

How to link libstd-rs dynamic linking. libstd-rs as dynamic is recommended by community?

help

satya200 April 8, 2025, 6:11am 1

I wrote sample hello world program and the release binary size of hello world is nearly 230KB. I could see the libstd-rs is linking statically to hello world binary. The try search how to link dynamically then i got below steps

- 1. libstd-rs build as a dynamic lib
- 2. Then link the libstd-rs dynamic lib to hello world binary.
If i do above approach is it fine?
From internet i saw rust community does not recommend libstd-rs to link as dynamic.
Is it true? If yes what is the problem i will face if link libstd-rs as dynamic.

The purpose i wanted to do because if i build libstd-rs as a dynamic lib in that case if i have multiple rust binary i can link and use.

1 Like

blonk April 8, 2025, 6:49am 2

The problem is that libstd comes with the specific version of rust you're using. If you're using stable rust 1.86.0 to dynamically link, there's a 1.86.1 released, and you upgrade your 1.86.0 to 1.86.1 (without pinning 1.86.0) then all your programs built with 1.86.0 will stop working.

There are definitely valid usecases for dynamic linking stdlib, but for regular computer use it wouldn't be super useful until there was a rust stdlib that came with your os in the same way that a libc does (and that's not likely to happen anytime soon).

As for how, you pass the prefer-dynamic flag to the compiler. See this or this (same solution, different ways to accomplish it) post.

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Lynnesbian April 13, 2025, 2:02am 3

If your goal is to reduce the binary size, see the "min sized Rust" guide. It provides a list of methods for reducing Rust binary sizes ranging from the simple and unintrusive to the complex and consequential. Stripping and LTO in particular can yield great dividends with little to no impact on user or developer experience.

3 Likes

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