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Evolving the BPF Type Format

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This talk focuses on a number of issues and suggested solutions around the BPF Type Format (BTF). BTF has becoming more and more central not just for core BPF features, but also in other subsystems such as ftrace. The goal explored here is to facilitate - as much as is possible - various feature requests that have been expressed around BTF support that will benefit BTF adoption.

These include

- supporting separating kernel BTF into a dedicated vmlinux BTF module so that small embedded systems can take advantage of BTF
- supporting explicit matching between kernel and module BTF to identify mismatches; currently mismatches have to be detected implicitly
- supporting standalone BTF to allow modules to include BTF that does not have to change every time the core kernel does
- auto-detecting which BTF features are available in a kernel so that we do not encode BTF features in kernel BTF that are not available in the kernel itself; this would be useful for a newer pahole when run on an older kernel

Primary author: MAGUIRE, Alan (Oracle)

Presenter: MAGUIRE, Alan (Oracle)

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