

Toolchains and Kernel MC Welcome

Friday, 24 September 2021 07:00 (5 minutes)

This is a quick intro to the MC.

The Toolchains and Kernel micro conference focuses on topics of interest related to building the Linux kernel. The goal is to get kernel developers and toolchain developers together to discuss outstanding or upcoming issues, feature requests, and further collaboration.

Suggested Topics:

- Continuous Integration
- Toolchain Feature Requests
- Rust support
- Outstanding/painful toolchain bugs
- Control Flow Integrity
- Syscall wrapping in glibc.
- Security features in the toolchains

Achievements since last year's LPC:

- linux-toolchains mailing list and archive created.
- Rust-for-linux Github org established. Patches move from out of tree module building, to in tree module building.
- CI for kernel builds with LLVM moved to tuxbuild after an unexpected "no more free lunch" from TravisCI.
- LTO support landed in mainline.
- PGO patches sent upstream.
- At least one bugfix sent found via clang-tidy/clang-analyzer, discussions around driving tree wide cleanups via clang-tidy.
- GCC implemented support for asm goto with outputs
- Support for auto-initialized automatics in GCC is being worked out in GCC upstream. This is one of the security features that were deemed as desirable by the kernel last year. Work on the other missing desired security features is WIP.

Possible Topics/Attendees:

- Upstreaming Rust Support - (Miguel Ojeda, Wedson Almeida Filho, Greg Kroah-Hartman, Michael Ellerman, Josh Triplett, Alex Gaynor, Geoffrey Thomas, Sami Tolvanen)
- Using Clang's locking annotations - (Jann Horn, Kees Cook)
- Memory ordering progress in the C/C++ standards committees - (Paul McKenney, Will Deacon, Peter Zijlstra)
- Toolchain security feature requests - (Kees Cook)
- Post Link Optimization of the kernel with Binary Optimization and Layout Tool (BOLT) - (Maksim Panchenko)
- Objtool on arm64 - (Josh Poimboeuf, Peter Zijlstra, Will Deacon, Bill Wendling)
- DWARF, CTF and BTF (Indu Bhagat, Mark Wielaard, Dodji Seketeli)
- BPF/BTF/CORE support in the GNU Toolchain (Jose E. Marchesi, David Faust, Weimin Pan)
- Using BTF for ABI analysis (Matthias Maennic, Giuliano Procida)

I agree to abide by the anti-harassment policy

I agree

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Presenters: MARCHESI, Jose E. (GNU Project, Oracle Inc.); DESAULNIERS, Nick (Google)

Session Classification: Toolchains and Kernel MC

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