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Zoned Storage Devices (SMR HDDs & ZNS SSDs) MC

The Zoned Storage interface has been introduced to make more efficient use of the storage medium, improving both device raw capacity and performance. Initially implemented for Shingled magnetic recording (SMR) HDDs, and recently also for flash-based SSDs through Zoned Namespace (ZNS) SSDs. Zoned storage devices expose their storage through zone semantics. Each zone has a set of read/write rules associated. One example is requiring zones to be written sequentially, which requires the host to be aware of such requirements.

The Linux kernel has had a general zoned subsystem for SMR HDDs since kernel 4.10 and gained support for ZNS SSDs in kernel 5.9. Furthermore, to help faster adoption of Zoned Storage devices, a few parts of the storage stack has been extended with zone support. Examples are filesystems such btrfs and f2fs, and the device mapper targets dm-linear and dm-zoned. This all eases the barrier to adoption.

The Zoned Storage micro-conference is to communicate the benefits of Zoned Storage to a broader audience, present the current and future challenges within the Linux storage stack, and collaborate with the wider community.

I agree to abide by the anti-harassment policy

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