Execute Faster and Higher Quality Deployments with CA Continuous Delivery Automation

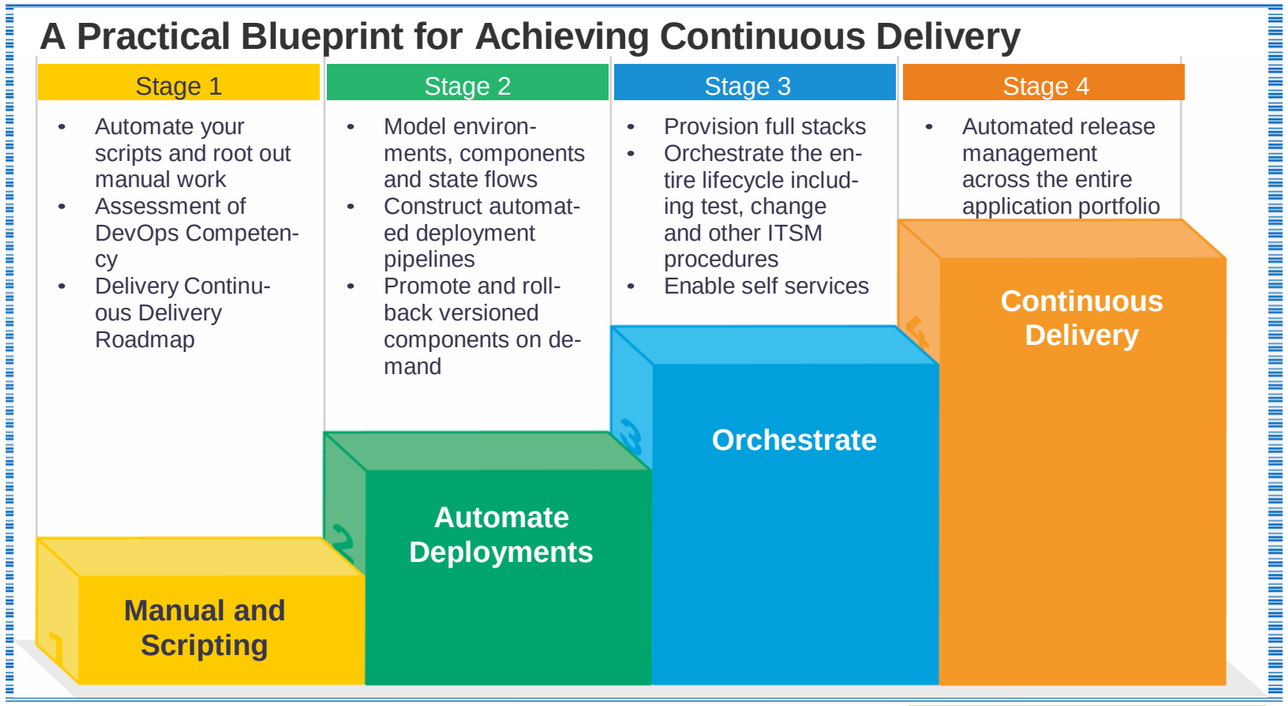
Applications are a key component of modern business, and users of these applications regularly expect 24x7 availability with new and enhanced features released on regular basis. With CA Continuous Delivery Automation, companies can automate and standardize the application release process from development through production—stabilizing releases, reducing errors and improving deployment time. CA Continuous Delivery Automation enables companies to accelerate application releases to market—on demand—with complete control and transparency of the entire deployment pipeline. Moreover, enterprise can start small and scale big to manage agile application deployment since CA Continuous Delivery Automation easily handles hundreds of complex, multi-tier applications across thousands of server and cloud platforms. The automated deployment pipeline is expanded to include orchestration – running workflows on cross-platform, multi-stack hosts and against adjacent systems. Application dependent systems such as VMs, Docker containers and continuous configuration tools are on-boarded along with elements of the ITSM stack. Environment lifespans are provisioned and de-provisioned on-demand or by timed lease to reduce virtual sprawl, and provide self-service accessibility to developers, testers, and other delivery personnel.

Business challenges

Continuous delivery is a journey and application release automation (ARA) is its lynchpin. Getting agile applications to market can be fraught with risk and delays due to manual release steps, time-consuming script maintenance, a disjointed toolchain and disconnected Dev, Test and Ops teams. Companies typically start small, automating releases for a single project or team and then scale to apply continuous delivery practices enterprise-wide. Along the way, adopting and mastering the ARA tools and processes to ignite and advance continuous delivery is non-trivial. In particular, many enterprises struggle with:

- **Pressure to deliver more, faster.** To keep pace with demands for new features and updates, the volume and velocity of releases must grow and include an efficient feedback loop—an impossible task if you 'throw code over the wall' to production.
- **Enterprise complexity.** With a myriad of tool preferences across multiple teams, orchestrating releases effectively is a juggling act. The array of application technologies and intricacies of environments and infrastructure also fuel complexity.
- **Downtime and failures.** Moving faster can lead to more mistakes (especially

A Practical Blueprint for Achieving Continuous Delivery



Key benefits and results

Many customers report significant benefits from release automation, such as:

- Reduced application release cycles from 12 days to a few minutes
- More frequent releases by up to 300 percent
- Reduced resource requirements for deployments from 15 to 1
- Instant visibility to key stakeholders and increased confidence

Marquee benefits yielding over **$1.2M** per year in savings are detailed on the reverse side of this document in order to show examples of business value achievable through CA Continuous Delivery Automation

Key features

- **Application-centric, model-driven** deployment provides reusable and repeatable processes to simplify and streamline application releases.
- **Comprehensive set of action packs and plug-ins** enables customers to leverage their existing investment and easily automate and integrate leading third-party solutions without scripting.
- **Scalable enterprise solution** that can handle complex, multi-tier distributed solutions across thousands of servers and multiple data centers.
- **Intuitive, powerful graphical Workflow Engine** eliminates the need of scripting and quickly allows you to visually create your deployment processes.
- **Consolidated release manager and dashboard** promotes collaboration and governance to plan, schedule and manage releases across the promotion pipeline.

For more information, please visit

ca technologies

http://www.ca.com/automation

Business Value Estimations for CA Continuous Delivery Automation

CA Continuous Delivery Automation business value can be quantified per a wide range of benefit scenarios for an illustrative organization with about $1B in annual revenue. A selection of these is listed below to show common areas measured.

Business Value Proposition	Business Value Enabler	Specific Measurement	Impact Range [1]	Key Resources Affected	Average Resource Value [2]	Projected Savings / year [3]
Increase in Dev / Test / QA staff output & operational capacity	● Automate environment provisioning & setup as needed in Dev/Test ● Quickly pinpoint root cause of release error ● Rapidly develop a fix for release issue ● Automate manual & script based release efforts ● Creation of standard reusable deployment processes ● Faster development through all phases of the software development lifecycle	Cost reduction in Dev / Test / QA labor	1 - 3%	Dev / Test / QA FTEs	72	$172,800
Reduction in remediation costs of release errors	● Automate manual & script based release efforts ● Reduce human errors & mistakes introduced in pre-production or production ● Promote & rollback versioned components on demand ● Easily rollback to prior version or restart deployment after error correction	Cost reduction in release error remediation	25 - 35%	Release Operations Errors	95 [4]	$202,350
Improved Time to Value for Revenue generating applications	● Just in time infrastructure provisioning & support for multitenancy in cloud environments assures timely availability of required resources ● Eliminates time consuming effort of managing independent changes across each environment ● Eliminates cumbersome tracking application changes & managing application drift across distributed data centers ● Reduces time to deploy applications into production	Revenue enhancement stream from early release	2 - 4%	Revenue dollars influenced by a 40 day delay	10,952,000 [5]	$328,560
Increase Release Manager/ Engineer staff output & operational effectiveness	● Manage increased volumes & frequency of releases ● Deliver real-time actionable intelligence across the release pipeline ● Orchestrate & automate end-to-end release pipeline ● Enable self services ● Construct automated deployment pipelines	Cost reduction in Release Manager / Engineer staff effort	25 - 35%	Release Manager/ Engineer FTEs	9	$324,000
Reduced costs through just In time orchestration of infrastructure Provisioning	● OOTB functionality & automation mechanics to provision & de-provision platform agnostic cloud-based environments on-demand ● Support for modern virtual, cloud or container environments needed for multi-tier app architecture including network & storage services ● Provision of environment blueprints allowing complete, full stack app environments ● Orchestrate automated testing use cases against newly provisioned & configured app ecosystem	Cost of inefficiency leading to VM sprawl	15 - 25%	Count of virtual machines for Release Management operations	100 [6]	$80,000
Reduced risk of security breaches	● Server, agents, database & the networked communication between support encryption ● ARA objects, app & environment models, properties & workflows are all controlled with RBAC ● Supports Separation of Duties concerns, can operate in the DMZ, provides proxy agent to securely broker communications & is firewall friendly ● Access to data is only provided to authorized users	Revenue at risk due to security breaches	1 - 3%	Revenue flowing though release management operations	$5,000,000 [7]	$100,000

This table shows some **key benefits** of **CA Continuous Delivery Automation**. Your CA Technologies representative can also share additional and more detailed ROI business case examples for this solution by engaging the CA Business Value Analytics Team. This team works with CA's customers to develop and analyze a comprehensive set of assumptions and environment specific metrics in order to build customized projective business cases.

1 The **Impact Ranges** shown above are estimations derived from the analysis of benchmark data which is a composite of data derived from industry analyst published information, interviews with subject matter experts and experiential data from prior projective analyses.

2 The **Average Resource** column shows the calculated mid-point of resource values captured in reference business case and customer analyses by the CA ROI & Business Value Analytics Team.

3 The **Projected Savings** calculations are based on the product of midpoints of the Impact and Average Resources to show a single representative potential savings value. The labor rates for all FTEs are an assumed blended rate of $60/hour for a 2,000 hours per year.

4 Assumes 1.5 Errors per FTE for a total of 72 Dev / Test / QA FTEs at $7,100 cost of remediation per error

5 Assumes 10% of $1.0B created through revenue producing apps with 40 days at risk annually due to release errors

6 Assumes a total of 1,000 Dev/Test VMs of which 10% are designated for Release Automation at $4,000 cost per VM

7 Assumes 10% of $1.0B created through revenue producing apps of which 5% is related to Release Management

Please note, the values expressed in this table are not a guarantee of achievable results and will vary depending upon your current infrastructure, people, and processes as well as the appropriate, effective implementation, adoption, and use of the CA solution.