cypress

How ServiceNow Cloud Observability Achieved 4X Deployment Velocity with Cypress

ServiceNow Cloud Observability, formerly known as Lightstep, provides distributed tracing products to offer visibility into the performance of complex services. Their mission is to instill confidence at scale for developers, operators, and users of modern software applications. ServiceNow's platform supports multiple coding languages and processes over 800TB of data daily. The engineering team handles front-end and back-end development along with quality assurance.

Challenge

Prior to adopting Cypress, the engineering team at ServiceNow followed a cumbersome 35-step QA process documented in a Google Document. This process, taking two hours per deployment for a single engineer, caused anxiety about deployment frequency and quality. Engineers were avoiding testing due to its complexity and tediousness, hindering deployment velocity and confidence.

"We had a lot of anxiety about how often we deployed and how big those deploys were," says Xin Zhang, Staff Software Engineer at ServiceNow Cloud Observability. "I was concerned about 95% of what was going out, and that was really hard."

ServiceNow's engineering team recognized the need for faster, more frequent, and more confident deployments.

Solution

Soon after, the team identified gaps in their processes and compared them with Cypress's capabilities. They worked out how they wanted to use Cypress, where (inside CI and CD), and how often. Within two weeks, they automated the most tedious manual tests using Cypress, and within two months, the entire manual QA process was eliminated, and Cypress was implemented for PR checks and parallelization. They found it easy

4X
faster deployment velocity

90%
of Engineering organization using Cypress

820k
automated tests conducted monthly

80%
reduction in test run times from parallelization

to implement Cypress, write custom commands, and use automation to simplify and streamline their processes effectively. Automated notifications were also set up in Slack for all the engineers to see, share and troubleshoot issues collectively.

Result

The adoption of Cypress revolutionized ServiceNow's engineering workflows, resulting in a 4X increase in deployment velocity. They significantly improved deployment quality and reduced risk. Comprehensive tests are now run in multiple environments across various user roles, with feature flags enabling rapid feature development. Automation of the test suite lowered operational overhead, freeing up engineers to focus on critical tasks. Deployments are now less stressful and time-consuming, fostering a culture of confidence and efficiency.

ServiceNow aims to expand their Cypress test suite to include more comprehensive visual testing of UI components like charts and tooltips, enhancing user experience. They plan to foster distributed test ownership, encouraging engineers to contribute to the test suite. With Cypress facilitating more frequent deployments, the team can handle fewer PRs with greater clarity and control, ensuring smoother development cycles.

"We want each engineer to feel confident in contributing to the test suite and widen our circle of Cypress test-writing champions", says Zhang. "Now, because Cypress makes it easy for us to deploy much more often, we're dealing with far fewer PRs each time, and we know exactly what is happening."

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