

Update On Scientific Linux

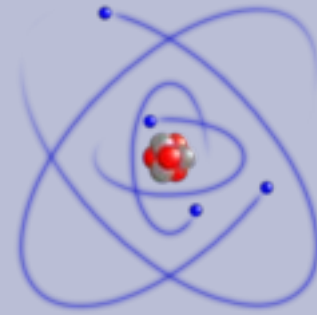
Troy Dawson

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HEPIX Fall 2008

October 22, 2008

Witty Comment



- PROGRAMMER'S DRINKING SONG

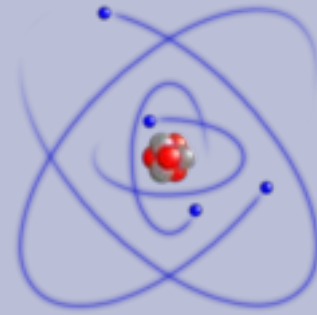
100 little bugs in the code,
100 little bugs in the code,

fix one bug, compile it again,
101 little bugs in the code.

101 little bugs in the code.....

Repeat until BUGS = 0

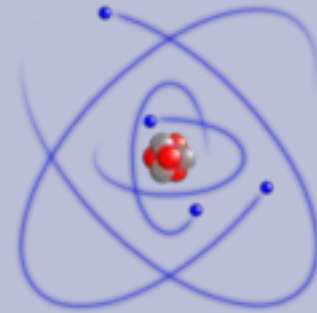
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- Presentation Overview
 - 2005 to the Present
 - The last six months
 - What we are currently working on
 - What we see in the future

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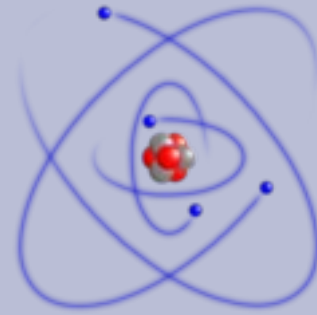
2005 - Present



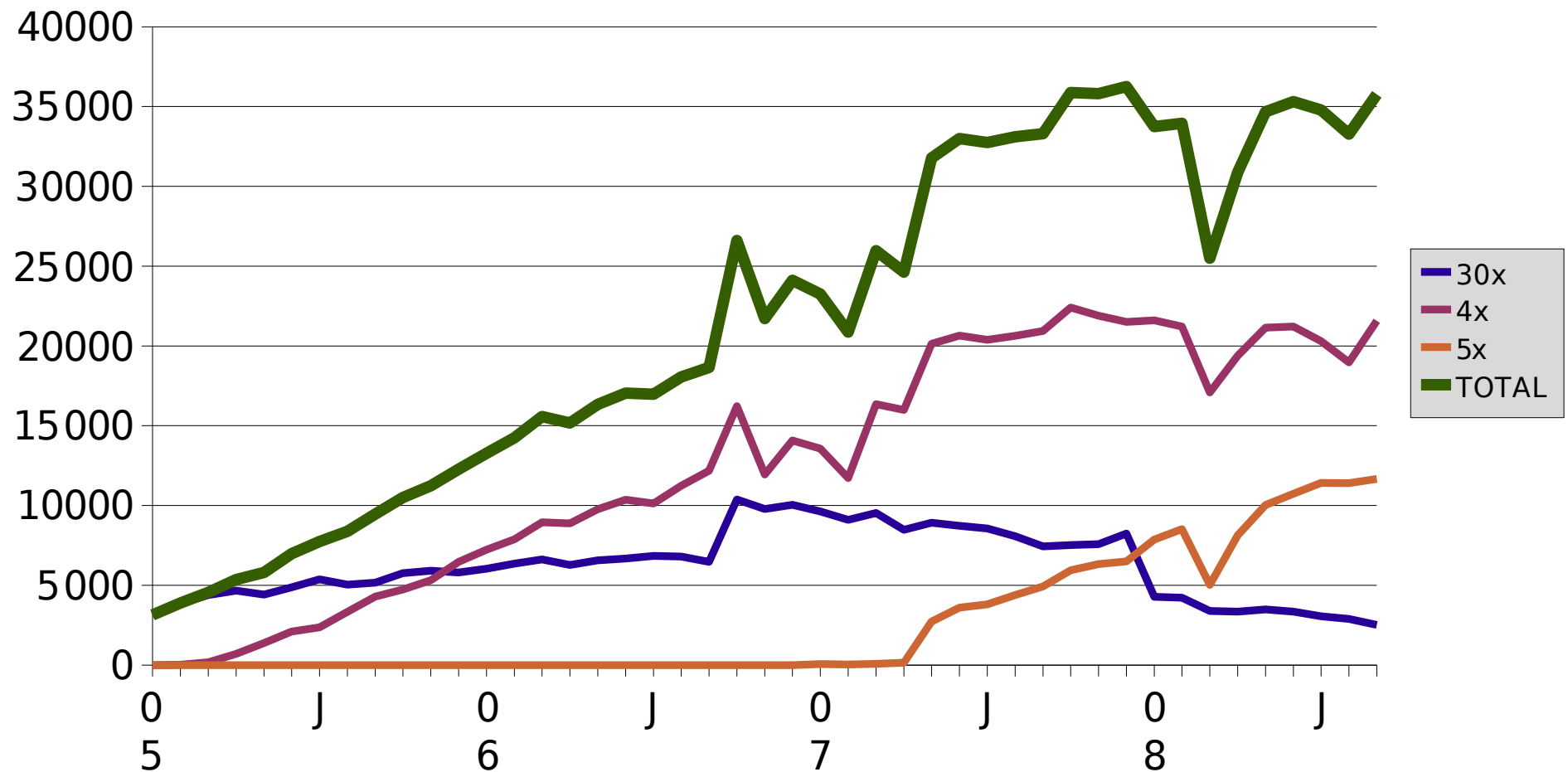
- The following statistics were gathered from <ftp.scientificlinux.org> log files
 - These numbers are the minimum. We know that they are higher.
 - These numbers are based on the yum and apt access to the errata
 - We currently have 27 public mirrors, and know of 185 sites mirroring us. These statistics do not represent any of the mirror sites.

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2005 - Present

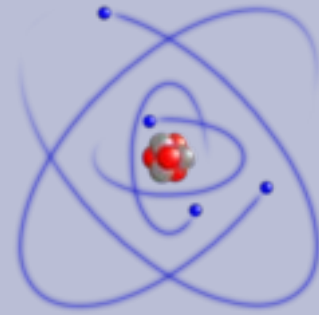


2005 to Present - By Release

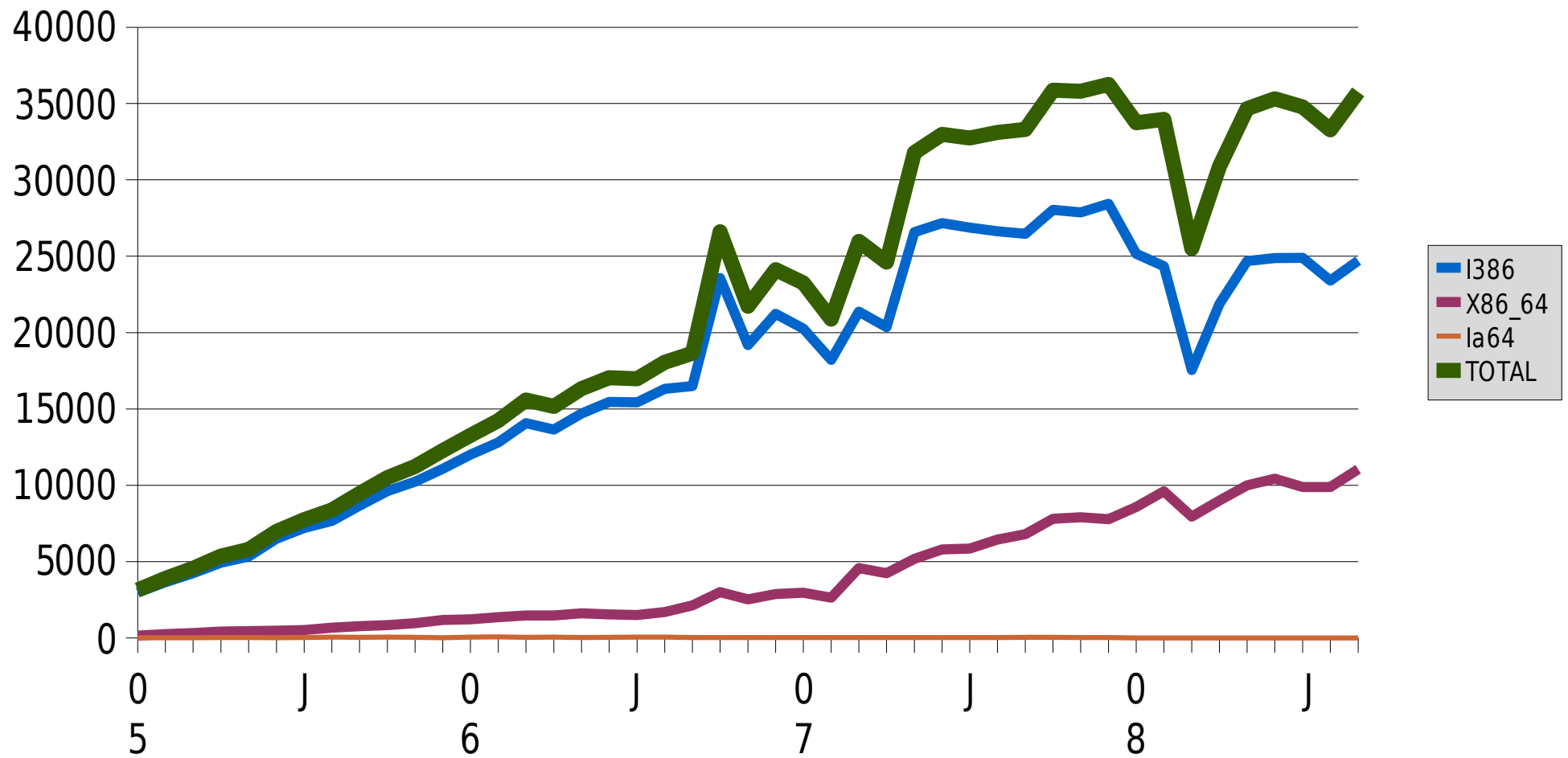


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2005 - Present

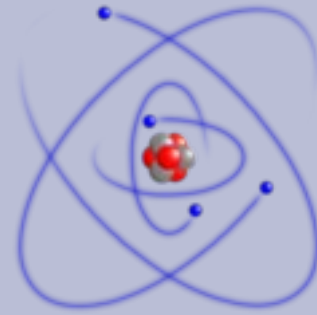


2005 to Present - By Arch

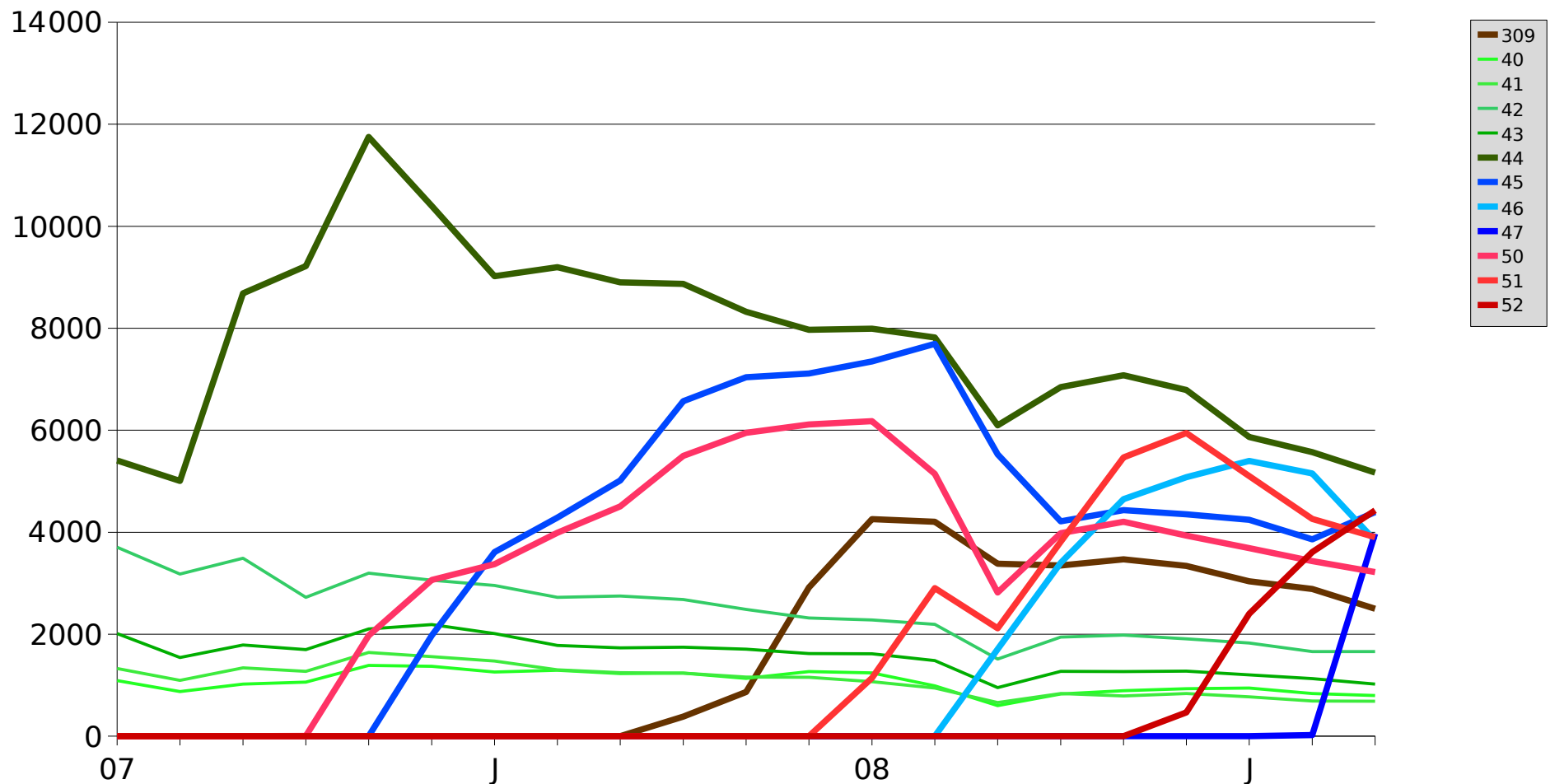


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2007 - Present

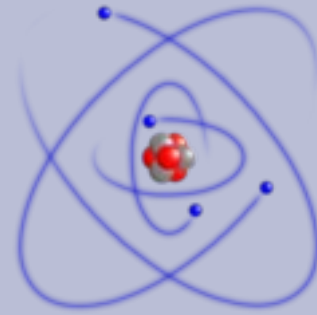


2007 to Present - By Individual Release

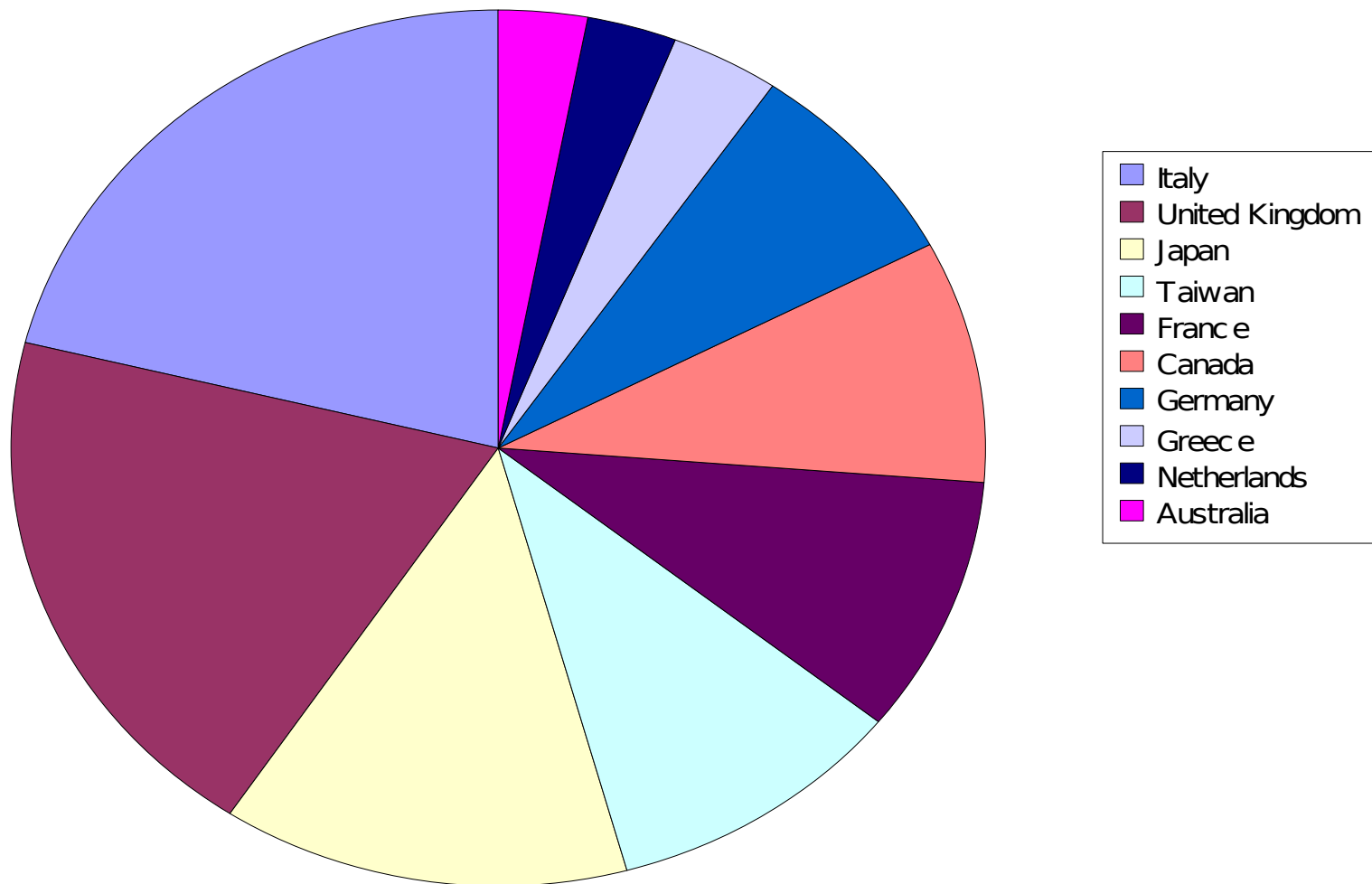


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2005 - Present

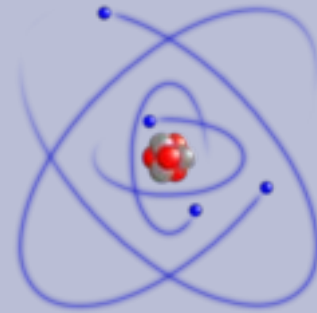


Top 10 Downloads by MB by Country



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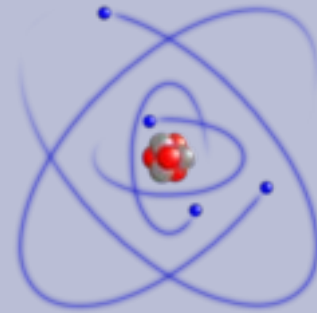
The Past Six Months



- **S.L. 5.2 released – June 2008**
 - For i386 and x86_64
 - **Programs that were added**
 - XFS File System - Post install only
 - dkms
 - kdeedu
 - Yum utilities: yum-aliases, yum-basearchonly, yum-filter-data, yum-list-data, yum-merge-conf, yum-protect-packages, yum-refresh-updatesd, yum-upgrade-helper
 - **Programs that were removed**
 - pine - replaced by alpine
 - r1000 - in the SL 5.2 kernel
 - yum-installonlyn - in the SL 5.2 yum

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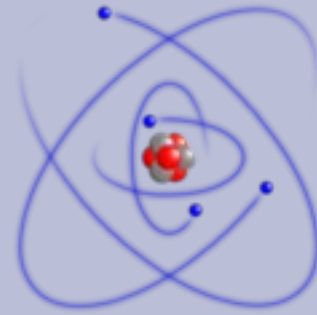
The Past Six Months



- S.L. Live 5.2 released – August 2008
 - For i386 and x86_64
 - CD, DVD, mini-CD
 - Changes can be stored persistently on a storage device like an USB key
 - can be installed on USB key, or local hard disk
 - LiveCD can be mounted over NFS (diskless client)
 - Programs added that are not part of the plain SL 5.2
 - ADDED: ntfs-3g (read/write NTFS support), ntfsprogs, kernel-module-ntfs, gparted, testdisk, dd_rescue, partimage (only i386 and DVD), iperf, aufs

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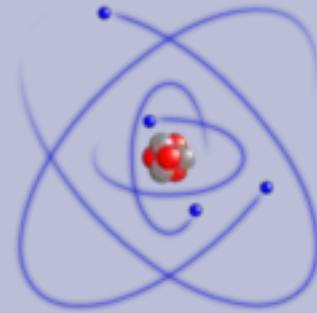
The Past Six Months



- S.L. 4.7 released – September 2008
 - For i386 and x86_64
 - Has Firefox 3
 - Programs that were added
 - 915resolution
 - Programs that were removed
 - pine - replaced by alpine

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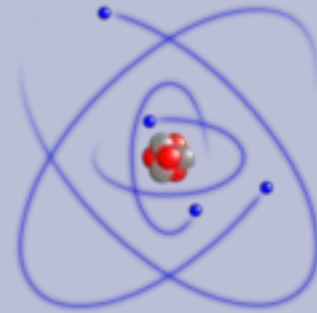
The Past Six Months



- S.L. Live 4.7 released – October 2008
 - For i386 and x86_64
 - CD, DVD, mini-CD
 - LiveCD/DVD can be installed to local hard disk
 - Changes can be stored persistently on an external device like an USB key
 - LiveCD can be mounted over NFS (diskless client)
 - Programs added that are not part of the plain SL 4.7
 - ntfsprogs, kernel-module-ntfs, qtparted, gparted, testdisk, dd_rescue, partimage (only i386), iperf, tkcvs, ms-sys, unionfs and squashfs for w/r live system

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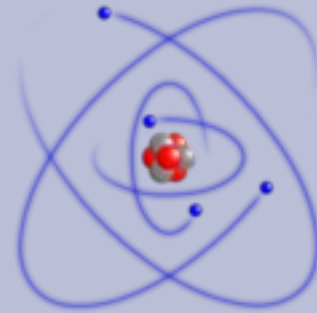
The Past Six Months



- Scripts for automatic download and building of RedHat errata were finished
 - Using virtual machines for SL3 and SL4
 - Using mock for SL5
 - Some items still have to be done by hand, such as kernel modules.
 - SL4 x86_64 virtual machine kept putting 64 bit libraries in the 32 bit directories
 - The problem ended up being /etc/rpm/platform
 - Virtual Machine had: ia32e-redhat-linux
 - Real Machines had: x86_64-redhat-linux
 - It was causing some rpm macro's to be set wrong

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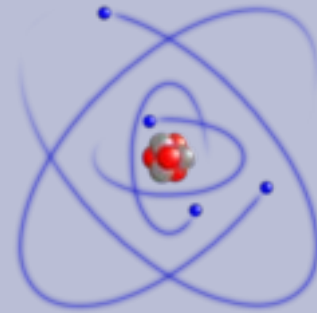
The Past Six Months



- Security updates continually released for all supported versions
- Fastbugs are now more consistent
 - Fastbugs are for SL4 and SL5
 - We push them out once a week - usually Wednesday

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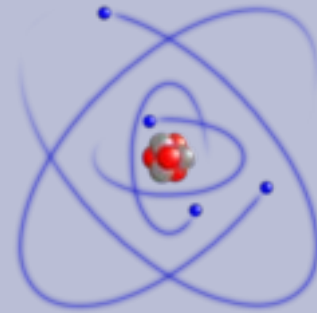
The Past Six Months



- Fixed poorly named rpm's
 - Poorly named rpms cannot be updated by yum
 - Cups is a good example
 - cups-1.1.22-0.rc1.9.20.2.2 (old)
 - cups-1.1.22-0.rc1.9.20.2.el4_6.6 (new)
 - We have fixed our build scripts so rpm's are built with the correct name.
 - We have removed problem rpm's from repositories.
 - We have written a yum plugin for affected systems.
 - For SL 4 we had to patch yum to get the plugin to work
 - For SL 5 the plugin works without any patches to yum
 - We pushed the patched yum and plugin to SL4
 - We then discovered that there were more poorly named packages than we thought.

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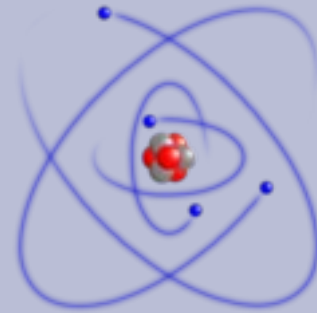
What we are currently working on



- Still fixing poorly named rpm's
 - We thought we had them all fixed, but we were wrong
 - RPM thinks that `_` is equal to `.`
 - We are still going through SL5 again.
 - When we are done, we will push out an updated yum with an updated versionfix.
 - We will then go through SL4 again.
 - Hopefully we got everything in SL4 the first time
 - If there is a need, we will push out an updated yum and versionfix
 - After a month or so with the updated yum, we will push out a new yum, without versionfix built in
 - versionfix will be a separate yum plugin
 - versionfix slows down updates

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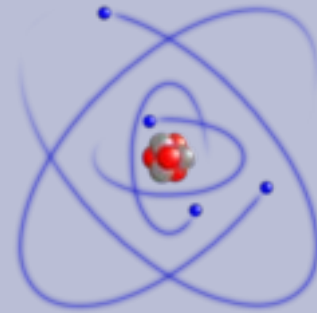
What we are currently working on



- Work on automating checking of packages
 - This is harder than it sounds because we do not have good access to RedHat's packages
 - The end goal is to be able to do the following automatically, instead of by hand
 - Download the packages from RedHat
 - Verify that we built the same packages from the source
 - Verify that our packages have the same names
 - Verify that our packages have the same files they do
 - Verify that our packages provide the same stuff
 - Verify that our packages require the same stuff

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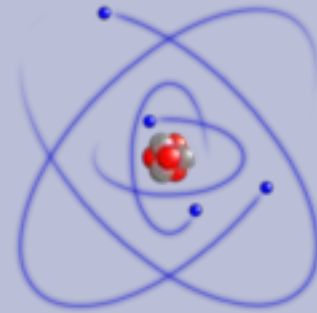
What we see in the future



- The 5 year anniversary of Scientific Linux
 - Spring 2004 Hepix (Scotland) was when Scientific Linux was first released
 - Spring 2009 Hepix will be the 5 year anniversary
- A new logo contest for Scientific Linux 6
 - Should be of the carbon atom
 - 6 electrons and protons
 - Should be in svg format if possible
 - Must be GPL or corresponding CC License

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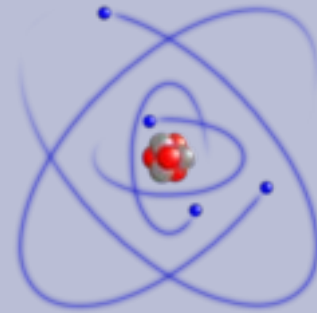
What we see in the future



- Continue to have security updates for SL 3.0.9
 - This will continue until October 2010
- Continue to have security updates for all releases of SL 4
- Continue to have fastbug updates for only the latest release of SL 4
- Continue to have security updates for all releases of SL 5
- Continue to have fastbug updates for only the latest release of SL 5

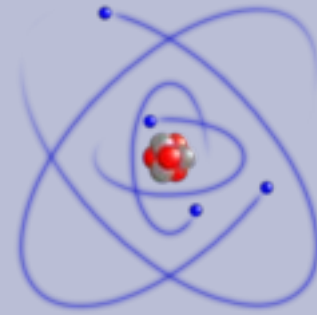
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What we see in the future



- When RHEL 5 Update 3 comes out, releasing S.L. 5.3
 - Estimate - March 2009
- When RHEL 4 Update 8 comes out, releasing S.L. 4.8
 - Estimate - June 2009
- When RHEL 6 comes out, releasing S.L. 6.0
 - Estimate - January 2010

References



- <https://www.scientificlinux.org/>
- <http://ftp.scientificlinux.org/linux/scientific/>
- <ftp://ftp.scientificlinux.org/linux/scientific/>
- <http://linux.web.psi.ch/livecd>
- <https://www.redhat.com/security/updates/errata/>