

LTO, PGO, and AutoFDO in the kernel

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Newer compiler optimization techniques stand to improve the runtime performance of Linux kernels. These techniques analyze more of a program (Link Time Optimization aka “LTO”) or make use of profiling information to improve code layout (Profile Guided Optimization “PGO”) and Automatic Feedback Directed Optimization “AutoFDO”). Now that Google is shipping all three in various kernel distributions, let’s take a look at the tradeoffs and path towards upstreaming these patch series.

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