

*ELRepo: Improving hardware  
support on RHEL and clones*

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# *What is ELRepo ?*

*Community project to improve RHEL hardware support*

- RPM repository for RHEL, CentOS, Scientific Linux
  - Supporting i386 and x86\_64
  - Built on RHEL5 and RHEL6
- Focusses on “drivers” for RHEL-based kernels
  - More than 300 different drivers
- For the community, by the community

# *Who is ELRepo*

- Founders
  - Akemi Yagi - toracat
  - Alan Bartlett - burakkucat
  - Phil Perry - NedSlider
  - Steve Tindall
- Contributors
  - Phil Schaffner
  - Dag Wieërs - dag
- Various individual contributors
  - You ?

# *What drivers ?*

- Providing (backported) “driver” packages for:
  - Hardware specific drivers
    - **Vendor-recommended drivers (network, storage)**
    - Video4Linux (more than 250 webcam drivers)
    - Audio drivers (eg. alsa)
    - Xorg + Video drivers (eg. Nvidia, ATI: fglrx)
    - Wireless (all drivers + firmware, ndiswrapper)
  - Kernel functionality
    - Filesystems: drbd, fuse, ntfs, reiserfs, hfs, hfsplus, openafs, minix, ocfs2, ...
    - Other: Flashcache, hyperv, ...

# *What drivers ?*

rt3572sta sierra rt5370sta ufs  
thinkpad\_acpi et131x udafb **pata** w83793  
dahdi option atyfb ch341 rr62x cp2101 eepr100 ctxfi rt2870sta  
rr2310 pata\_via r8169 openswan-ipsec nx1001 bbswitch  
asix r8168 arcmsr hellop rt2860sta dahdi vt1211  
e100 r8192ce ath9k ntf s adt7473 hyperv minix  
drbd84 hso fglrx sis190 aacraid r8101  
openafs rts5139 reiserfs ieee1394 tg3 be2net  
rr172x forcedeth lin\_tape openafs mptfusion cciss mmc pc87427  
rr174x ipset tp\_smapi ocfs2 rtl8187se lp nvidia-96xx xpad dac960 powernow-k8  
kqemu r8192cu rt3090sta fuse ndiswrapper sparse-keymap  
via-cputemp nvidia ipg **video4linux** sata\_via rt3070sta  
e1000e igb flashcache r8192se video4linux joydev e1000  
sc92031 asus-wmi atl1e k10temp hyperv atl2 drbd83 sk98lin  
forcedeth w83627hf atl1 dpt\_i20  
tulip jme jfs rt3562sta fglrx93 rt5390sta mISDN

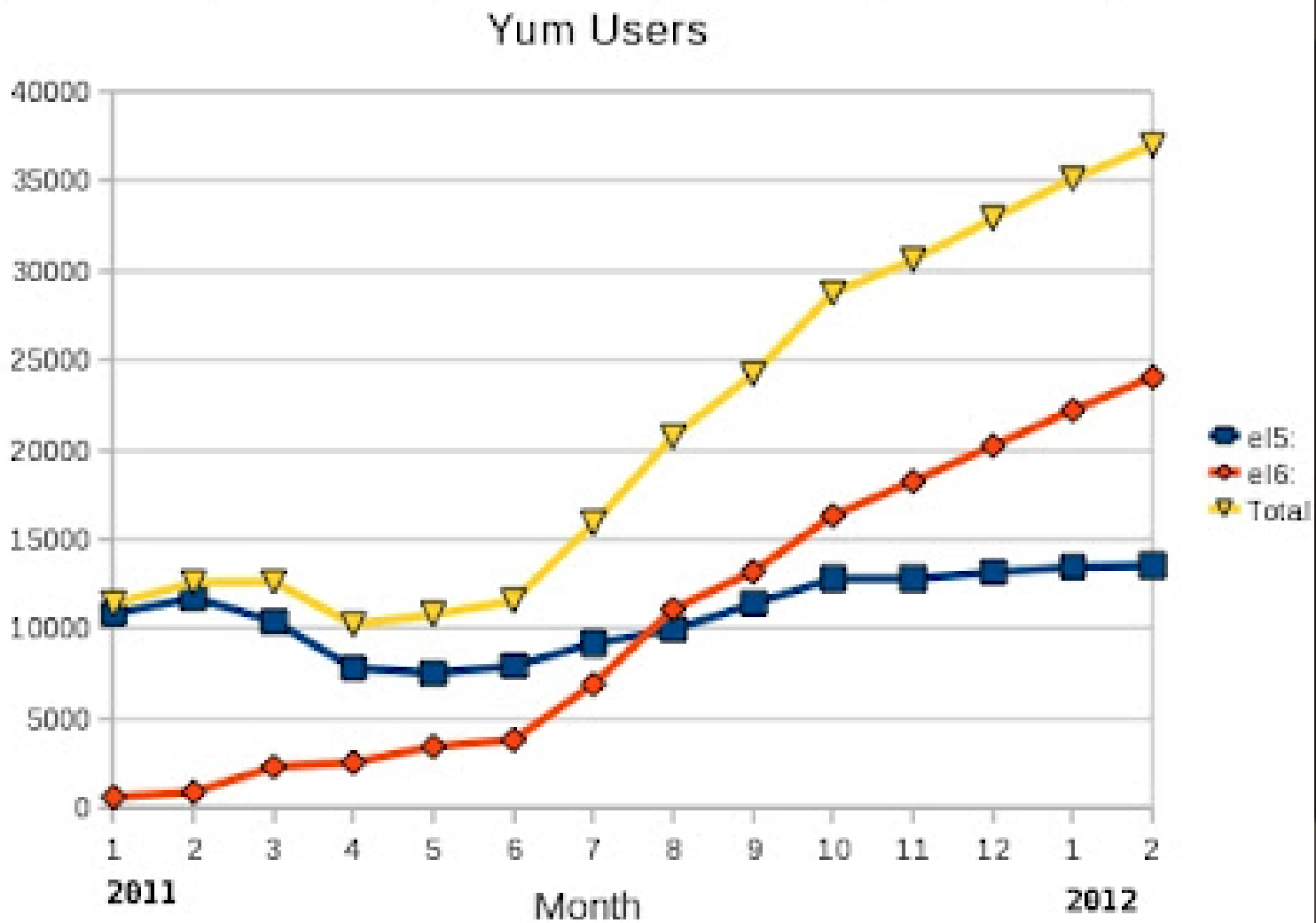
# *Why ELRepo drivers ?*

- Red Hat supports hardware based on:
  - Internal support resources
  - Customer needs
  - Risk assesement
  - Ships with their kernel
- Red Hat seldom backports stuff
- CentOS and Scientific Linux suffer from that too

# *Why ELRepo drivers ?*

- Properly packaged drivers in RPM
  - ELRepo coexists with other 3<sup>rd</sup> party repositories
- ELRepo “drivers” are built on RHEL
  - Works for specific RHEL kernels (2.6.18 and 2.6.32)
- ELRepo kmod packages are RHEL kABI-tracking
  - They do not require a reboot or compilation
  - They survive kernel updates

# Growth





# *ELRepo's mainline kernel*

- Separately packaged as *kernel-ml*
  - Allows for co-installation with base kernels
- Useful for:
  - Testing hardware with newer kernels
  - Selecting drivers for back-porting efforts
  - Report regressions to kernel developers
- Not intended for production use and provided as-is
  - But sometimes provides a useful alternative

# *Mainline kernels for RHEL*

- Stable release:
  - kernel-ml-2.6.35 (EL5)
  - kernel-ml-3.0.26 (EL6)
- One kernel too far:
  - kernel-ml-2.6.39 (EL5)
- Most recent mainline kernel:
  - Kernel-ml-3.3.0 (EL6)

# *How to contribute to ELRepo ?*

- Contact us:
  - Through issue-tracker
  - On the mailinglist or in private
- Contribute based on our templates
  - Do a pull-request on Github
  - Offer to maintain it
- Documentation exists for helping you start

# *How to contribute to ELRepo ?*

- Website: <http://elrepo.org/>
- Blog: <http://elrepoproject.blogspot.com/>
- Package index: <http://elrepo.org/linux/elrepo/>
  - Stable, Testing, Extras, kernel-ml
- Collaboration:
  - Github: <http://github.com/elrepo>
  - Mailinglist: <http://lists.elrepo.org/mailman/>
  - Bug-tracker: <http://elrepo.org/bugs/>

*Thank you for listening*

Any feedback ? Pull requests ?