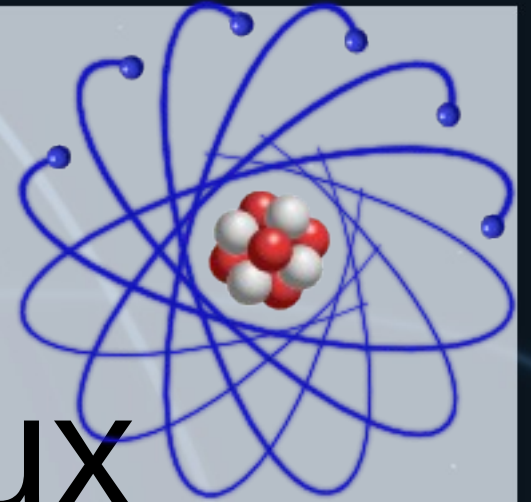


Update On Scientific Linux



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HEPiX Fall 2013



Presentation Overview

- Overview of the last six months activity
- What we are currently working on
- What we see for the future
- Important topics of conversation

By the way, it's been 10 years since SL was first proposed at HEPiX in Vancouver

The Last Six Months



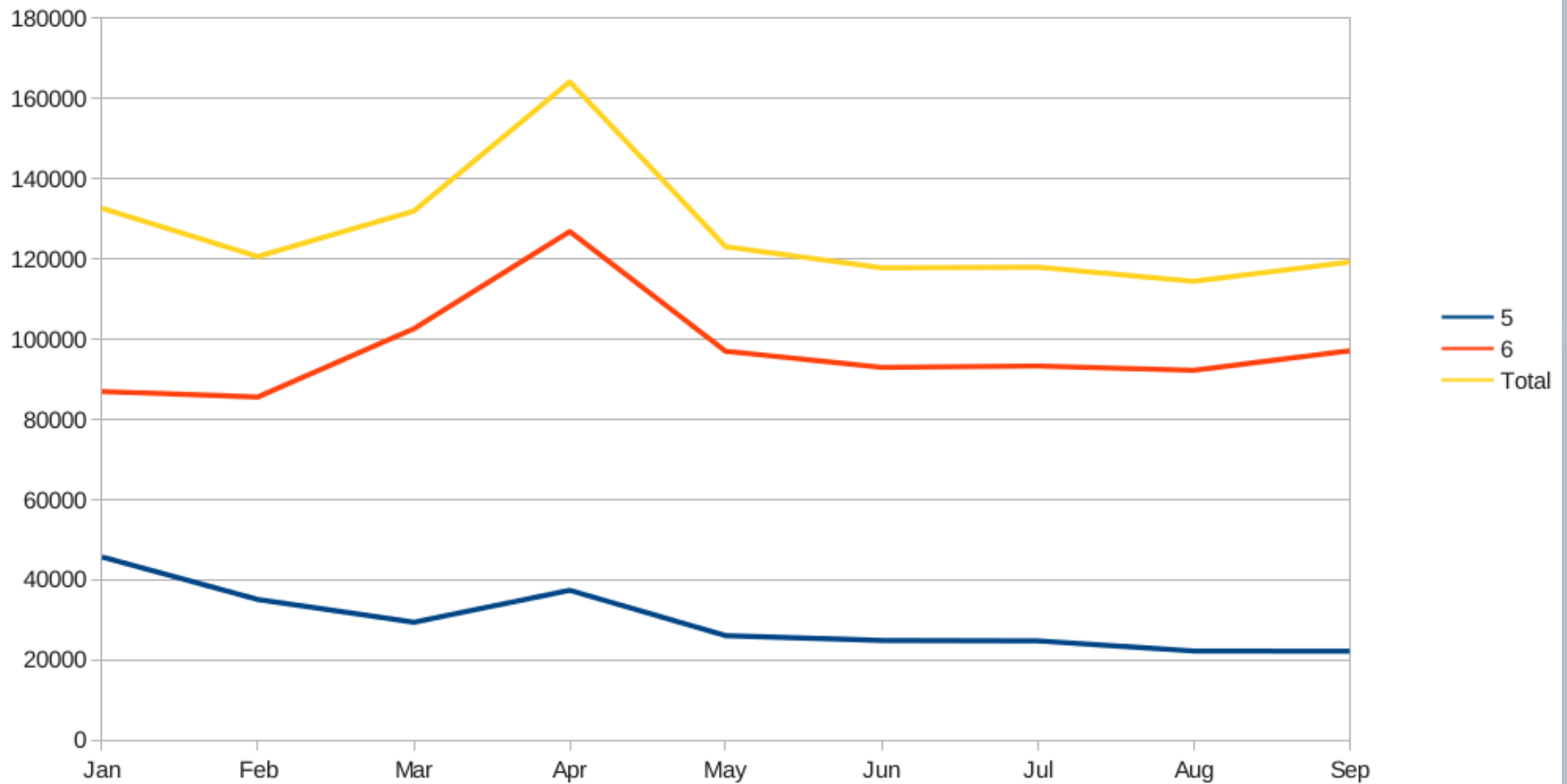
Six months activity

The following statistics were gathered from the official Scientific Linux distribution servers

- These numbers are a minimum
 - We do not gather stats from our mirror sites
 - The real numbers are higher
- The values we have are based on yum downloads of security errata
- We currently have 82 public mirrors.
- Vertical axis represents “number of unique ip addresses”
- Horizontal axis is time

Some Usage Stats for 2013

2013 SL metrics





SL6 updateinfo.xml

- August 16th all official Scientific Linux 6 repositories now feature the updateinfo.xml
 - This metadata enables use of yum-plugin-security for all SL6 releases
 - Provides an easy way to search based on CVEs
 - Provides reasons for why an update was released
 - Provides hints for the necessity of restarting systems/services
 - There is also a nicely formatted html interface to the data
 - Custom XSLT written specifically for SL



SL6 updateinfo.xml

Update ID	Title	Released	Severity
 SL6.4:yum-conf-sl-other	enhancement: yum-conf-sl-other	2013-03-28	
 SLBA-2013:0279-1	glibc bug fix and enhancement update	2013-03-28	

[RHBA-2013:0279-1](#)

From: SCIENTIFIC-LINUX-ERRATA@LISTSERV.FNAL.GOV

Description:













This update includes a number of bug fixes

Packages:

Scientific Linux 6

- glibc-2.12-1.107.el6.i686.rpm
- glibc-2.12-1.107.el6.x86_64.rpm
- glibc-common-2.12-1.107.el6.x86_64.rpm
- glibc-devel-2.12-1.107.el6.i686.rpm
- glibc-devel-2.12-1.107.el6.x86_64.rpm
- glibc-headers-2.12-1.107.el6.x86_64.rpm
- glibc-static-2.12-1.107.el6.i686.rpm
- glibc-static-2.12-1.107.el6.x86_64.rpm
- glibc-utils-2.12-1.107.el6.x86_64.rpm
- nscd-2.12-1.107.el6.x86_64.rpm

All Related Updates:

-  SLBA-2013:0212-1 - 2013-02-05
-  SLBA-2012:1422-1 - 2012-11-06
-  SLSA-2012:1208-1 - 2012-08-27
-  SLBA-2012:1158-1 - 2012-08-14
-  SLBA-2012:0763-1 - 2012-08-08
-  SLSA-2012:1098-1 - 2012-07-19
-  SLBA-2012:0566-1 - 2012-05-22
-  SLSA-2012:0393-1 - 2012-03-21
-  SLSA-2012:0058-1 - 2012-01-25
-  SLSA-2011:1526-3 - 2011-12-08
-  SLBA-2011:1179-1 - 2011-09-14
-  SLBA-2011:0564-1 - 2011-07-22

http://ftp.scientificlinux.org/linux/scientific/6x/x86_64/os/repodata/updateinfo.xml

Scientific Linux and KISTI

- Seo-Young Noh was at FNAL this summer.
- Part of his time at FNAL was devoted to learning how to customize Scientific Linux for his site.
- During that process he took some great notes that may serve as a starting place for some new documentation.
- We hope to have some further collaboration on other projects.

NFS, unique inodes, rsync, (and SL)

- The NFS spec does not say it requires unique inodes for an exported volume.
- rsync uses the inode number to determine if files are hardlinks (when you pass -H)
- This was briefly an issue on the SL distribution servers
 - Reported by Owen Dunn of cam.ac.uk on Sep 2 2013
 - Should not be an issue currently
- Our storage vendor (BlueArc) is aware of the issue.

OpenAFS 1.4 End of Life – not yet

- In August 2013 OpenAFS 1.4 tarball releases end of life.
 - Had a conversation with Stephan Wiesand
 - SL OpenAFS package maintainer
 - OpenAFS 1.6 Branch Release Manager
 - For now individual patches are planned when necessary
- OpenAFS 1.4 is the version we package for SL5
 - No plans to push OpenAFS 1.6 into SL5 right now
 - OpenAFS 1.6 builds and installs on SL5
 - When there is a reason to worry about this, we will

Scientific Linux 5

- Red Hat 5.10 Official release Sept 30 2013
- SL 5.10 BETA 1 Oct 17 2013
- Significant changes:
 - MySQL 5.0 no longer supported!
 - Migrate to MySQL 5.5 via MySQL 5.1
 - Packages provided
 - Can't migrate back afterwards!
 - MySQL 5.0 will remain within the tree to provide client libraries
 - MySQL 5.5 is a Software Collection style package

Software Collections for SL 6 (not 5)

- Install in PARALLEL with existing tools!
- See Red Hat's documentation
- New software
 - Mariadb 5.5
 - Nodejs 0.10 (Preview)
- Updated programs
 - Perl 5.16
 - PHP 5.4
 - Python 2.7
 - Python 3.3
 - Ruby 1.9.3
 - MySQL 5.5
 - Postgresql 9.2



Devtoolset 2.0

- Binutils 2.23.52.0.1
- Dwz 0.11
- Dyninst 8.0
- Elfutils 0.155
- Gcc 4.8.1
- GDB 7.6
- Memstomp 0.1.4
- Oprofile 0.9.8
- Strace 4.7
- SystemTap 2.1
- Valgrind 3.8.1
- The new eclipse is much more challenging.
 - Requires maven – from Fedora
 - Which requires, which requires, which requires.....



UEFI

- In preparation for supporting UEFI Secure Boot on SL7, Scientific Linux has joined the UEFI Forum.
 - www.uefi.org
 - There is no expectation of supporting UEFI Secure Boot on RHEL6 (and therefore SL6)



Errata, security and other

- Security updates continue to be released for all supported releases.
- Non-security updates were released for the latest (the 'X' tree) releases on a weekly basis.
 - Reminder: the SL5x and SL6x trees are always the most recent release.
 - Reminder: SL 5.9 and SL 6.4 are using 'X' by default.
 - yum-conf-sl{5,6}x
- Bonnie King is fully trained to build, test, and publish errata

Currently working on



SL7 build system

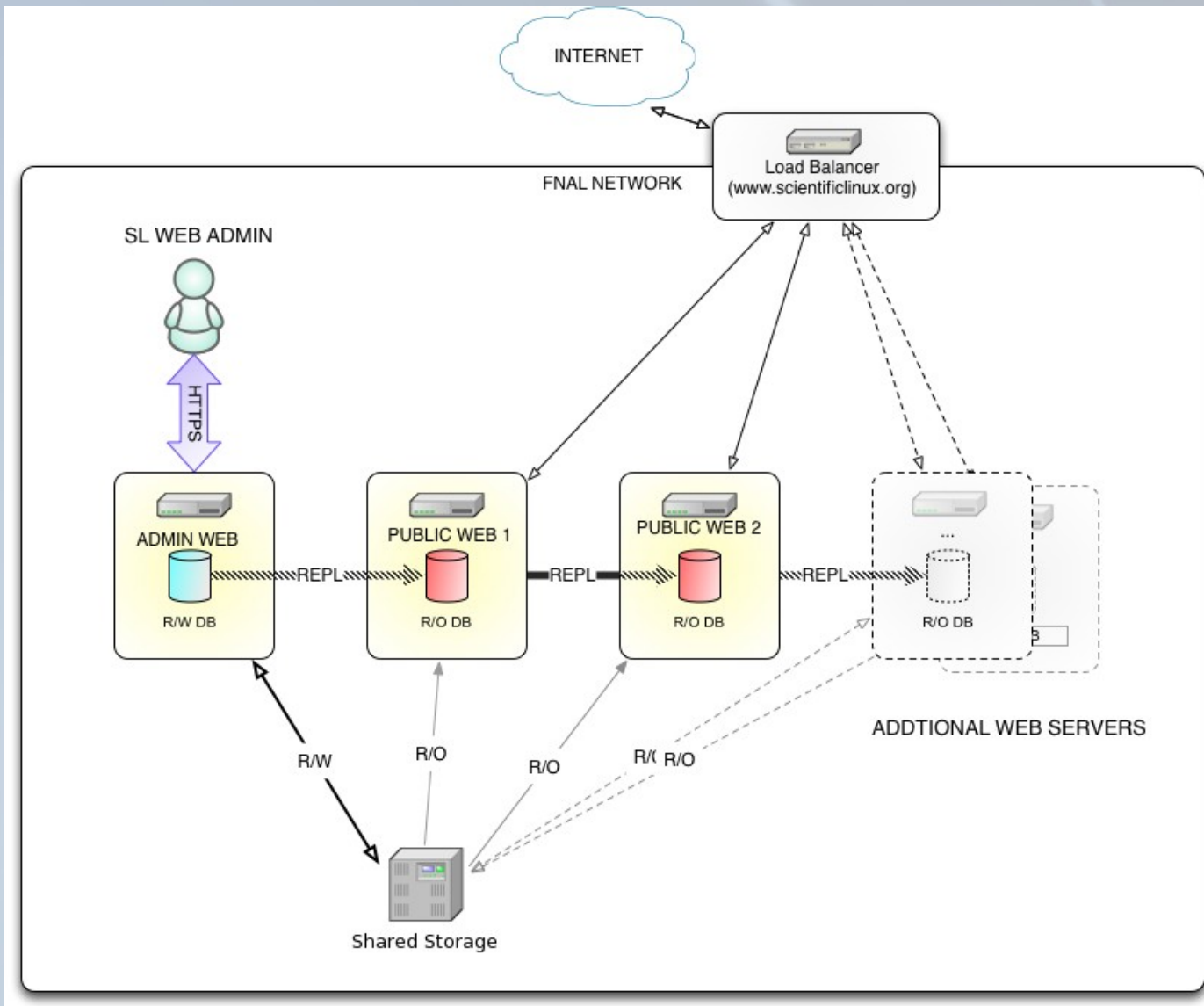
- Koji 1.8.0
 - As part of the process we've submitted a number of patches upstream
 - Resolved
 - 205, 269
 - Unresolved with patches attached
 - 261, 266, 267, 262
 - My pet bug is #266, it adds chainbuild support for SRPMs
 - All the installation documentation on the Fedora Wiki was updated for Koji 1.8.0 by the SL team
 - Utilizing koji plugins for automated build management
 - Deployed, configured, and managed with puppet

www.scientificlinux.org

- This site is beginning to show its age
 - No api hooks for automated updates
 - Lots of content for SL3, not much for SL5 or SL6
 - It is on older hardware
 - Memory limitations sometimes produce a Zope traceback
 - No staging environment to test larger changes



www.scientificlinux.org *possible* design



Items Coming in the Future



Scientific Linux 6

- RHEL 6.5 Beta released on Oct 8 2013
 - We plan to build the official release when it is released
 - Expected feature (from the RHEL Beta notes)
 - Better support for PTP (Precision Time Protocol)
 - Newer openssl
 - Native hooks for GlusterFS
 - Updates to tuned
 - 1TB RAM, if you want it



Scientific Linux 7

- According to Red Hat, the public Beta will be sometime in 2013 (unless it is early 2014)
 - Expected to look somewhat like Fedora 19
 - RHEL7 will use systemd
 - RHEL7 will use NetworkManager
 - RHEL7 will use GNOME3 (classic mode!)
 - RHEL7 will probably prefer XFS to EXT{2,3,4} for EVERYTHING
 - RHEL7 may use the new anaconda

According to Red Hat Summit (RHEL Roadmap)

- <https://www.redhat.com/summit/2013/presentations/>

Speaking of Fedora 19

- Bugzillas in Fedora that may impact RHEL7 that we care about (and you might too):
 - 893593
 - Make yum-cron use systemd
 - 999155
 - Errors only reporting for yum-cron
 - 681750
 - No language selection in GDM3
 - 1001165
 - Can't set GDM banner and GDM no-user-list
 - 1001196
 - Gnome doesn't preserve settings from `/etc/locale.conf`



Important Conversational Topics And Questions



Conversation Points

- SL7 point releases
 - Should we continue to make them?
- Software Collections
 - The SL6 software collection rpms don't build easily on SL5, too much has changed.
 - Are there specific tools the community wants/uses that might fit this model?
 - Conversion tool available (spec2scl) for SL6 in sl-addons
 - Some manual labor is still required
- ZFS packages in SL6
 - Well technically the sl-addons repo, anyone using them?

Upstream Community Projects For RHEL6 You Should Know

- RDO – <http://openstack.redhat.com>
 - This is the upstream for RHOS (Open Stack), complete with a working el6 yum repo.
- Ovirt - <http://www.ovirt.org>
 - This is the upstream for RHEV (Virtualization), complete with a working el6 yum repo.
- GlusterFS - <http://www.gluster.org>
 - This is the upstream for RHSS (Storage Server), complete with a working el6 yum repo.



Remember

- Submit your fixes to upstream
 - If you've fixed a problem let them know!
 - They might integrate your fix!
 - They might fix it another way.
 - They might not know there is a bug!
- You should also submit your bugs upstream
 - Unreported bugs do not exist, there is basically no chance an unreported bug gets fixed.
 - Upstream has fixed community reported bugs



References

- See Also
 - www.scientificlinux.org
 - www.scientificlinux.org/download/mirrors
 - www.redhat.com/licenses
 - access.redhat.com/site/documentation