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Kernel Sanitizers Office Hours

Friday, 20 September 2024 15:00 (45 minutes)

The Linux kernel has numerous tools to detect bugs, among them a family of dynamic program analysis called "sanitizers": Kernel Address Sanitizer (KASAN), Kernel Memory Sanitizer (KMSAN), Kernel Concurrency Sanitizer (KCSAN), and the Undefined Behaviour Sanitizer (UBSAN).

Knowing when to apply which sanitizer in the kernel development process may not always be obvious: each sanitizer is dedicated to finding a different class of bugs, and each introduces some amount of performance and/or memory overhead. Not only that, each sanitizer also provides a range of options to tweak their abilities.

This session is dedicated to briefly introducing each kernel sanitizer, the bug classes they help detect, and important gotchas when using them.

The rest of the session is dedicated to answering questions around each of the sanitizers, KASAN, KMSAN, KCSAN, and UBSAN. Feel free to also share success stories that may give other attendees only starting out with some of the sanitizers ideas how to best apply them.

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