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A Linux Kernel More Stable Than -stable

Posted by **Unknown Lamer** on Tuesday August 16, @06:04PM from the linux-gets-a-day-job dept.



[jfruhlinger](#) writes

'-stable' is the term for the current Linux release most suitable for general use; but as Linux moves into more and more niches, there's a [need for a kernel more stable than -stable](#), which is updated fairly regularly. Both enterprise and embedded systems in particular need a longer horizon of kernel stability, which prompted Greg Kroah-Hartman, then at SuSE, to establish a -longterm kernel, which will remain stable for up to two years. Now there are moves to [get this schedule formalized](#) — moves that are a good sign of Linux's long-term health."

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- Good (Score:2)** Maybe other open source projects take the hint and provide something where I can install and not worry about it
 - Re:** sudo apt-get update
 - Re:** Speaking of which...
 - Re:** Speaking of which... I think I guessed that you were about to suggest backup? Maintenance isn't limited to upgrades,
 - Re:** When was the last time you performed a backup on your wireless router? Embedded systems is the focus of this
 - Re:** Embedded systems is the focus of this article. Indeed. When was the last time you did a kernel update on
 - Re:** sudo aptitude update && sudo aptitude -y upgrade

Re:Good

by [icebike \(68054\)](#) on Tuesday August 16, @07:37PM (#37113578)

Yay, done with maintenance for a while.

This isn't about your server or your workstation.

Its about your wifi routers ADSL modems, cable modems, and electric toasters , and everything else that has linux embedded these days, many millions of which are attached directly to the net, serving as your first line of defense.

Not one in a hundred wifi routers get updated over their life span.

I have servers running ancient linux. (Embarrassed to say just HOW old). They do specific tasks and have no user accounts, and they reside on the Local net, but still any disgruntled employee could own them if they tried. There is no patch source for these old installations, and trying to back port security patches is simply a non-starter.

Two years is not enough. 5 years is marginal. Even then, I want nothing but security patches. If I need the next version of something I'll upgrade, but for embedded devices or single purpose servers, all I need is security fixes.

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- Re:** Better: pacman -Syu
- Re:** No, but you get your car serviced every few months...
- Re:** Ubuntu has their LTS releases, which aim for the same thing. No "new feature" releases, just stability and security upgrades.

Red Hat (Score:4, Interesting)

by [93 Escort Wagon \(326346\)](#) on Tuesday August 16, @06:12PM (#37112832)

Isn't this basically what Red Hat does - back porting security and bug fixes to an established maintenance point for the kernel and many of their other packages?

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└ **Re:** This does not help help RH most direct competitor SUSE.

└ **Re:** > Isn't this basically what Red Hat does - back porting security and bug fixes to an established maintenance point for the

Do Firefox Devs Dream of Stable Releases? (Score:5, Funny)

by [Tackhead \(54550\)](#) on Tuesday August 16, @06:25PM (#37112986)

Both enterprise and embedded systems in particular need a longer horizon of kernel stability, which prompted Greg Kroah-Hartman, then at SuSE, to establish a -longterm kernel, which will remain stable for up to two years.

Have you ever taken a Kroah-Hartman test? It's a test designed to provoke an emotional response.

Hartman: You're in a repository, compiling a kernel, when all of a sudden you look down.

Dotzler: What version?

Hartman: What?

Dotzler: What version?

Hartman: It doesn't make any difference what version - it's completely hypothetical.

Dotzler: That's what I've been trying to convince the world all week!

Hartman: Maybe you're fed up. Maybe you want to be by yourself. Who knows? You look down at the screen and see the codebase in TortoiseGIT. It's crawling toward release.

Dotzler: TortoiseGIT? What's that?

Hartman: You know what TortoiseSVN was?

Dotzler: Of course!

Hartman: Same thing.

Dotzler: I've never seen a stable UI. But I understand what you mean.

Hartman: You merge some code down, change the UI, and increment the release number just for the hell of it, Asa.

Dotzler: Do you make up these questions Mr. Hartman? Or do Slashdotters just write cheap pop culture parodies instead of working?

Hartman: The project lays on its back, its belly baking in the white-hot flames of a thousand angry users, beating its legs trying to make itself stable but it can't. Not without your help. But you're not helping.

Dotzler: What do you mean I'm not helping?

Hartman: I mean *you're not helping!* Why is that, Asa? (pause) They're just questions, Asa. In answer to your query, it was either this or a filk based on a Rob Zombie song. It's a test, designed to provoke an emotional response. Shall we continue?

Dotzler: Nothing is worse than having an itch you can never scratch!

Hartman: Describe in single words only the good things that come into your mind about your mother.

Dotzler: My mother?

Hartman: Yeah.

Dotzler: Let me tell you about my mother... ***BLAM BLAM BLAM***

"More stable than -stable", that's our motto.

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└ **Re:** I want more runtime, fucker!

Isn't Greg still at SUSE? (Score:3)

by [Sits \(117492\)](#) on Tuesday August 16, @06:28PM (#37113014) [Homepage Journal](#)

Why does the summary say "then at SuSE"? [Greg's still working for SUSE/Novell as a Linux kernel developer fellow](#) [google.com] right?

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What will this do to version numbering? (Score:3, Interesting)

by [jd \(1658\)](#) <impak@nospAMyahoo.com> on Tuesday August 16, @06:33PM (#37113076) [Homepage Journal](#)

Since the -longterm is going to have to be based off of a -stable release and be maintained off that branch, we end right back where we were, with four version numbers, each level denoting the number of rounds of fixes applied to the number to the left. Only there's now going to be increased stagger, since stable will lag behind the release and longterm will lag behind stable. (They have to.)

If we're going to have lots of version numbers, then going back to the odd/even minor digit makes more sense than to do rapid increments. Yes, this pushes us out to five digits, which is borderline insane, but it is then five digits that carry specific pieces of discrete information rather than four digits where two don't necessarily convey a whole lot.

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└ **Re:** It sounds like -longerm is just this guy's fork. I don't think it will affect how Linus numbers the mainline kernel.

Re:What will this do to version numbering?

by [MasterPatricko \(1414887\)](#) on Tuesday August 16, @07:11PM(#37113388) [Homepage](#)

"this guy" is Greg K-H, second-in-command to Linus and the maintainer of the -stable tree. His arguments were one of the main reasons Linus changed the 3.0 numbering. Greg is just proposing that he maintains another tree officially, not a "fork". As for version numbering, I think there will be 3 numbers - first two for mainline releases, and one more for stable/longterm patch level. I don't think -longterm will be needing an extra number.

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Another thought... (Score:3)

by [jd \(1658\)](#) <impak@nospAMyaho.com> on Tuesday August 16, @06:47PM(#37113192) [Homepage Journal](#)

Yes, a static baseline is great for certification programs such as [EAL](#) [commoncriteriaportal.org] and [FAA approval](#) [linuxworks.com], but it's not the only sort of "stable" that you want. Data centres want a "carrier-grade" OS (which means five nines reliability). They don't necessarily care if they have to patch, since you can now hot-patch the kernel without taking it down, but they absolutely do not want the software to show any unreliability whatsoever. They'd likely get upset at having to patch more than once a year, since in-situ patching isn't always safe, but if you're limited to a few minutes downtime a year on a server as an absolute maximum (this is ignoring failover, etc, that's a whole different issue than a specific physical or virtual server instance being five nines) then I could see it being tolerated a whole lot more than a blind kernel upgrade at year's end.

(This assumes that the hot upgrades can be made fault-tolerant enough that a brown-paper-bag release - you know they're going to happen on any tree eventually - can be backed out without violating five nines.)

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Negaverse (Score:4)

by [gman003 \(1693318\)](#) on Tuesday August 16, @06:48PM(#37113206)

Wait, a piece of software moving towards a slower, more enterprise-friendly release system, in direct contradiction of recent trends (see: Firefox 10)?

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- └ [Re:](#) What you're missing is that Firefox doesn't want to target the enterprise. What Mozilla is missing is that if they fail to target
- └ [Re:](#) Who is Mozilla targeting? If they are not going after the enterprise are they going after the basement hobbyist? Or the

[Enterprise? \(Score:2\)](#) What does "enterprise" mean in this context?

- └ [Re:](#) NCC-1701-D [wikipedia.org]

Stable = Older (Score:3)

by [John Sokol \(109591\)](#) on Tuesday August 16, @07:46PM(#37113688) [Homepage Journal](#)

By definition a stable system has to be running older code that's been fixed and is well understood rather than "the latest" updated code.

If your constantly churning and updating you can not be stable.

Red Hat run's behind the main Linux distribution to get added stability.

But FreeBSD which seems old and stodgy is like that because of the emphasis on stability over features and improvement. It's also simpler under the hood which is also important for Stability.

But it all depends on what your trying to do. GUI vs. Server.

For Server I'd go with BSD.

For GUI I'd go with Windows, Apple OS-X (BSD variant), maybe Android (haven't developed on it yet) XWindows just sucks.

For Embedded , I'd go with what ever the eval boards ship with. Usually Linux these days. (Certainly not PSOS or QNIX)

At this point I can compile the same code on all of these using GCC and run them equally well. They are all Posix compliant. SDL run's on all of them.

Java also run on them. So does Flash, LLVM, TCL, PERL, RUBY, Python or what ever langue du jour.

Let's end the religious wars on OS's, it's about getting your work done. The OS is just a platform for the language your want your code to run on.

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- └ [Re:](#) VxWorks or Microware OS/9 still kick Linux's butt in the RTOS world for reliability and strength/stability of codebase. Just
- └ [Re:](#) Xworks and microware, yuck.

↳ **Re:** Ahh, been using Linux since 1995. Never seen that "more solid" thing come out of open-source yet. Reason is, most

[How to make Linux stable \(Score:2, Insightful\)](#) 1) insert Windows install disk

↳ **Re:** The old "increasing your IQ by giving yourself a lobotomy" argument... I am not impressed.

2 years isn't a lot (Score:4, Interesting)

by [GPLHbst-Thomas \(1330431\)](#) on Tuesday August 16, @08:46PM(#37114122)

Debian security support stands for more than 2 years. So if you say "more than 2 years", I'd say, that's what we get with any Debian release. So I hope that the plan is to have it for longer, otherwise it's YASM (Yet Another Suse Marketing...). There's all signs that 2.6.32 will be maintained for a long long, very long, extremely long time, since so many distro are using it.

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↳ **Re:** 2 years for the kernel is already a start. That way not each distro needs to do the security patching on their own, but rather

And a stable API, anytime? (Score:3, Insightful)

by [renzhi \(2216300\)](#) on Tuesday August 16, @09:05PM(#37114272)

Linux could have dominated, if there was some sort of stable API for third-party developers. Developing for the Linux platform quickly becomes an experience of insanity, when you start doing compatibility test, and the test matrix just explodes.

I'd say, if it was too hard to keep API stable across all versions of Linux, maybe we should at least have API stable for all minor versions, say, 2.6.x?

I know all the arguments for moving faster, for keeping a cleaner code base, etc. But hell, what good is a shiny kernel if the apps can't keep up with?

Just venting, from my experiences working with kernel module.

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Real-time Kernel Patches Synchronisation? (Score:5, Interesting)

by [highways \(1382025\)](#) on Tuesday August 16, @09:23PM(#37114398)

If the target for a long-term stable kernel is embedded systems, then I would suggest having some sort of arrangement with the [real-time kernel patches](#) [kernel.org] which typically don't release with every kernel.

If, for example, 2.6.39 was chosen as a -longterm, it's unattractive for many embedded developers without the option of the -rt.

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planned obsolescence (Score:2) Kroah-Hartman says - "Consumer devices have a 1-2 year lifespan" -- this is a sign of our times.

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I'd give my right arm to be ambidextrous.