



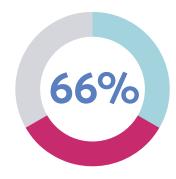
Keeping up with customer demand—and getting ahead of the competition—means you must continuously deliver high-quality apps and experiences. In the modern software factory, you'll find

Application releases are occurring at increased volumes, with greater frequency and speed.1

33% Release daily or more frequently

33%

Release weekly



¹ CA Technologies DevOps Research, prepared by Spiceworks, February 2017



"Cloud First" is becoming a global priority.

In 15 months, 80 percent of all IT budgets will be committed to cloud apps and solutions²



Microservice architectures and container-based apps are the new norm.

83 percent of organizations are actively using containers todav.3

² Forbes, "2017 State of Cloud Adoption and Security," April 2017



But how do you become a modern software factory when you're still facing challenges like:

- Manual Processes: Manual, ad hoc release and testing processes do not scale in a multi-app, multi-release pipeline.
 And increased deployment frequency and speed through automation exacerbate the issue.
- Testing Bottlenecks: Testing is critical, but a siloed, time-consuming and manual part of the release cycle. In fact, 66 percent still use Microsoft Excel®, Microsoft Word® and email to track testing.⁴
- Evolving Tech: DevOps toolchains and technologies are constantly evolving, putting pressure on teams to balance new capabilities with existing investments.
- **Limited Visibility:** The proliferation of moving parts requires that you establish a big picture view of the pipeline to continuously improve the speed and quality of releases.

The answer: You need one more DevOps tool—a director.

⁴ QA Intelligence sponsored by PractiTest, "2016 State of Testing Report," 2016

You Need Continuous "Everything"— Development, Testing, Release and Improvement

To deliver more features faster *and* improve application quality, you need to fully orchestrate the pipeline from planning through production. This means you need to direct all tasks within the pipeline, enabling seamless development hand-offs, continuous testing and simplified production releases. And you need to connect your DevOps toolchain and your teams for better process flow, communication, alignment and collaboration.

With a well-orchestrated toolchain, you'll be able to reduce the bottlenecks affecting your pipeline while attaining the visibility required to continuously improve application quality and release processes through actionable insights.

Enter CA Continuous Delivery Director—a powerful pipeline planning, orchestration and analytics solution that enables teams to continually improve the delivery of revenue-generating features. It works with your commercial, open-source or home-grown DevOps solutions to orchestrate the pipeline from planning through production.

Check out six ways that you can put CA Continuous Delivery Director to use in your organization today.



Use Case #1: Intelligent Continuous Testing

Testing and QA—and the tools employed—are often siloed in an application release process, where testing work can take weeks to complete. Despite the adoption of test automation tools, there's a low degree of integration among them. Therefore, testing handoffs, communications, environment management, validation and promotion are still very manual processes.

But what if you could integrate and automate every testing step in your pipeline?

With CA Continuous Delivery Director, you can.

By integrating the various elements of your testing toolchain, you can orchestrate an end-to-end workflow, shifting testing left and doing more in parallel. This means, in a simple and automated way, you can grab project requirements, deploy test environments, load test cases and test data, run automatic test scripts, update status and promote a build without a single manual intervention. You'll also be able to automatically prioritize the order of your testing, enabling you to test more risk-prone areas first.

By instating automatic feedback loops, you'll accelerate fixes in development, and with release health profiles, you can make real-time, informed decisions about releases. Ultimately, you'll be able to achieve continuous testing and better application quality due to a faster, smarter and more streamlined testing regimen.



63%

of DevOps adopters say current QA processes are a bottleneck.⁵

⁵ Computing Research, "DevOps Review 2017," March 2017

Use Case #2: Shift Cloud

Cloud First is a global priority for organizations that prefer deploying applications that can be purchased as a service or deployed in the cloud. At minimum, cloud transformations are on the roadmap of every enterprise. How are you managing this shift?

Your cloud adoption is likely a mixed bag of private, public and hybrid at the moment. And it may not be clear which cloud provider is the right solution for you long term. Companies are continuing to move legacy systems to modern technologies, and public cloud technologies continue to evolve their security and reliability—although costs continue to rise there. It's a world of transition, and you don't want to be caught having to re-configure your applications along the way.

But what if you could standardize, automate and abstract release processes across on-premises AND cloud environments to easily adapt as you shift to the cloud?

With CA Continuous Delivery Directory, you can.

CA Continuous Delivery Director is tool- and environment-agnostic, so you can support each team's workflow and toolchain, no matter what they are. This means any cloud—private, public or hybrid—on any platform—Amazon, Microsoft® or Google—can be just as tangible to your organization as a physical server. Using CA Continuous Delivery Director, you can model releases, whether based on monolithic or microservice apps, and orchestrate the appropriate pipeline to support both architectures, easing your shift to the cloud and facilitating application modernization.



Use Case #3: Dynamic Release Pipeline

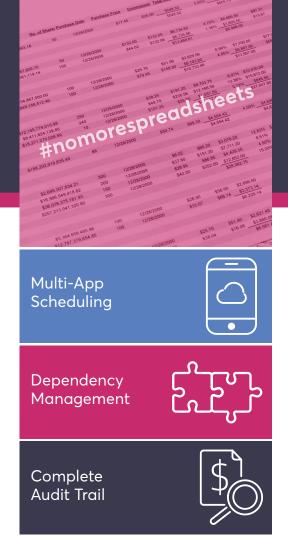
In today's modern software factory, releases are complex, often involving multiple applications with dependencies and different technology with potentially conflicting resources. This is difficult enough to keep track of when your managing one release, let alone hundreds or thousands.

As pipelines multiply, release managers are left struggling to stay afloat and bring some order, visibility and predictability to the multitudes of tracks that they need to coordinate and make sense of—particularly since many are still using manual, ad hoc methods.

But what if you could gain centralized planning and management, shared visibility and governance over all your releases?

With CA Continuous Delivery Director, you can.

With CA Continuous Delivery Director, you have a single control point for handling high-frequency and parallel pipelines—easily managing dependencies and conflicts. You can plan your releases end-to-end and execute them automatically, adding in manual steps and check points as needed, as well as feedback mechanisms. You can release and track stories independently or grouped based on business requirements, and coordinate multiple releases into the same production schedule. It becomes your super-charged spreadsheet replacement, orchestrating all releases through the pipeline and providing visibility to every stakeholder.



83%

of North American SMBs still use spreadsheets to handle application releases.⁶

Use Case #4: Business Value Alignment

Is your pipeline prioritized with the value-added, revenue-generating features needed for the business? Knowing what application content is in what release and the status of that content in the pipeline is hard to track and measure. Yet this key application knowledge can greatly improve the ability of your business to manage its workflow and customer experiences.

What if you could monitor the who, what, where and when of all apps?

With CA Continuous Delivery Director, you can.

By automatically importing user stories, features and fixes for multiple applications and mapping them to a release, your DevOps teams can track the status and progress of content as it moves through the release cycle. You'll have full visibility into what features and fixes are being delivered when, what specific content is in each release and what other releases are in the pipeline and what they contain. This means you can deliver business-centric reporting to demonstrate progress against strategic initiatives.



Use Case #5: Data-driven Pipeline and Roadmap

Continuous delivery is a journey that takes teams from manual, scripted processes to more automated, standardized, efficient and agile processes. But understanding how to embark on that journey can be challenging. Many organizations know they need to apply more automation, but understanding where to start—and where they might see the most benefits—is not evident.

But what if you could make data-driven decisions about your path to automation and continuous delivery?

With CA Continuous Delivery Director, you can.

Start by planning your release phases in CA Continuous Delivery Director, adding all manual and automated tasks, and executing releases through the tool. By gathering data across the entirety of the release pipeline, you can take the guesswork out of where to automate next with insights into the percentage of automation in any release



and where the bottlenecks are in your pipeline. You can even chart your progress over time as you add more automation—seeing not only improvements in speed but also improvements in quality.



Use Case #6: A Smarter DevOps Toolchain

Releasing applications is an intensely collaborative process that spans multiple departments—from development to test to release management to operations. There are mutliple tools in play with every team; however, there remains a significant lack of coordination and shared knowledge across the DevOps toolchain to generate the value stream velocity that can keep businesses competitive and customers engaged. For example, if a testing function is isolated, it becomes a black hole of activity and often a bottleneck to delivery. This is not a time-efficient or scalable practice.

But what if you could build a smarter, easily integrated toolchain?

With CA Continuous Delivery Director, you can.

CA Continuous Delivery Director offers an open framework, allowing you to choose the tools that are the best fit for the job and integrate them into an intelligent toolchain. This means you can orchestrate workflows automatically across the continuous delivery pipeline with zero touches. This includes a continuous testing workflow for better, faster testing.

When teams can visualize, orchestrate and track the continuous delivery toolchain from development through production, the pipeline becomes an entity of its own—giving you the visibility and analytics to help your teams iteratively improve to derive more value.



End-to-End Orchestration



Value Stream Mapping





Directing Your Success

CA Continuous Delivery Director sits at the heart of the modern software factory, enabling you to release revenue-generating features into the hands of your customers as fast and frequently as needed.

Only with CA Continuous Delivery Director can you:

- Schedule and manage multiple, complex, multi-tier releases across all phases of the application lifecycle, including coordination of multiple releases to the same release track.
- Fully orchestrate an intelligent, end-to-end testing workflow with automated promotion of builds, feedback loops and risk assessment.
- Access a real-time view of application content in the pipeline (the who, what, where, when of all features and fixes), providing insight and full business value alignment.

- Identify and manage interdependencies and potential conflicts across multiple apps and releases in the continuous delivery pipeline.
- Access a single source for continuous delivery insights with full pipeline analytics, enabling you to gauge release readiness and continually improve application quality and release processes.
- Use governance controls and consistent release criteria to ensure compliance, including an automatic audit trail of end-toend release activity.

- Leverage a cloud-agnostic platform that separates application release processes from the environment to support any cloud implementation, including hybrid solutions.
- Maintain team alignment and interactivity through integrated collaboration technologies like notifications, activity window and shared reports.
- Manage the continuous delivery value stream with intelligent integration of your DevOps toolchain through a powerful, tool-agnostic platform that works with your favorite DevOps tools open source, commercial or home grown.



CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate—across mobile, private and public cloud, distributed and mainframe environments. Learn more at <u>ca.com</u>.

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