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Toolchains MC

The goal of the Toolchains micro-conference is to hold discussions about toolchain related topics that are relevant to the Linux kernel. This covers both the GNU toolchain and the Clang/LLVM toolchain.

In the last years we have had either a micro-conference or a complete track to discuss about Toolchain topics during LPC, and along with LSFMMBPF they have proven to be a quite effective way to keep track and bring to a satisfactory conclusion of problems that often take a long time to resolve and that require a lot of interaction between the kernel and the toolchains communities.

This is particularly important for some topics that are of maintenance in nature and evolve over time. But also for particular projects that cover some particular need of the kernel hackers, or some desired functionality.

Some of the topics we are particularly interested in covering this year are:

- Kernel-oriented toolchain security features (KSPP).
- Coverage of new system calls in glibc.
- Support for compiling BPF programs with both GCC and Clang.
- Removal of compiler plugins from the kernel source tree.
- Toolchain support for facilitating online patching in ARM64.
- User stack unwinding in the kernel, based on the SFrame format.
- Profile-guided optimization of the kernel.
- Any other issue brought from the Kernel BoF at the GNU Tools Cauldron conference in September.

As is intended with micro-conference, the emphasis is to have productive discussions and the goal is to reach agreements and satisfactory solutions to fix particular issues. In particular, long talks are discouraged, and the presentation material should be reduced to the minimum necessary to present the problem to discuss. Notepads should then be ready to document the discussion and the reached agreements.

Key participants:

- Kees Cook (KSPP)
- Yonghong Song (BPF, LLVM BPF back-end)
- Steven Rostedt (SFrame kernel support, feedback from Cauldron)
- Paul McKenney (feedback from Cauldron)
- Jose E. Marchesi (GCC BPF back-end)

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