

Scientific Linux

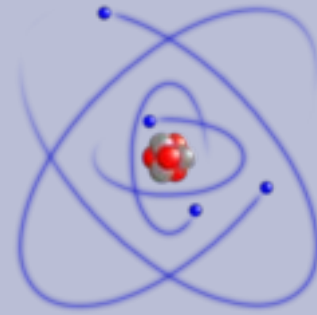
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NLIT 2008

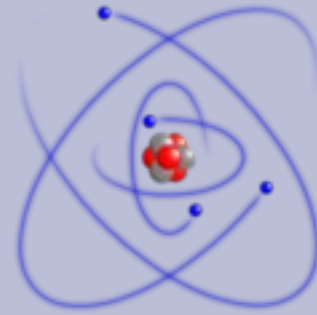
May 12, 2008

Scientific Linux



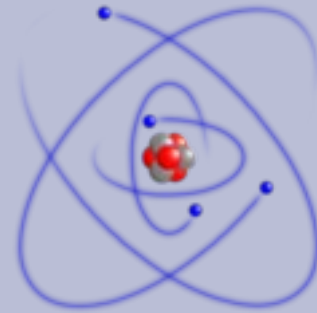
- Presentation Overview
 - What is Scientific Linux
 - When should you use it?
 - When shouldn't you use it?
 - How can it be part of your Linux strategy

What is Scientific Linux?



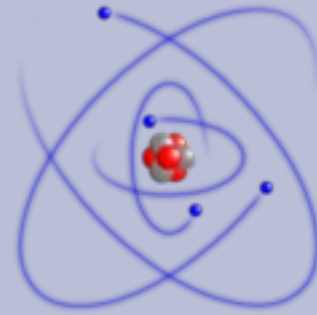
- Recompiled Red Hat Enterprise Linux
 - Keep everything the same
 - Change where we must
- Value Added In
 - Additions
 - Changes

What is Scientific Linux?



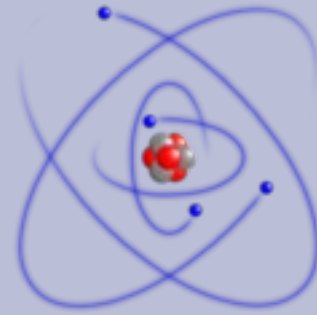
- Recompiled Red Hat Enterprise Linux
 - Keep everything the same
 - Goal is to be completely compatible with RHEL
 - When possible we do not change the source
 - We recompile using RHEL's compilers and libraries
 - Changes where we must
 - Where we legally must because of Red Hat's trademarks
 - Where we morally felt we should
 - Bookmarks, Up2date (automated patch updates)

What is Scientific Linux?



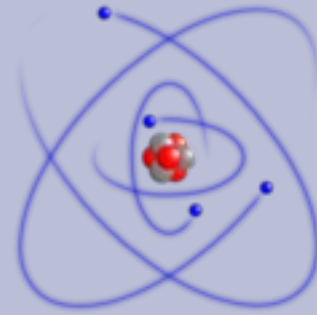
- Value Added In
 - Additions
 - packages
 - tweaks
 - Changes
 - Installation program modified for Sites
 - Ability to sit on a release

What is Scientific Linux?



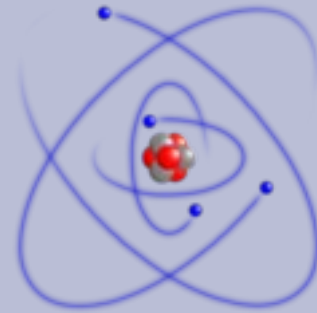
- Additions
 - Packages
 - Consolidated RHEL suites
 - GFS, Cluster Suite
 - Commonly used in science
 - OpenAFS
 - That we felt were missing
 - pine, perl-CPAN, icewm

What is Scientific Linux?



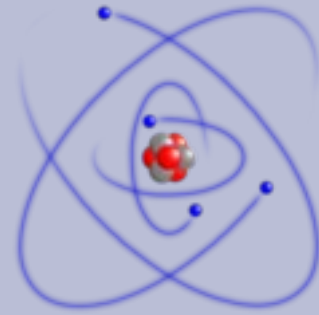
- Additions
 - Tweaks
 - Easily installed
 - Don't have to modify original package
 - Not installed by default
 - Modifies standard configuration's
 - color ls
 - Turns off color ls
 - terminal button on desktop panel
 - security enhancements

What is Scientific Linux?



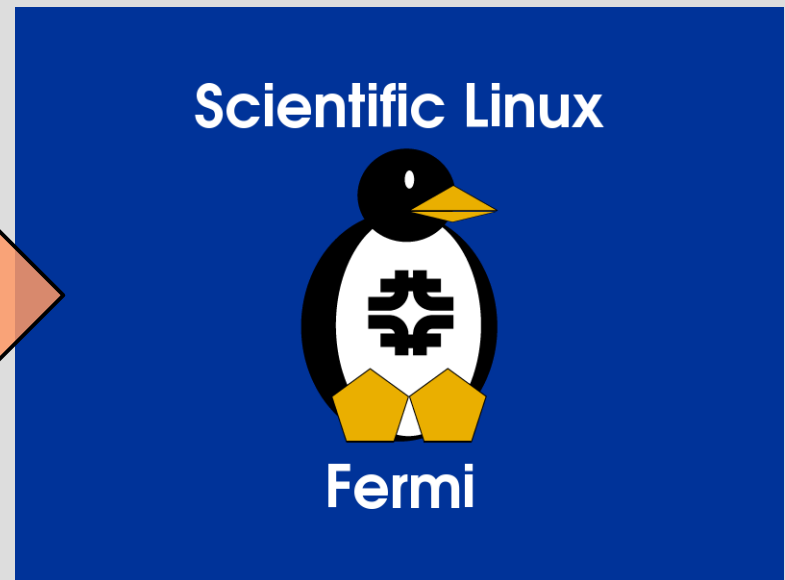
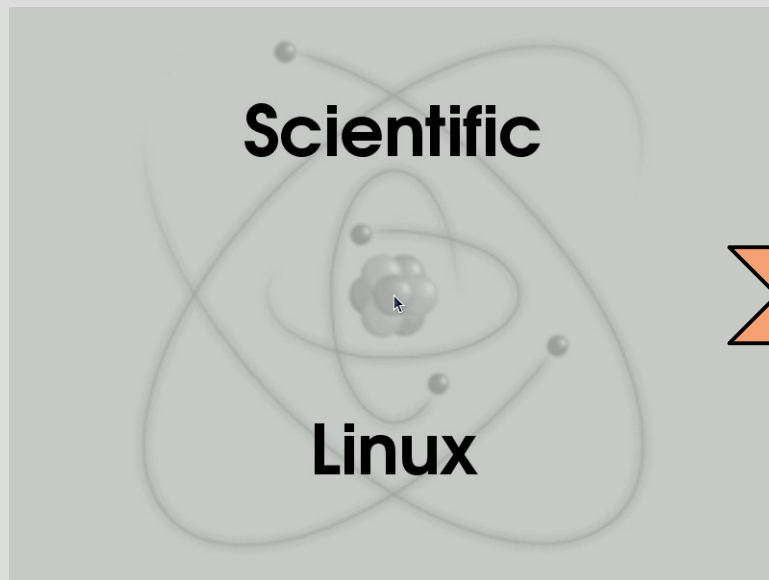
- Sites are a way for a Laboratory, or site, to customize Scientific Linux with minimum effort and changes
- Gives facilities choices
 - What packages are installed
 - Add, delete, modify packages
 - Customize installer program

What is Scientific Linux?

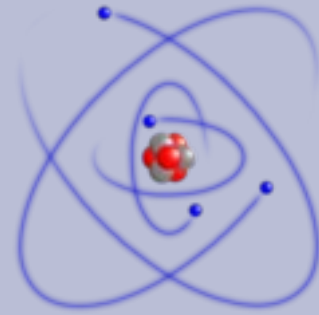


To Summarize

Sites allow you to change Scientific Linux into your own custom distribution.

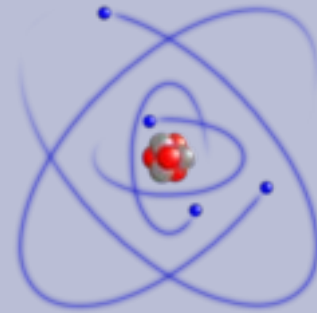


What is Scientific Linux?



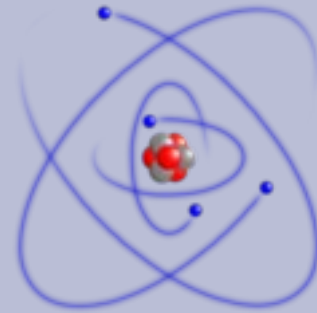
- Ability to sit on a release
 - One of the goals for Scientific Linux was that scientists would be able to install one version of Scientific Linux, and not have to worry about being forced to upgrade to the latest release.
 - They would still get security updates
 - For a multi-year experiment, this is very important. Changes in libraries might change the result a an experiment

What is Scientific Linux?



- Ability to sit on a release
 - Red Hat does not let a normal user do this. All security updates state that the user must be running the latest updates.
 - If you pay them, Red Hat will allow a user to stay on a release for 18 months. This feature was only started last year.

What is Scientific Linux?

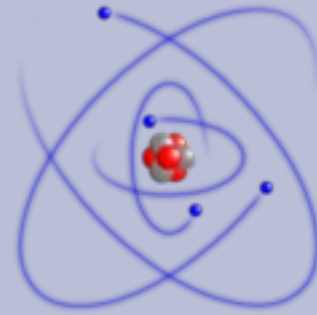


- Infrastructure

- Mail Lists

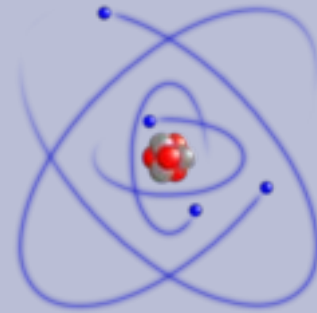
- <https://www.scientificlinux.org/maillists/>
 - scientific-linux-users@fnal.gov
 - scientific-linux-devel@fnal.gov
 - scientific-linux-errata@fnal.gov
 - scientific-linux-announce@fnal.gov

What is Scientific Linux?



- Infrastructure
 - Web Site
 - <https://www.scientificlinux.org/>
 - File Servers
 - <https://www.scientificlinux.org/download/>
 - <http://ftp.scientificlinux.org/linux/scientific/>
 - <ftp://ftp.scientificlinux.org/linux/scientific/>
 - <rsync://rsync.scientificlinux.org/scientific/>
 - 27 public mirrors

What is Scientific Linux?



- Infrastructure

- Semi-Annual Meetings at HEPIX

- <https://www.hepix.org/>

- High Energy Physics (HEP) Unix users and administrators collaboration

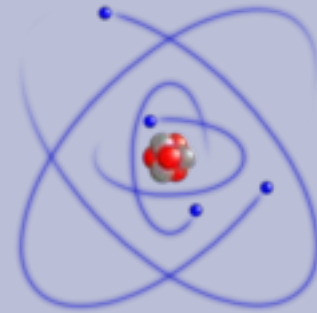
- Each conference we give our update on Scientific Linux

- Each conference we have a plenary discussion on relevant topics.

- The conference gives the developers the chance to see each other and talk with their main users.

Scientific Linux

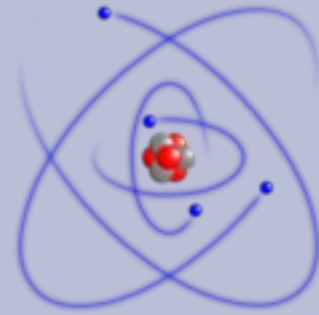
2005 - Present



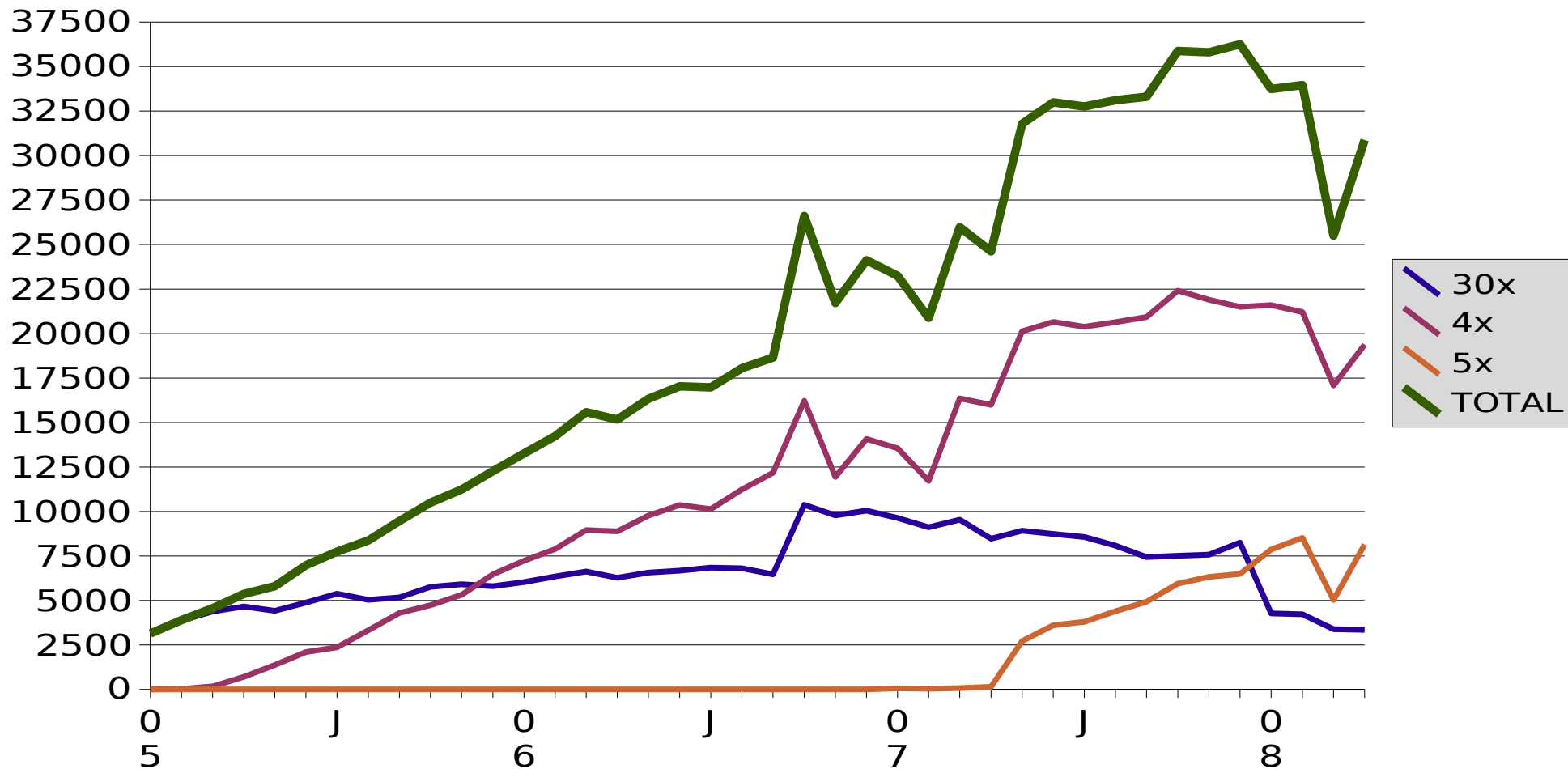
- The following statistics were gathered from ftp.scientificlinux.org log files
 - These numbers are the minimum. We know that they are higher. We use these numbers mainly to see trends.
 - These numbers are based on the yum and apt access to the errata
 - We currently have 27 public mirrors, and know of 158 sites mirroring us. These statistics do not represent any of the mirror sites.

Scientific Linux

2005 - Present

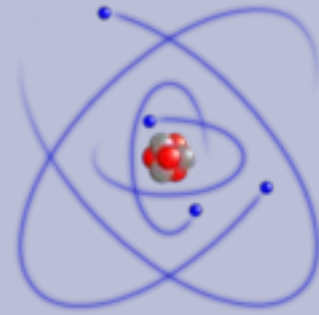


2005 to Present - By Release

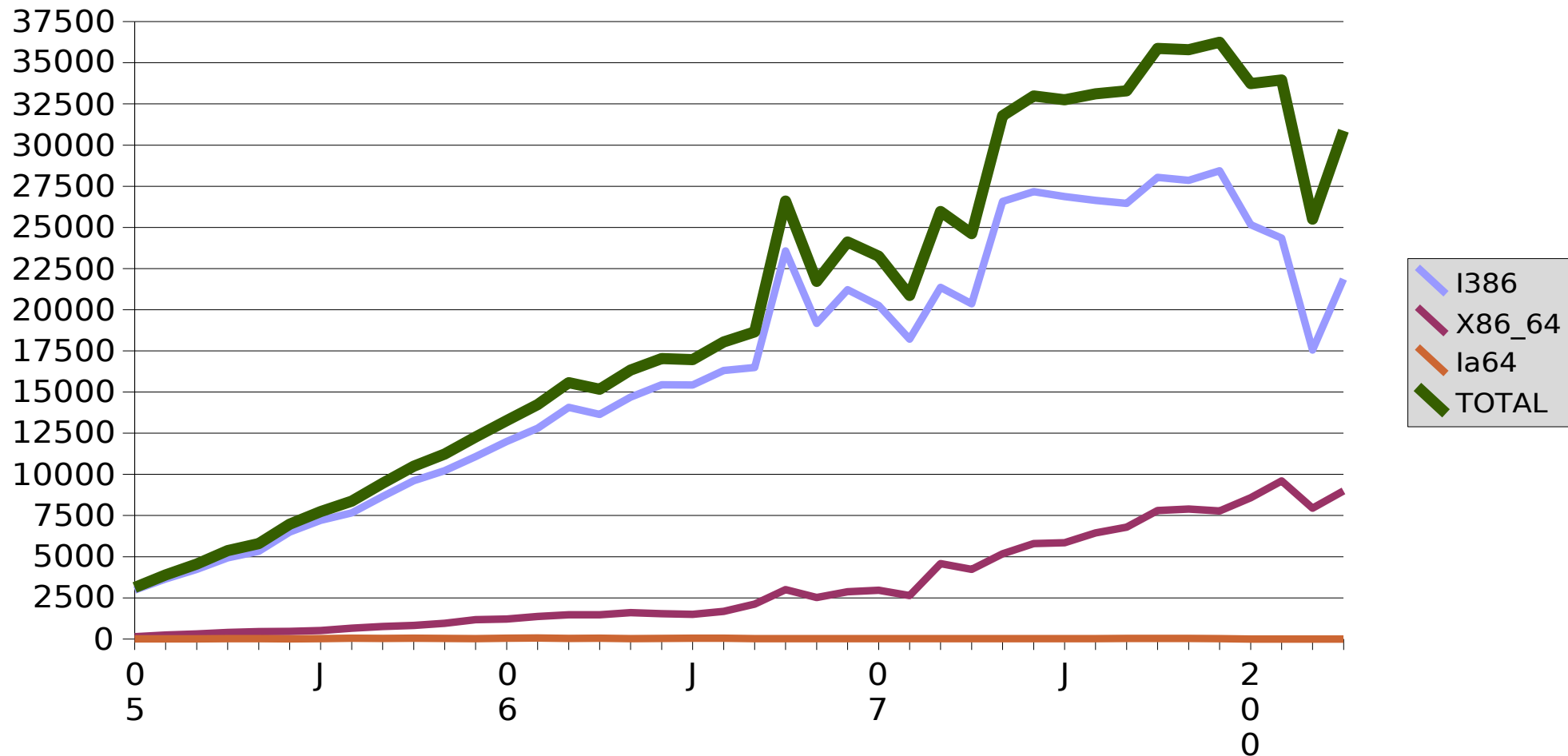


Scientific Linux

2005 - Present

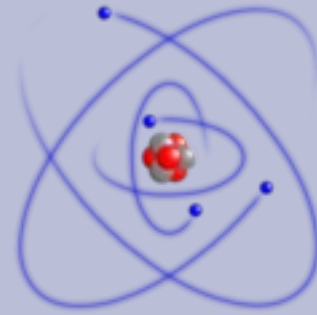


2005 to Present - By Arch

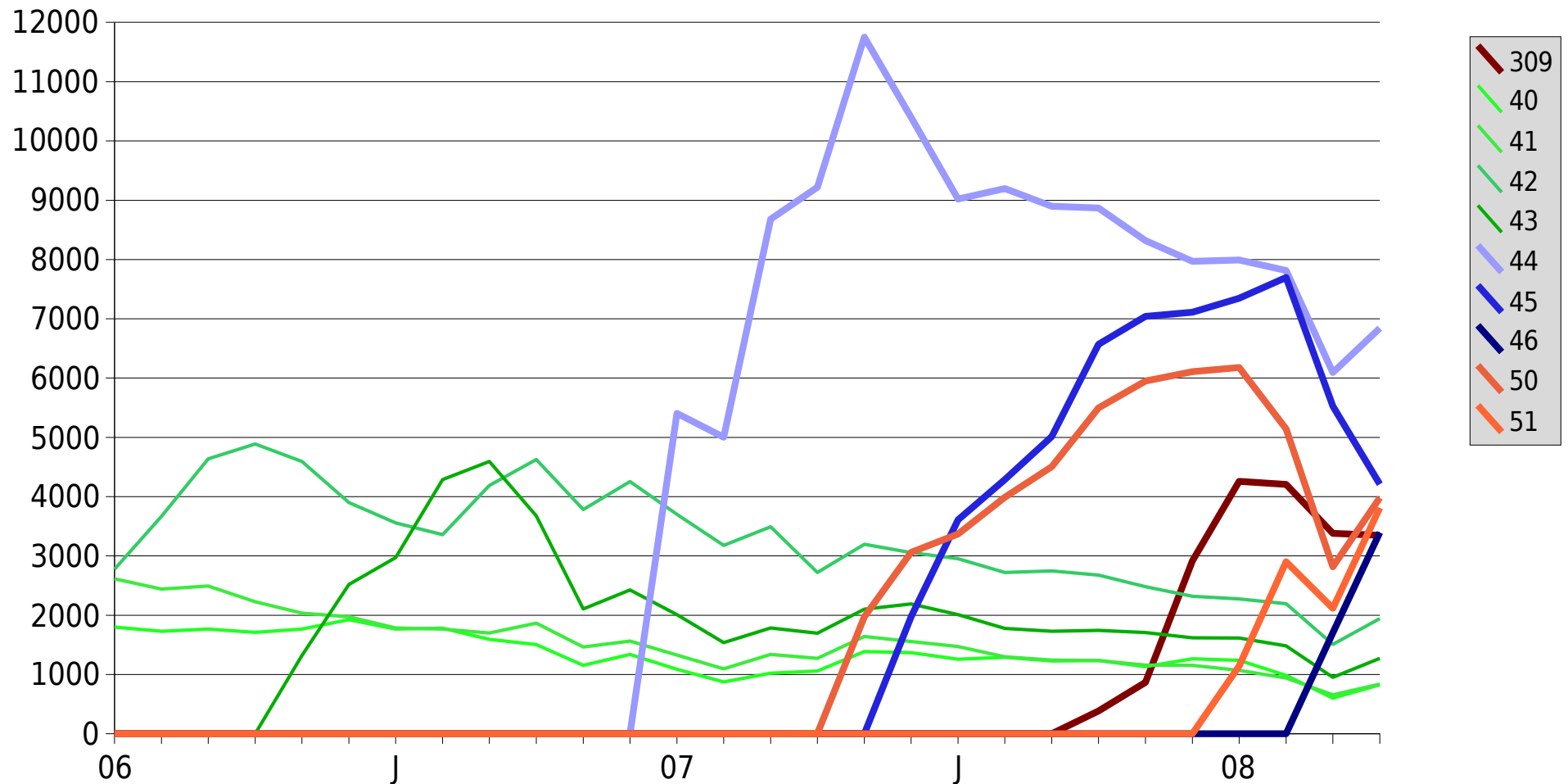


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2006 - Present

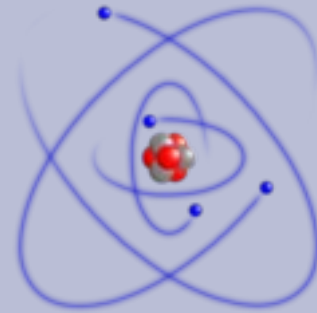


2006 to Present - By Individual Release



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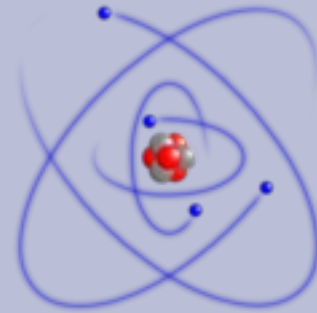
When you should and shouldn't use it



- When you **SHOULD** run Scientific Linux
 - You want to run linux

Scientific Linux

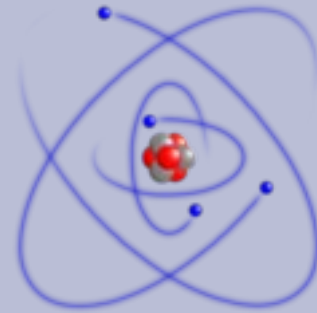
When you should and shouldn't use it



- When you SHOULD run Scientific Linux
 - You need an Enterprise level Linux distribution
 - You want to customize and make your own distribution, yet still get security updates
 - You want to evaluate RHEL without paying for it.

Scientific Linux

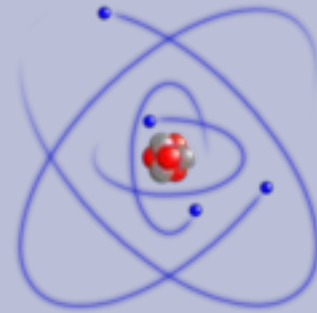
When you should and shouldn't use it



- When you SHOULD run Scientific Linux
 - You need a free Enterprise Linux distribution
 - You want to be able to stay on a release for a long time
 - You want to have pine, icewm, openafs, and a slew of other packages available to you.

Scientific Linux

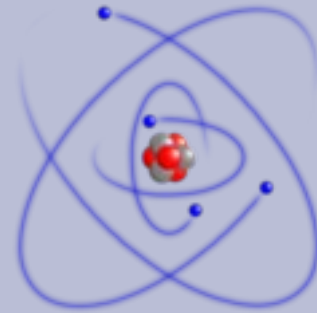
When you should and shouldn't use it



- When you should NOT run Scientific Linux
 - You have a large budget and want to help support an open source corporation.

Scientific Linux

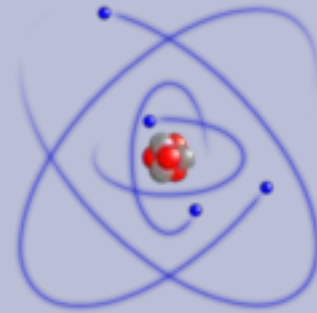
When you should and shouldn't use it



- When you should NOT run Scientific Linux
 - You have a machine, or set of machines, that run an application that requires real Red Hat Linux in order to be supported.
 - Example: Oracle database
 - You are required to pay for OS support.
 - Some managers and/or departments feel more warm and fuzzy when they pay for support.
 - You want a bleeding edge Linux distribution
 - Example: Fedora, Ubuntu

Scientific Linux

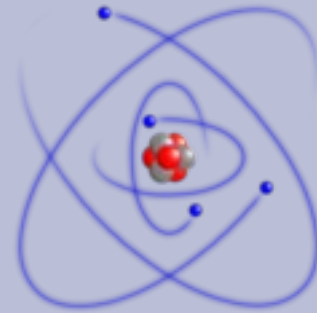
Part of Your Linux Strategy



- There are many strategies for deploying Scientific Linux
 - All your machines running Scientific Linux
 - Important servers running RHEL, all other machines running Scientific Linux
 - All your servers running Scientific Linux, while your desktops are running a bleeding edge Linux
 - Linux Stew

Scientific Linux

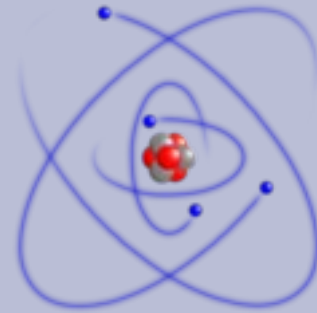
Part of Your Linux Strategy



- All your machines running Scientific Linux
 - Gives you consistency
 - Training administrators is easier
 - Documenting how to do things is easier
 - Very good on your budget

Scientific Linux

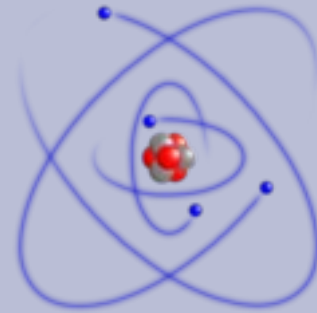
Part of Your Linux Strategy



- Important servers running RHEL, all other machines running Scientific Linux
 - Gives you more consistency, along with the warm fuzzy feeling when you pay for support.
 - Documentation is the same except for how you get updates and support.
 - Not free, but much better on your budget.

Scientific Linux

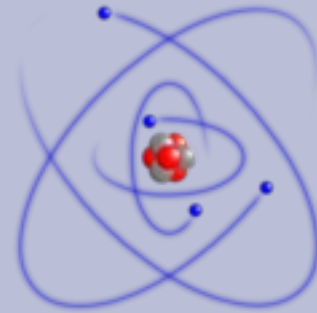
Part of Your Linux Strategy



- All your servers running Scientific Linux, all your desktops running a bleeding edge Linux
 - Servers are stable and can go several years between upgrades.
 - Users are happier because they always have the latest software.
 - Users are sadder because their desktop gets changed more often
 - Desktop admins have to do upgrades more often.

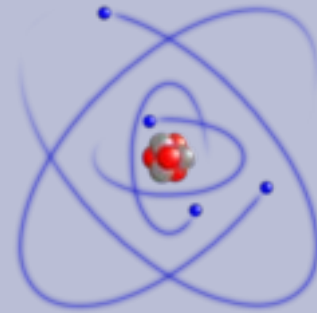
Scientific Linux

Part of Your Linux Strategy



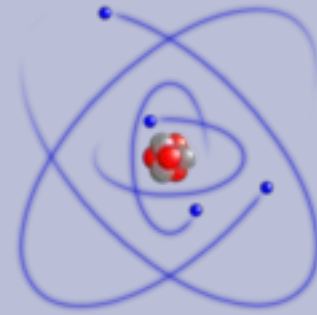
- Linux Stew
 - Run Scientific Linux along with any other version of Linux looks good or the users want.
 - Confusing for users
 - Very hard to maintain or document
 - Usually just a transition phase, hopefully. One or two versions of Linux will eventually become more dominant.

Scientific Linux



- Conclusion
 - Scientific Linux is a Red Hat Enterprise Linux compatible Linux distribution
 - Scientific Linux has many good features, such as added packages, easy customization.
 - Scientific Linux is free
 - Scientific Linux can fit into your Linux strategy

References



- <https://www.scientificlinux.org/>
- <https://www.scientificlinux.org/about/metrics/>
- <http://ftp.scientificlinux.org/linux/scientific/>
- <ftp://ftp.scientificlinux.org/linux/scientific/>