
Subject: Mold - Alternative Linker on Linux
Posted by [Klugier](#) on Sun, 08 Dec 2024 15:28:24 GMT
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Hello,

Today I found that there is an alternative linker called mold. Authors advertised it as a faster alternative to the default linkers associated with compilers such as ld for GCC and lld for Clang. I decided to give it a chance and indeed it performs better on my machine (Ryzen 5900x):

- TheIDE Linking Debug (Stock Clang 1:32s vs 00.43s on Mold)
- TheIDE Linking Debug (Stock GCC 1:50s vs 0:46s on Mold)
- TheIDE Linking Debug (Old Xeon) (Stock Clang: 2:17s vs 1.05s on Mold)

I did some tests with BLITZ disabled and the timings are:

- UppWeb Linking Debug (Stock Clang 1.13s vs 0.23s on Mold) ~ 5 times faster, the whole build is decreased from 36.68s to 35.58s. Not much, but the gain is visible.

Mold is only available on Linux so far. So, if you want to use you need to download it. On my distro Manjaro it is available as a package, so I used this option. After that there is a need to modify build method to switch to alternative linker and that's all. Just add "-fuse-lld=mold" to Common Link Options. My BM setup below:

If you could test it and post the benchmark on your system (Stock vs Mold), I would be grateful for that information.

Links:

- [Mold Linker Performance Remains Very Compelling In 2024 Over GNU Gold/ld, LLVM lld - Phoronix](#)

Klugier

File Attachments

1) [MoldBM.png](#), downloaded 340 times

Build methods

Method

- GCC
- CLANG**
- GCCARM64

Builder: CLANG

Compiler name: clang++

External debugger: gdb

Common options:

Common C++ options: -std=c++17 -Wno-logical-op-parentheses

Common C options:

Common link options: -fuse-ld=mold

Common fixed flags:

Debug mode defaults

Default debug info level: Full Use BLITZ All static

Debug options: -O0

Debug fixed flags:

Debug link options:

Release mode defaults

Use BLITZ All static

Release options: -O3 -ffunction-sections -fdata-sections

Release fixed flags:

Release link options: -Wl,--gc-sections

Allow precompiled headers Disable BLITZ

PATH - executable directories INCLUDE directories LIB directories

Lock link mode

Script file:

Store all target files in the same directory

Set as default