Delivering Mission-Critical IT Automation with Confidence: The SaltStack QA Turnaround Using Cypress.io

Providing automated continuous compliance and IT security, SaltStack delivers a mission-critical service that customers trust. Here's how the SaltStack team used Cypress to deliver their solution with confidence.

Failure is Not an Option

SaltStack® is an award-winning IT automation platform. It helps businesses control, optimize, secure and manage all aspects of their digital infrastructure, like servers and data centers. With clients like IBM Cloud, LinkedIn and Adobe all counting on SaltStack to keep their businesses running, quality and reliability is imperative.

But early on, the SaltStack engineering team was dealing with quality challenges:

- Time-consuming manual front-end tests were slowing their releases
- The team was expanding fast to support rapid feature development
- The front-end team was rewriting all the components in a shift in architecture from React to Angular. All these variables meant long testing cycles and increasing potential for bugs and regressions.

Innovation Slowed by Manual Testing

In their mission to implement automated testing, accelerate QA cycles, and accelerate innovation, the team chose Cypress because:

- Cypress is easy to learn and set up.
- It speeds up test runs dramatically.
- The Dashboard enables all team members to share (and learn from) test run results.
- Support from Cypress is fast and prescriptive.

SaltStack was particularly interested in Cypress's built-in automatic waiting. This would be very helpful in automating some of their long-running asynchronous processes, which at the time demanded time-consuming manual testing.

Results & Impact

800
automated Cypress tests
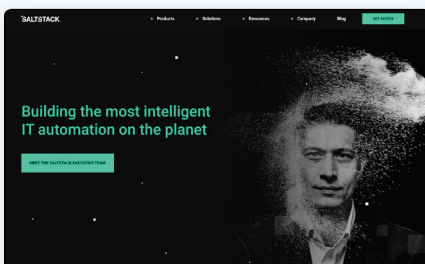
93%
reduction in regressions

300
Cypress tests written in 1 month by a single QA engineer
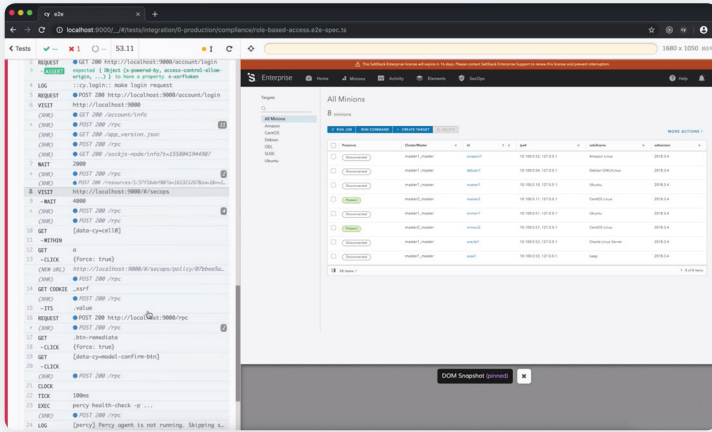
100%
test coverage for all new features

75%
of all test cases automated

"Cypress was so easy to set up and get going, and is easy to teach to other team members. It's an essential tool for us to make sure our IT security services work as customers expect them to."

Nathan Watts
QA Automation Engineer, SaltStack

After deployment: Better quality in less time

In the first month after adopting Cypress, one SaltStack engineer was able to write over 300 tests quickly and easily.

SaltStack accomplished a remarkable QA turnaround by utilizing Cypress to automate the majority of their end-to-end tests. The developers are working more closely with the QA team – attending meetings together and achieving a deeper understanding of which tests need to be written to guarantee quality.

SaltStack now runs over 500 flake-free tests twice daily and uses the Cypress Dashboard to help everyone track and understand their test runs and monitor their improvements in quality.

The Future

Cypress is now being standardized across and taught to the QA team, the front-end team and the automated test engineer pool.

Implementing Cypress has reiterated how important testing and quality are in providing a flawless customer experience. SaltStack is now creating custom Cypress commands to set up their test architecture to run faster, easier tests at scale. Cypress tests are also being extended to cover the new features SaltStack is working on. Custom security policy checks made possible by SaltStack SecOps content must be certified by the Center for Internet Security or other security organizations – and SaltStack plans on automating this validation.

> "Cypress has made it **so simple and so easy to write tests** that you can learn JavaScript at the same time as you run a test."

> "The Cypress documentation includes a very good 'best practices guide' which **helps you write the best tests** that you can."

> "Implementing Cypress as our automation framework enabled SaltStack to **adapt to a rapid pace of change**."

About Cypress

With over 10 million 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 the 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 between teams and records screenshots, video, and test runs - while seamlessly integrating with existing tools and processes. Dashboard features like parallelization and run grouping help accelerate test runs with ease. For more information, visit **cypress.io**