

Future DESY strategy for

- RHEL 7
- DESY Linux Desktop and Laptop

Yves Kemp, with lots of input from many others

Linux User Meeting
12.3.2015

- > RHEL 7
- > ... and derivatives
- > At DESY



RHEL and derivatives

> CentOS being part of RedHat

- ScientificLinux or CentOS: Question is relevant again
- First impression: “both are equally OK”
- Some differences are non-technical, or only of relevance for core-admins
- Maybe (!) CentOS now gets similar support by third party vendors as RHEL ... missing in the past with SL

> IT will offer a free derivative of RHEL 7

- Final decision SL 7 or CentOS 7 only after migration RHEL 7.0 -> RHEL 7.1 (and how CentOS and SL will follow)
- Dependencies will/should be minimal, so switch should be possible
- Naming will be “EL7” –Enterprise Linux and independent of CentOS or ScientificLinux
- Currently only planned for x86-64



RHEL and derivatives

- > EL7 installation and administration only for server and VMs
 - Will not take 1:1 the full support life cycle of RHEL (10y) ... see next slides

- > RHEL 7 strengthens server capabilities
 - No EL7 installation on desktop or laptop supported by IT
 - If necessary enlarge PAL infrastructure with EL7



A look at the RHEL Support Policy

Red Hat Enterprise Linux 5

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)	End of Extended Life Phase
March 15, 2007	January 8, 2013	January 31, 2014	March 31, 2017	March 31, 2020

Red Hat Enterprise Linux 6

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)	End of Extended Life Phase
November 10, 2010	Q2 of 2016	Q2 of 2017	November 30, 2020	November 30, 2023

Red Hat Enterprise Linux 7

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)	End of Extended Life Phase
June 10, 2014	Q4 of 2019	Q4 of 2020	June 30, 2024	June 30, 2027



... and what IT plans to support

Red Hat Enterprise Linux 5

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)
March 15, 2007	January 8, 2013	January 31, 2014	March 31, 2017

SL5: No new desktop installations
 SL5: Server installation on request only
 SL5: No new config features

Red Hat Enterprise Linux 6

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)
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SL6: No new desktop installation after:
 No new config feature after:

SL6: Server installation on request only after:

Red Hat Enterprise Linux 7

General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)
June 10, 2014	Q4 of 2019	Q4 of 2020	June 30, 2024

EL7: No new config feature after:

EL7: Server installation on request only after:



... and what IT plans to support in text form

> SL5:

- No new desktop installations
- Server installation on request only
- No new config features

> SL6:

- No new desktop installation after: Q2 2016
- No new config feature after: Q2 2016
- SL6: Server installation on request only after: Q2 2017

> EL7:

- No desktop installation
- No new config feature after: Q4 2019
- SL6: Server installation on request only after: Q4 2020



- > Ubuntu
- > ... and the DESY Linux distro on desktops



Linux-Desktop @ DESY

- > We see increasing request for Ubuntu Desktop installations
- > Usually the LTS version is asked for
 - Some basic, current design criteria are questioned by users ... see later
- > **Proposal:** Only install and support the current Ubuntu LTS version
 - as of today Ubuntu 14.04, changes very two years



Proposal for installation and configuration details

- > Hardware: Only support DESY standard desktop (inkl. Graphics card) with *one* standard monitor, mouse, keyboard, sound
 - Other hardware may be supported if of broader interest (e.g. one webcam)
 - DESY standard desktop in version ABC only supported for Ubuntu XYZ ... other can work, but not guaranteed (and no manpower invested if not working)
- > Kerberos: Systems are fully kerberised
- > AFS is installed and configured as client - but \$HOME located on /home local partition
- > Graphical user interface: Only support the current Ubuntu standard, which currently is Unity
- > We strongly discourage the usage of the @sys variable
 - Instead explicit naming in the path

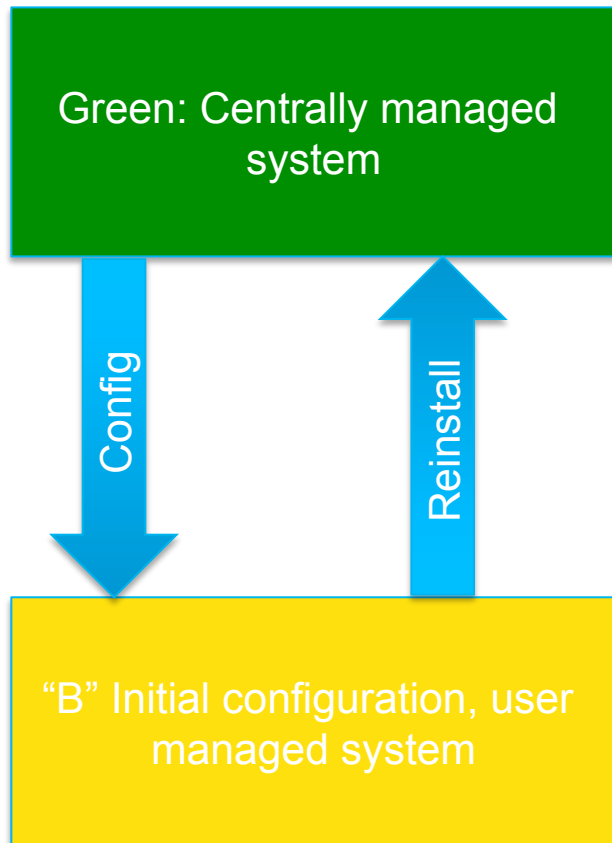


... one more word on \$HOME proposal

- > K5 and AFS token created on login
- > AFS is still mounted and accessible
- > For data that needs backup or that is sensitive: Still use AFS e.g. via links
 - `ln -l /afs/desy.de/user/k/kemp/documents /home/kemp/documents`
 - `ln -l /afs/desy.de/user/k/kemp/private /home/kemp/private`
 - `ln -l /afs/desy.de/user/k/kemp/mycode /home/kemp/mycode`
 - AFS can play off its strength of secure, global filesystem
- > Some problems observed with AFS on desktops as \$HOME (!):
 - Token expiration
 - No sockets : Problem Akonadi – used by many KDE or plasma widgets
 - ...



Administration: two flavours of Ubuntu LTS policy



> Green: Centrally managed system

- IT installs, configures and manages via Puppet & Co.
- Users and group admins have no config (no root login)
- Software or config wishes can be deployed on group basis if desired and no side impact
- Users able to install software from predefined repos

> Yellow: Initial configuration, user managed system

- Initial installation and basic configuration via IT using Puppet
- ("RSR-konform" ... "Mail-Master-friendly")
- User and/or group admins get root-login and are responsible for management ... no further config or management by IT

> Change Green->Yellow always possible

> Change Yellow->Green only via re-installation

Group specific configuration within **green**

- > User needs special package from standard repo: Just install it themselves
 - Though not necessarily support for the software from IT

- > If a group has needs for special, *simple*, configuration:
 - E.g. NFS mount of fileserver on all desktops: Can/Will be done by IT
 - E.g. all users from group need package XYZ from standard repo: Configured by IT

- > If a group has needs for special, *advanced*, configuration:
 - IT cannot create and maintain configuration
 - IT can offer access to Puppet for group admins: Group admins get tutorials, and can perform configuration for their systems – and are responsible for this part of the configuration
 - Slightly modified version of **Green** with shared responsibilities
 - Example: Beamline machines with special hardware and setup



... And there is a third alternative **red**

- > User driven installation and configuration still allowed – within the rules of the RSR
 - E.g. for other distributions (SuSE, ...)
- > IT Support: Good (or improved😊) documentation of basis configuration
 - Configuration parameters for IP/DNS/NTP ?
 - Configuration parameters for Kerberos & AFS ?
 - Configuration parameters for printing, mail, ... ?
 - Which RSR rules are there, and basic config parameters ?
 - How to become mail-master friendly? (postfix 0-client)
 - ...
 - **Important: Also of interest for Mac-users!**
- > Otherwise users are on their own, no support from IT



Laptops

- > **Currently:** Bring-in service, one-time installation and configuration with current Ubuntu distro (LTS if possible, otherwise the current non-LTS version)
 - Later: Best-effort support
- > **Future:** We guarantee that DESY standard laptops will work with *one* Linux distro ... usually the current Ubuntu version
- > Installation protocol (including tweaks and non-functional parts) made available “as is”
- > Installation, configuration and administration: User and/or group admin
 - Can/should use documentation for class “red” systems
- > No further support by IT



“Our software only runs under SL”!

- > ... is this really so? Sometimes we can help to get software running on other distros
- > If so: Is there a need to have the software installed on all desktops of a group?
- > What about the previously described model “one/some WGS (=server in computing center) with SL/EL and Ubuntu desktops as access points”?
 - Need to discuss with users and groups
- > Potentially IT needs to enlarge PAL or similar resources for this purpose



PAL: Public Access Linux

> PAL

- SL5: legacy support until latest 31.3.2017 ... but usage already now discouraged
- SL6: current default (=pal.desy.de) ... for some time. Legacy support until latest 30.11.20120
- EL7: pal-el7 one of first EL7 systems, awaited 2015Q2
- Ubuntu: Always current Ubuntu LTS (aktuell 14.04) ... if new LTS version available reinstallation within “several weeks” ... paul.desy.de

> Login:

- ssh / ssh -X ...
- VNC for graphical work
- **FastX: for graphical work with low bandwidth and high latency**



Future desktop hardware

- > Powerful “workstations” more and more niche product
- > Normal desktop will always exist
- > More small form-factor systems will emerge: “Mac-Mini” form factor, e.g. Intel NUC, some new DELL systems, ...
 - These are “better thin clients”
- > ... or no desktop at all: People using laptop (or even Macs 😊)
- > ...and potentially a new work model
 - The machine on your desk has a good distro for office work, code development and low-performance work
 - High-performance work is done somewhere else, where hardware and/or distro fit better: Workgroup-Server / Batch / HPC-Cluster ...

