CI setup for multi-platform software project

Marek Pikuła · ORConf 2024 · Gothenburg · 2024-09-14

Samsung R&D Institute Poland

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INTRODUCTION

CI setup for the *pixman* project

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A lot of platforms

Pixman has a lot of platform-specific SIMD implementations (MMX, SSE2 SSSE3, ARMv6 SIMD, ARMv7/v8 Neon, LoongSon MMI, PPC VMX, MIPS DSPr2, RISC-V).

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Existing CI

The previous CI setup was *lacking*. Testing only single backend on x86-64.

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The Plan

Execute tests on all architectures and backends, and provide a summary coverage report.

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Types of targets

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“Code coverage” native target

Used to generate code coverage summary.

Uses QEMU for running native Docker images with all optional dependencies.

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“Platform coverage” cross target

Used to test if tests pass on platforms without official distro support.

Cross-compiled with tests run under QEMU or Wine.

Both test GNU and LLVM toolchains.

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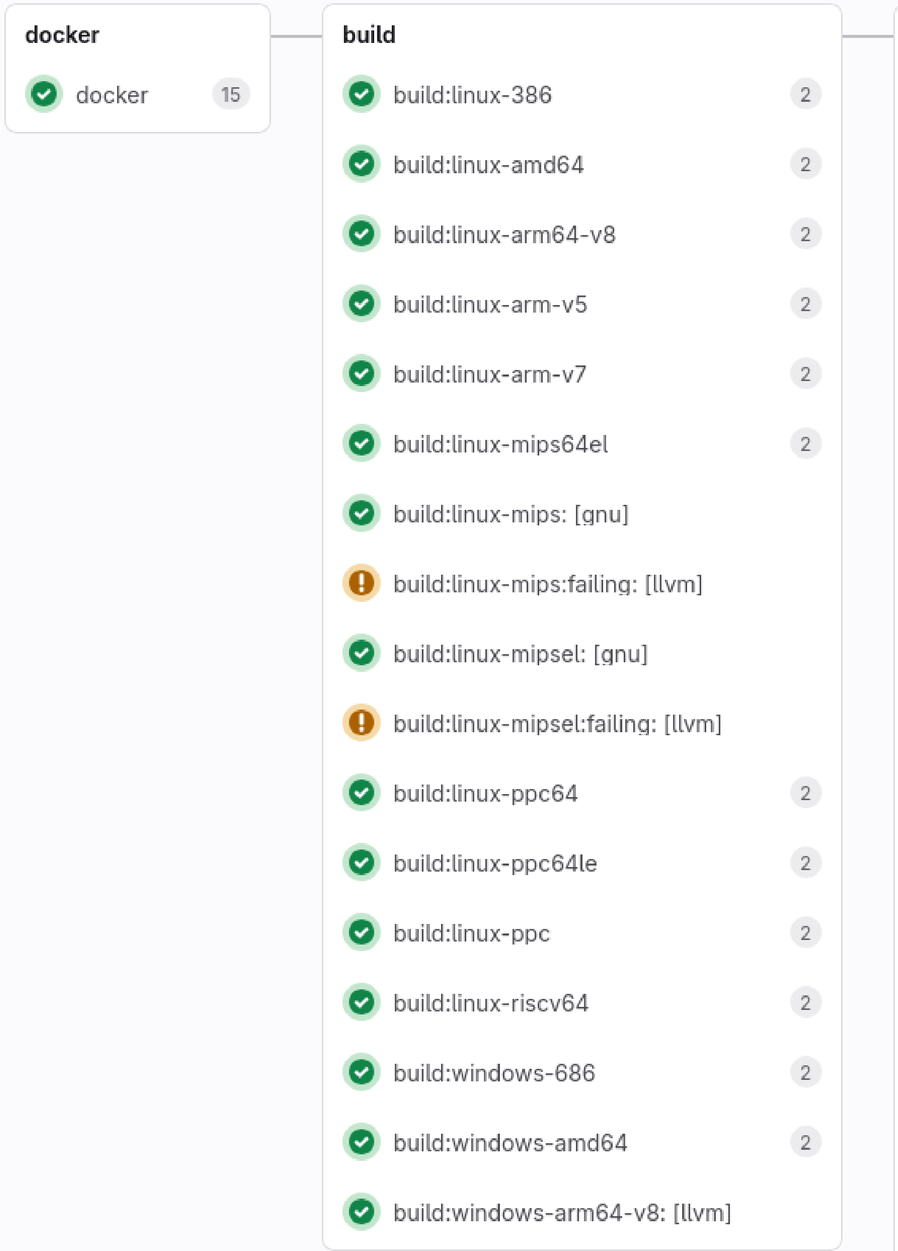

Build fails:

- MIPS with LLVM

Test fails (LLVM):

- All x86
- ARMv6 NEON
- LoongSon MMI
- PPC VMX

Platform fails:

- MIPS32 (be)
- PPC
- PPC64 (be)

Interesting targets:

- Windows on ARM

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Thank you!

Questions?

Recent pipeline run

m.pikula@partner.samsung.com

linkedin.com/in/marek-pikula

github.com/MarekPikula

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