



Continuous Delivery Requires Smart Test Orchestration



Smart Test Orchestration for a Sprint-by-Sprint World

In an agile development world, continuous delivery of software with sprint-based precision is the goal of DevOps teams. But to manage that, your organization's testing and release practices must be fast—embodying instantaneous feedback, no wait time and parallel execution. In addition, the "best-practice" goal of an agile sprint should be to produce a viable release candidate that's fully technically and functionally validated.

It's a great place to be in an organization—not scrambling to get new features out the door on time, but pushing a button to deliver them when the business wants, following what's essentially an on-demand release model.

Today, testing is the biggest bottleneck standing in your way—one that continuous testing can mitigate. To put a continuous testing practice in place, however, you must first build its foundation—one that automates testing with your release cycle and enables adaptability and insight for smarter test orchestration and lower-risk releases.

Here's how you get started:

**Build a
Continuous Testing
Foundation**

**Improve Testing
Efficiency by Adding
Intelligence**

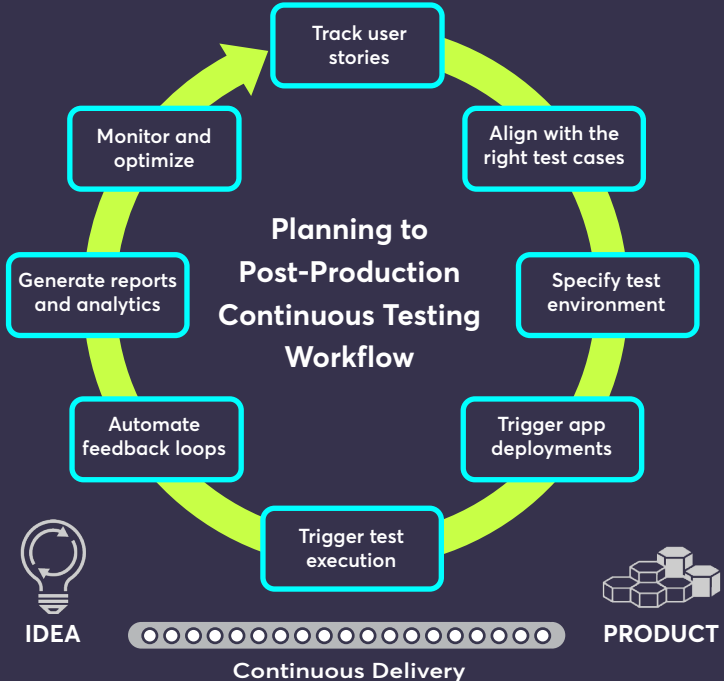
**Get Visibility and
Insights Into Release
Readiness**

Build a Continuous Testing Foundation

Your current testing practices aren't helping you operate at the speed of agile. You have manual processes and difficulties integrating different automation tools. Your feedback loops are slow, inhibiting collaboration among teams. You have limited visibility into testing progress and how it's impacting your release. No wonder you're constantly dealing with bottlenecks and quality concerns.

To address these challenges, you need to be able to continuously uncover and fix unexpected issues as soon as they're injected into the pipeline. That's what continuous testing is all about. But where do you start?

By orchestrating test execution as a seamless part of your release cycle, you lay the foundation for continuous testing. Your development, testing and delivery teams can now work together and have complete transparency into testing activities, quality issues and release health. On-demand releases become a reality.



Accelerate Testing and Increase Rigor

Through end-to-end pipeline orchestration, a coherent testing workflow takes you through all phases of testing, including unit, GUI, performance and security testing. It allows you to track user stories through the pipeline—aligning the right tests with the right environments. It automates testing promotion at every stage, providing related feedback at the near-instantaneous pace you require for rapid, high-quality testing.



Increase visibility and control from development through release



Streamline collaboration among development, testing and release teams



Reduce cycle times and rapidly apply feedback

Improve Testing Efficiency by Adding Intelligence

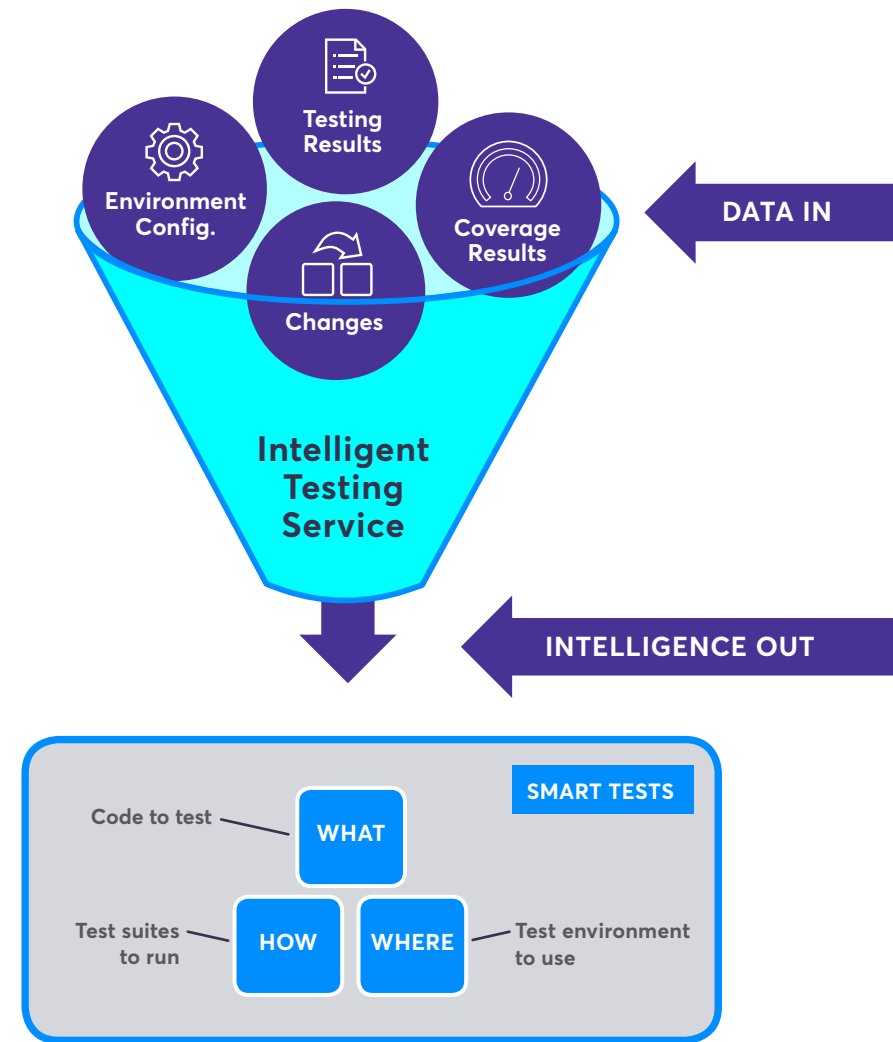
Your testing cycles can have hundreds of tests and take hours to complete. Worse, every new feature or bug can add more tests to your cycle. If you're running all the tests all the time, it's hard to be agile and accomplish in-sprint testing.

With continuous testing orchestration in place, you'll be positioned to automatically adapt testing to the code change committed to the pipeline.

For example, the changes that are riskier, higher-profile or historically problematic can be prioritized first for testing, so you can root out issues earlier with a subset of tests.

At the same time, through smarter test selection, you'll be able to pick the most efficient testing path to shave even more time off your testing cycles. In the end, you'll be able to complete testing faster and more intelligently every time.

Leverage an intelligent testing service to select what tests to run at every phase of your testing cycle based on the risk level of the code change, predictive analysis and business priorities.



Get Visibility and Insights Into Release Readiness

If you don't understand the quality of the code in your release, it's impossible to make a go/no-go decision with full confidence.

With test orchestration as a seamless part of your release cycle, you'll have the necessary data at hand to know the quality level of your pipeline. You also will have continuous visibility into quality issues as the release executes, including detection of anomalies and alerting of exceptional failure rates, durations or execution time.

You'll be able to access test results and insights as your pipeline executes to better understand the health of releases as they move from development to production. What's more, you'll have a complete audit trail of test activities and be able to improve planning for each test cycle.



Reduce release risk and improve pipeline efficiency by 30 percent*

* CA Continuous Delivery Director Business Value Estimator



Test coverage visibility
Testing an app across all phases



Test execution details
Testing activities down to specific tools and phases



Quality trends
Visibility into the quality level of a release

Smart Test Orchestration Drives Quality

CA Continuous Delivery orchestrates the delivery of quality through automating test execution as a seamless part of the release cycle and providing continuous visibility into quality issues.

Thanks to the testing transparency and automation provided, you can manage change validation and delivery risk across your entire organization. You also gain a single place for your development, testing and delivery teams to work together, with fast feedback loops and end-to-end visibility into application quality.

Using CA Continuous Delivery Director, you'll be in complete control of your testing workflows, ensuring the right tests are run in the right environments at the right time.

From this foundation for continuous testing, you'll be able to add intelligence and get insights to further speed time to market, decrease risk and increase the quality of your applications.

Learn more about
smart test orchestration

ca.com/cddirector



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