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Case Study | gofundme

GoFundMe achieves 30x faster test runs with Cypress

The GoFundMe Charity team needed a new testing tool that encouraged their developers to work together with QA to write more tests, and that would allow them to gain confidence in their test suite and deployments. Find out how they accomplished—while simultaneously and exponentially speeding up their test runs—by choosing Cypress.

Tools that make a difference

GoFundMe's subscription-free platform for charities makes fundraising easy by providing a full suite of powerful tools and services. Charities who rely on the platform include the American Heart Association, the Boston and New York Marathons, the American Cancer Society, LLS, and the American Red Cross.

Customizable donate buttons, data management, a web builder, ticketing and branded campaigns are just some of the tools that deliver a world-class fundraising experience to GoFundMe Charity's clients. The platform's extensive feature set keeps the QA team busy—and until they adopted Cypress at the end of 2019, the team handled all of their end-to-end and integration testing using an inefficient Selenium setup.

The challenge: Slow, flaky and frustrating tests

The GoFundMe Charity team was using Selenium, PHP Webdriver and PHP Unit. The team's suite of ~1,000 tests took **5 hours to run**, so they scheduled this to run overnight. Thus, getting quick feedback on a fix or a new feature was impossible.

10% of the tests would fail randomly each time, due to brittle code and poor coding practices. The tools in use made tests very difficult to write, debug and update—and much of the QA team being new to coding only amplified this problem.

Things had to change, so the QA team set two goals:

1. Get developers to write some tests. Having developers write tests for the features they were building would ensure good coding practices. QA could then instead take on a supportive role.
2. Gain confidence in the test suite. Having 100 different sets of failures in each test run made testing feel useless. The team needed the tests to be less brittle and flaky.

Results & Impact

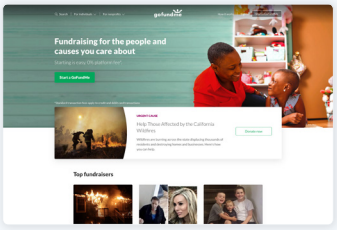
30x faster
increase in test run speed

98-99%
reduction in test failures

50%
increase in developers writing tests (from 0)

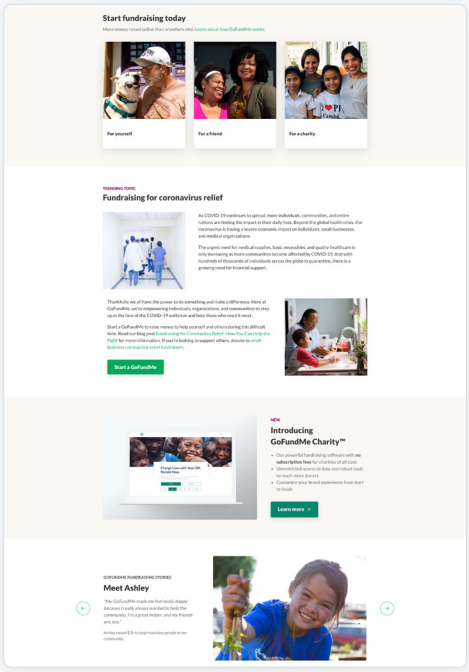
Test Improvements
easier to read, update, and debug

Hours Saved
"countless"



"We realized pretty quickly that Cypress was the winner. It combines everything we need into a single tool that feels familiar, but is easy to teach and use. It was VERY well-documented, it had parallel testing, a dashboard for viewing results, in-browser debugging, DOM snapshots, it was in Javascript, and it was super readable. And best of all, the setup is dead simple."

Todd Williams
GoFundMe Charity's Senior QA Automation Engineer



Why GoFundMe switched to Cypress

To improve test quality and get the developers on board, the QA team needed to change to a testing platform that is easy and simple to use.

They reviewed Selenium with Mocha and Chai instead of PHP Unit, Codeception, Selenide, Katalon, Nightwatch and Cypress. After running several proofs of concept and assessing the pros and cons of each, Cypress emerged as the clear winner because:

- **It has the easiest setup, installation and execution.**
- **Cypress makes writing tests easy for both QA and developers.**
- **It combines everything GoFundMe needs into a single tool.**
- **It feels familiar and easy to teach and use.**
- **The documentation is excellent.**
- **It's in Javascript which is easy to read.**
- **The Cypress Dashboard, browser debugging and DOM snapshots make identifying and fixing problems a breeze.**

How to get developers to write tests

GoFundMe's developers had resisted writing tests because it was time-consuming; they didn't think they were good at testing; and writing tests wasn't their favorite task (particularly in Selenium).

The QA team got the developers on board by:

- Switching to Cypress, which was much easier for everyone to learn and use.
- Helping set up the tests so that developers can work quickly.
- Providing support to developers by sharing best practices and other helpful guidance.

Results beyond expectations

GoFundMe has achieved incredible results with Cypress:

- **30x faster test runs: Down from 5 hours to 10 minutes.** This was driven by smarter setups, getting clever about waiting, and focusing less energy on cross-browser testing.
- **Very little test flake: 1-2 failed tests per run, down from 100.** Test flakiness is now next to nothing, thanks to implementing code and testing best practices.
- **Significantly more confidence in tests.** Moving away from the page object model and making tests more deterministic has made them easy to read, update and debug.

Cypress helped the QA team to implement the following best practices:

- Moving away from the page object model.
- Making their tests deterministic, using Cypress mocks and stubs.
- Creating better setups.
- Adding custom data-qa selectors.
- Implementing smarter usage of waiting, using Cypress route aliases or assertions.

About Cypress

With millions of downloads and users in over 90 countries, Cypress is the leader in browser-based test automation for the modern web. Cypress enables developers and enterprises to easily, quickly and accurately test anything that runs in a browser – empowering developers to build web applications faster and better.

Using the Test Runner, developers can quickly create and run live end-to-end tests for complex user workflows and interactions, and complex scenarios in applications including e-commerce. The Dashboard service provides collaboration and sharing between teams and records screenshots, video, and test runs – while seamlessly integrating with existing tools and processes. For more information, visit **cypress.io**.