

I was wrong about Rust build times

And I have learned the errors of my ways

Why is my Rust build so slow?

Dec 30, 2021 30 minute read <u>rust</u> · <u>release-engineering</u> 🧐 <u>fasterthanlime</u>

Contents

What is cargo even doingHow much time are we spending on these steps?Linker, is it you?Debug symbols, perhaps?Incremental buildsLink-time optimization (LTO)Rustc self-profilingWarp, I trusted youRevisiting all the other changesSplitting into more crates!Conclusion

I've recently come back to an older project of mine (that powers this website), and as I did some maintenance work: upgrade to newer crates, upgrade to <u>a newer</u> <u>rustc</u>, I noticed that my build was taking too damn long!



The still-relevant

• `cargo build --timings` is still useful



The still-relevant

• Apple made Id64 twice as fast (WWDC 2022) https://developer.apple.com/videos/play/wwdc2022/110362



The still-relevant

- Incremental builds are still better but:
 - The idea wasn't allowed to go all the way
 - It really only works for local caching
 - Some CI providers have started "bringing the builds to cache" rather than the other way around



What was wrong

• Splitting crates. Why?



My new approach

• Dynamic linking with stabby