**End Support**
50	i386 x86_64	04 May 2007 16 May 2007	Notes - i386 Notes -x86_64	Until at least 2010-10-10
51	i386 x86_64	16 Jan 2008 16 Jan 2008	Notes - i386 Notes -x86_64	
52	i386 x86_64	26 Jun 2008 26 Jun 2008	Notes - i386 Notes -x86_64	
Scientific Linux 4.x				
Release	**Arch**	**Release Date**	**Release Notes**	**End Support**
40	i386 x86_64	21 Apr 2005 22 Apr 2005	Notes - i386 Notes -x86_64	2010-10-10
41	i386 x86_64 ia64	4 Aug 2005 18 Aug 2005 8 Aug 2005	Notes - i386 Notes -x86_64 Notes -ia64	
42	i386 x86_64	22 Nov 2005 22 Nov 2005	Notes - i386 Notes -x86_64	
43	i386 x86_64	8 May 2006 8 May 2006	Notes - i386 Notes -x86_64	
44	i386 x86_64	9 Oct 2006 11 Oct 2006	Notes - i386 Notes -x86_64	
45	i386 x86_64	25 Jun 2007 25 Jun 2007	Notes - i386 Notes -x86_64	
46	i386 x86_64	12 Mar 2008 12 Mar 2008	Notes - i386 Notes -x86_64	
47	i386 x86_64	03 Sep 2008 03 Sep 2008	Notes - i386 Notes -x86_64	
Scientific Linux 3.0.x				
Release	**Arch**	**Release Date**	**Release Notes**	**End Support**
309	i386 x86_64	12 Oct 2007 12 Oct 2007	Notes -i386 Notes -x86_64	Oct 2010

SL News from HEPiX (as reported by T. Dawson/FNAL)

> SL4 End of Support Life remains at October 2010 (same as SL3)

- No lab requested an extension

> Discussion on SL4/SL5 support for brand new hardware

- Variety of strategies in different labs, including:

  - Freedom of choice for desktop and notebook diestributions (Ubuntu, Fedora)
  - Buy branded servers/dekstops with certified RHEL preinstalled
  - Fermi Linux STS will be based on Fedora

> Community requests Java 1.6

- E.g. dCache

- Will be put into „testing" for a month

- May be pushed out beginning Dec 1st, 2008 (unless tests fail)