SA_IMMUTABLE and More

By Roy Schestowitz

There are some parts of the kernel where even the most experienced and capable developers fear to tread; one of those is surely the code that implements signals. The nature of the signal API almost guarantees that any implementation will be full of subtle interactions and complexities, and the version in Linux doesn't disappoint. So the inclusion of a signal-handling change late in the 5.16 merge window might have been expected to have the potential for difficulties; it didn't disappoint either.

Oracle Working On Multi-Threaded VFIO Page Pinning For ~10x Faster QEMU Initialization - Phoronix

For those assigning VFIO devices to guest virtual machines, the initialization/start-up process may soon be much faster with a set of patches volleyed by Oracle.

Oracle engineers have been working on multi-threaded VFIO page pinning to speed-up the initialization process and can be quite noticeable impact for large guest VMs.

Linux 5.16’s Great Features Include FUTEX2, Folios, AMD Rembrandt, Intel AMX & Much More - Phoronix

After a quiet holiday period the Linux 5.16 kernel is set to be introduced as stable this Sunday.

Here is a look at the sixteen most exciting features to find with Linux 5.16.

At the end of the merge window I posted my usual look at the changes I found most
interesting with the Linux 5.16 feature overview. See that for the lengthy list of new features while here is a recap of what's to be found in this new kernel version. Linux 5.16 is what will hopefully be powering the likes of Ubuntu 22.04 LTS with v5.17 not arriving as stable until around the end of March and that in turn cutting things too close.

- Intel's Linux OS Shows The Importance Of Software Optimizations, Further Optimized Xeon "Ice Lake" In 2021 - Phoronix [5]

As part of the various end-of-year Linux comparisons that I've made a habit of over the past 17 years, with the EOY 2021 benchmarking I was rather curious to see how Intel's Clear Linux distribution has evolved Xeon Scalable "Ice Lake" performance since that platform launched in Q2'2021. It turns out there have been some terrific optimizations squeezed out of that latest-generation Xeon Scalable platform on Intel's Clear Linux. In this article is a look at the Ubuntu and Clear Linux performance on the flagship Xeon Platinum 8380 2P reference server back around the time Ice Lake launched and then again using the latest software packages that closed out 2021.

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