Improved EXT4 + XFS DAX Implementation Appears Ready To Go For Linux 5.8

Adding to the expected changes for Linux 5.8 is improved EXT4 and XFS file-system direct access "DAX" support.

DAX is the means of direct access to files backed by persistent memory (such as Intel Optane DC Persistent Memory) without needing to be copied via the page cache. Thus DAX bypasses that extra copy for reads/writes to the storage device and mapping the storage device directly into user-space.

The Top Linux 5.7 Features From Apple Fast Charge To Official Tiger Lake Graphics

Assuming no last minute concerns, the Linux 5.7 kernel is set to debut as stable this weekend. Given all the weeks since the merge window and our many articles covering all the feature activity at that point (and not to be confused with our activity of new work being queued for the upcoming Linux 5.8 cycle), here is a look back at some of the top features of the Linux 5.7 kernel.

Among the most interesting new features and improvements for Linux 5.7 include:

- Intel Tiger Lake "Gen12" graphics are now enabled by default in being deemed stable enough for out-of-the-box support where as on prior kernels the support at the time was hidden behind a kernel module parameter.

Performance-Helping FSGSBASE Patches Spun For Linux A 13th Time
The FSGSBASE Linux kernel patches that have the potential of helping performance going back to Intel Ivy Bridge era CPUs in select workloads have now hit their 13th revision to the series in the long-running effort to getting this support mainlined.

**Linux's Hardware Monitoring "HWMON" Picking Up Notification Support** [5]

In addition to the AMD Zen "amd_energy" driver coming for Linux 5.8, another late change now queued into hwmon staging is introducing notification support for the hardware monitoring subsystem.

HWMON subsystem maintainer and Google employee Guenter Roeck has queued up notification support for this subsystem. This serves as a generic notification mechanism not only to notify user-space but also the thermal subsystem for any HWMON driver events. In the HWMON context, these events could be important like warnings/critical alarms over detected temperatures or voltages for different components.

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