

Zack's Kernel News

Chronicler Zack Brown reports on the latest news, views, dilemmas, and developments within the Linux kernel community.

By Zack Brown

Rebooting Kerneloops.org

The kerneloops.org site has been down for a long time, but it may be getting some love in the near future. Jiri Slaby first reported that the site was broken back in June and was followed by a small chorus of interested folks who were also interested. For several months, there was no news, and Alan Cox speculated that the site might simply be gone for good.

Finally in August, Arjan van de Ven invited people to help fix the code. Andi Kleen remarked that it had been a very useful service, and that it would be good to get it working again. A couple of people expressed interest, including Bastien Roucaries, Arnaud Lacombe, and Josh Hunt, but, as of this writing, the site still gives the same error Jiri initially reported – a kernel version mismatch when trying to view recent kernels.

The idea behind kerneloops.org has been to take advantage of the oops reports that often get sent to the linux-kernel mailing list and other lists by folks who experience crashes and want help debugging them. Each oops report is a highly structured wad of data, generated by the kernel, that tries to give as much info as it can about why the system crashed. Although oops reports are somewhat human-readable, they are designed also to be parsed by scripts.

In addition to whatever help people get from the folks when they post an oops report to a mailing list, each of these dying kernel breaths are collected in the little glass kerneloops.org bottle and analyzed for statistics, which are then presented on the site. The stats let people know which kernels are particularly prone to crashes, and which parts of any given kernel are causing the most trouble. Essentially, it helps the kernel folks figure out where to direct their energies.

It'd be nice to have kerneloops.org up and running again. Maybe someone, or a few someones, will take it over and make it well again.

Long-Term Plan for Long-Term Kernels

Greg Kroah-Hartman announced his intention to revamp his approach to long-term kernel releases. These releases are like the stable kernel series, but they continue to be actively maintained for much longer than other stable ker-

nels. Typically, the long-term kernel releases are highly valued by Linux distributions, embedded systems developers, and other corporations who base their business on Linux. Greg posted a request for suggestions as to how he should organize the long-term maintenance process. A big discussion ensued.

His plan essentially involved picking a favored kernel release every year, to be maintained as a long-term stable series, and then dropping support for that kernel after two years.

Greg also gave a nice history of long-term kernel releases:

2.6.16 became a "long-term" kernel because my day job (at SUSE) picked the 2.6.16 kernel for its "enterprise" release, and it made things a lot easier for me to keep working at applying bugfixes and other stable patches to it to make my job simpler (applying a known-good bunch of patches in one stable update was easier than a set of smaller patches that were only tested by a smaller group of people).

Seeing that this worked well, a cabal of developers got together at a few different Linux conferences and determined that based on their future distro release cycles, we could all aim for standardizing on the 2.6.32 kernel, saving us all time and energy in the long run. We turned around and planted the proper seeds within the different organizations and, lo and behold, project managers figured that this was their idea and sold it to the rest of the groups and made it happen. Right now, all of the major "enterprise" and "stable" distro releases are based on the 2.6.32 kernel, making this trial a huge success.

A big response followed his announcement. Everyone has a stake in stable kernels. David Lang came up with some suggestions. He pointed out that just picking a kernel every year on a time clock might run into some problems. He said he'd seen a lot of kernel releases that turned out just to be not quite right – just a bit off in a general sense, in a way that backporting fixes was not really going to help.

He suggested selecting long-term kernels from the pool of stable kernels that had already been out for a few months and that showed signs of non-wonkiness. Greg liked this idea.

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The Linux kernel mailing list comprises the core of Linux development activities. Traffic volumes are immense, often reaching 10,000 messages in a week, and keeping up to date with the entire scope of development is a virtually impossible task for one person. One of the few brave souls to take on this task is **Zack Brown**.

Ben Hutchings also pointed out that Greg's idea of "dropping" support after two years was not ideal. He suggested handing off the long-term development to a volunteer after the two-year mark and only "dropping" support if no volunteer came forward. But, it seemed that this approach was actually Greg's default, and he confirmed he'd be handing the 2.6.32 kernel off to Willy Tarreau around February 2012, instead of just dropping support.

Greg had initially justified his two-year estimate by saying that consumer electronics were often replaced after two years, but some folks, including Ben, felt that two years was a lot less than what a lot of vendors needed. And, Jeremiah C. Foster said that the automotive industry needed at least 10 years of support for the entertainment software typically embedded in modern cars.

Greg's response was, "Isn't that the job of the distros and commercial OSVs today? Are they somehow not doing this job well? Do they need help from the community instead to help define, implement, and maintain this for them?" He invited Jeremiah or anyone from the automotive industry to contact him to figure the issue out, and Jeremiah started setting up a meeting. But, Jeremiah did also add, "The 10-year model may be coming to an end. Over the air updates, once a year dealer updates, and mileage-based service updates are all now opportunities to ship bug fixes and potentially new features. So, it looks like a 5-year model, or even shorter, might be usable." He added, "Currently, there are agreements between car makers and their software partners and, as these groups both get more familiar with open source, hopefully they'll be better prepared to work with the mainline kernel maintainers and to be open about their requirements. Right now, unfortunately, they are not able to do that."

Overall, Greg's announcement was met with a lot of discussion and encouragement, and a lot of folks were enthusiastic to continue talking about things during the Kernel Summit and various other gatherings.

Promoting Wireless Networks

Luis R. Rodriguez liked the Electronic Frontier Foundation's effort to promote wireless networks and invited folks to contribute to a wiki he created [1].

There were a number of comments; most seemed to be saying that an open wireless network would have too many technical and legal problems to ever be feasible. Still, Luis posted a link to a new mailing list set up by the EFF [2].

The idea of an open wireless network, supported by individuals rather than big companies, seems like something to work toward if possible. The reliance on wired technology, and on the good will of corporate service providers, seems like something to move away from. ■■■

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[1] Open Wireless Movement: <http://wireless.kernel.org/en/developers/OpenWirelessMovement>

[2] Tech: <https://lists.openwireless.org/mailman/listinfo/tech>

