Engineer Software

A safety net that no longer costs half an hour

Cut the site's browser-driven quality gate from 1,636 seconds to 615 by scheduling its checks longest-first through a worker pool bounded to four lanes, after measuring that alphabetical order cost 320 seconds against 224.

August 2026

615

seconds for the visual gate, down from 1,636

Situation. Eleven of the site's checks drive a headless browser: layout at every window shape the design draws, type scale, translated-text expansion, contrast, accessibility rules, forced colours, mascot sizing, motion, print across six paper combinations, console errors and visual regression. Run one at a time they took 1,636 seconds, a little over twenty-seven minutes. A gate that takes twenty-seven minutes is a gate that gets skipped, and a skipped check is indistinguishable from a passing one.

Task. The wall clock had to come down far enough that running them was the default rather than a decision, without weakening any of them.

Action. The work was measurement first. Each check was timed individually on a twelve-core machine: layout at 405 seconds, type at 301, translation at 282, contrast at 189, accessibility at 178, and so on down to seventeen. Two findings shaped the answer. Running all of them at once was slower than running four at a time — 265 seconds against 224 — because each check is itself a browser doing parallel work, and oversubscribing the machine costs more than the concurrency wins. And ordering by longest processing time first beat alphabetical order by nearly a third, 224 seconds against 320, which is the classic scheduling result and shows up here because the checks vary by a factor of twenty in cost. So the runner is a bounded worker pool, sized from the core count with a floor of two and a ceiling of four, fed longest-first. Alongside it the

checks were widened rather than narrowed: they now share one viewport table of twenty-two window shapes, derived from every media query the stylesheet actually contains, which took the layout check alone from 95 seconds to 405.

Result. The gate went from 1,636 seconds to 615, while the checks got broader rather than thinner — the serial cost went up and the wall clock came down. The measurement is the part worth keeping: two reasonable-sounding choices, running everything at once and running things in the order they were written, were each measurably worse than the alternative.

Bring this experience to your project

Use “A safety net that no longer costs half an hour” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. Interfaces that load quickly, work on a phone and behave the same in every browser your customers happen to use.

Explore our services Get in touch →

Look behind the result

Read the situation, decisions and result in this example. We can discuss which parts transfer to your constraints and which need another approach. A safety net that no longer costs half an hour — 615 seconds for the visual gate, down from 1,636

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Is your test suite slow enough that people skip it?

Talk through your project with the engineer responsible for delivery. We agree the scope, price basis and handover in writing before work begins.

Role context: Build and Release Engineer. It draws on Frontend Engineering, DevOps, Automation & CI/CD, Performance Tuning, Testing & QA and Python. And while you are here, we are rather good at Frontend Development, DevOps & CI/CD Automation and Technical Leadership & Consulting.

Get in touch Explore our services

One piece of **a longer record** — and it is all on this site.

Every entry is written the same way: the situation, the task, what we did and what changed.

See the whole record

Define the improvement you need

Describe the workflow, the existing interfaces and the users who need the change. We can define a testable delivery and a handover that lets your team maintain it.

See what it costs Get in touch →

Is your test suite slow enough that people skip it?

Ask about the decisions behind “A safety net that no longer costs half an hour”. You will speak with the people who can explain the work and assess your own project.

Explore our services

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