



How DHL Parcel reduced test execution time by 65% with Cypress Cloud

DHL Parcel operates as a leading provider of standard domestic and international parcel pick-up, delivery, and return solutions for businesses and consumers worldwide. These services rely on a sophisticated software infrastructure, necessitating robust automated testing to ensure uninterrupted service to clients and customers.

The software team at DHL Parcel engages in continuous deployment, averaging over 400 deployments annually. Their suite of applications includes a labeling tool responsible for generating between 100,000 to 150,000 shipping labels daily, highlighting the critical role of testing in the deployment process.

Challenge

Despite efficient and reliable Cypress tests, the software team encountered challenges with test run times, often exceeding the duration of builds. With frequent code fixes and deployments, prolonged test runs hindered development velocity. Additionally, as the test codebase expanded, engineers became reluctant to write new tests due to time constraints. Efforts to improve efficiency through parallelization initially showed promise but introduced new complexities, including unbalanced test suites and wasted CPU capacity.

Solution

Rick Fleuren, a software developer at DHL Parcel, identified opportunities to enhance test run times through Cypress Cloud's parallelization capabilities. Leveraging Jenkins, Rick configured additional machines recommended by Cypress Cloud, reducing test run duration from 7 to 6 minutes. Utilizing Cypress's automatic test time monitoring, the team identified further optimization areas, implementing recommendations to trim another 30 seconds from test runs.

65%

reduction in test run times
from parallelization

820k

automated tests conducted
monthly

50%

increase in test coverage



Subsequent analysis revealed CPU load imbalances during simultaneous project executions. By adjusting communication between Cypress Cloud and machines, idle CPU capacity was effectively utilized, further slashing test run time to 4.5 minutes. To achieve even greater efficiency, the team integrated Docker Compose with a Cypress image, seamlessly managing test execution and reducing run time to an impressive 3.5 minutes.

Result

Thanks to Cypress, DHL Parcel's software team achieved faster, more reliable end-to-end tests. Their innovative setup leveraged Docker containers to streamline parallelization efforts effortlessly. This approach eliminated the previous issue of unbalanced test suites and significantly reduced test run times by 65%. With improved efficiency, the team experienced a notable increase in feature coverage and enhanced overall testing satisfaction, marking a significant improvement in their development workflow.

"Cypress is so easy that even back-end developers understand what's going on," says Rick Fleuren, Software Developer at DHL Parcel. "It's been instrumental in reducing our test execution times, and Cypress Cloud seamlessly parallelized our tests with minimal time and setup."

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