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eBPF-based FUSE

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The file system in userspace, or fuse filesystem, is a long-standing filesystem in linux that allows a file system to be implemented in user space. Unsurprisingly, this comes with a performance overhead, mostly due to the large number of context switches from the kernel to the user space daemon implementing the file system.

bpf, or berkeley packet filters, is a mechanism to allow user space to put carefully sanitized programs into the kernel, initially as part of a firewall, but now for many uses.

fuse-bpf is thus a natural extension of fuse, adding support for backing files and directories that can be controlled using bpf, thus avoiding context switches to the kernel. This allows us to use fuse in many more places in Android as performance is very close to the native file system.

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Yes

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