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Analyzing changes to the binary interface exposed by the Kernel to its modules

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Operating system distributors often face challenges that are somewhat different from that of upstream kernel developers. For instance, some kernel updates often need to stay at least binary compatible with modules that might be “out of tree” for some time.

In that context, being able to automatically detect and analyze changes to the binary interface exposed by the kernel to its module does have some noticeable value.

The Libabigail framework is capable of analyzing ELF binaries along with their accompanying debug info in the DWARF format, detect and report changes in types, functions, variables and ELF symbols. It has historically supported that for user space shared libraries and application so we worked to make it understand the Linux kernel binaries.

In this presentation, we are going to present the current support of ABI analysis for Linux Kernel binaries, especially the kind of information that Libabigail consumes from DWARF and thus what it would need from an alternative debug info format.

We hope the presentation will lead to discussions on topics revolving around what it would take to adapt Libabigail to the emerging alternate debug info formats and if that would make sense at all.

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Yes

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