Toolchain support for objtool in the Linux kernel

Wednesday, 14 September 2022 12:45 (45 minutes)

The Linux kernel relies on objtool for performing a host of validations, metadata generation, and other fix-ups and annotations. One of Objtool’s feature is stack metadata validation and generation which forms the backbone of kernel’s reliable stack unwinding needs.

In this session, we will discuss what components of the objtool, in general, can get some help from the toolchain. We will also discuss what assistance can be provided for the usecase of reliable stack tracing. For reliable stack traces, correct and complete metadata is only one of the pillars. We will discuss the additional components that are required. At LPC 2021, we talked about the proposal to define and generate CTF Frame unwind information in the GNU Toolchain. There was also a discussion on objtool on arm64. In this session, we plan to converge these discussions with a perspective of what toolchain support can be provided to support objtool in the Linux kernel.

I agree to abide by the anti-harassment policy

Yes

Primary authors: BHAGAT, Indu; POIMBOEUF, Josh (Red Hat)

Presenters: BHAGAT, Indu; POIMBOEUF, Josh (Red Hat)

Session Classification: Toolchains

Track Classification: Toolchains Track