A Broadcom Company
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Case Study

TASC Relies on CA Automation to Orchestrate Application Releases to the Cloud

Client Profile

Organization: TASC (Total Administrative Services Corporation)
Industry: Administrative Services

Business

With more than 21 innovative service offerings, TASC confidently serves businesses of all sizes in all 50 U.S. states. Last year their annual revenue exceeded a robust $100 million.

Challenge

- Manual, inconsistent, time-consuming app releases.
- Slow development cycles with no transparency.
- Archaic and manual testing with slow turnaround.
- Monolithic, static, inconsistent IT infrastructure.

Solution

- Model based deployment architecture.
- Abstracting of workflows using reusable objects.
- Integration with other DevOps tools.
- Highly scalable, stable platform.

Results

- Deployment times reduced by more than 75%.
- Major cost savings on computing resources.
- Improved customer service levels with self-service.
- Higher availability with zero down time deployments.

Business

Providing Administrative Services That Are Second to None

TASC (Total Administrative Services Corporation) is the largest independent provider of third-party employee benefit administrative services in the United States. With 19 innovative service offerings, TASC's team of dedicated professionals, comprising 8,000 field representatives and more than 900 associates, serves more than 60,000 businesses of all sizes from its Madison, Wisconsin campus and remote locations.

Some 60,000 clients translate into approximately 600,000 participants. On any given day, there are approximately 40,000 active users of the TASC's web-based applications and systems application on the MyTASC website (www.tasconline.com) with more than 100,000 online at peak times.

Typically, employers use MyTASC to manage their employee list and employee census during the day, while employees will manage their employee benefits, request reimbursements of money, and make updates to their accounts at night. TASC services need to be available 24x7 to employers, employees, and internal customers.

Challenges

Faster Deployments Needed to Support 30% Business Growth

TASC's online services were built around a custom-developed core Java application. This was supported by .Net and PHP web-based applications, and data integration tools that are JBoss-based and MySQL-based. These, in turn, primarily on Linux and Windows on-premise platforms. TASC realized change was required in order to support a 30% annual growth in business and the need to offer customers mobile and SaaS-based solutions.

"We were releasing code to our major Java platform every 2-3 months, which simply wasn't fast enough," says Tom Flitter, Director of Applications and Integration, TASC. "Adding people and improving processes, we were able to move to major Java releases every 4-6 weeks. Depending on the breadth and the scope of a release, we might have up to six people involved in both planning for a release and executing it into a production environment.

"Deployments would normally run on a Saturday night as we needed to take our systems down. This had a significant impact on both our internal and external customers, which is why we only did it once a month. Moreover, we didn't have control of our releases. Knowledge was limited to a few key individuals; and while we had a defined implementation plan, too often we relied on some 'secret sauce' to make it all work and run properly."

Solution

Automating Application Releases Enables Dramatic Productivity Improvements

TASC initially introduced Jenkins to help automate deployments but it soon became apparent that they would need additional tools to manage the complexity of deploying across multiple nodes, and to achieve the scalability required to support releases into TASC's production environment. Automic Continuous Delivery Automation was also introduced to speed application delivery, to enhance visibility, and to improve the quality of application release cycles.

Integrating Jenkins and their F5 virtual appliance load balancer with Automic Continuous Delivery Automation allows TASC to phase their deployments across their nodes, eliminating the need to shut down systems and to disrupt services to internal or external customers. TASC also uses Automic Continuous Delivery Automation to modularize Java code dependencies and to eliminate the need to create packages as ear files. Establishing a clear separation of duties between development from deployment teams for application releases helps TASC maintain PCI compliance. It also enables the company to use the same deployment model from early testing through to production: ensuring consistency and improving the quality of release processes.

TASC uses Automic Continuous Delivery Automation to simplify administration and gain extra flexibility by abstracting its process flows. The company relies on Automic Continuous Delivery Automation to orchestrate their deployment pipeline integrating with Sonatype Nexus Maven and Subversion (SVN) as they promote their apps through their JBoss-based development, QA, staging, and production environments. The CA web interface provides users with a gateway for submitting requests and tracking progress of their deployments.

Solution (cont.)

"Automic Continuous Delivery Automation is helping us provision servers, components for those servers, data refreshes, and specific code releases to each target environment in a consistent and repeatable way. We no longer need an infrastructure or DevOps Engineer to manage releases. Our Business Analysts, Project Managers, and Quality Assurance Engineers go to the CA page, select what they want, and press a button. Within an hour, they have a complete environment provisioned at the proper build and configuration levels they need for their project. We've automated database refreshes so they now take 10 minutes to complete instead of 3-4 hours and test cycles operate faster when running against fresh data."
- John Gildenzoph, DevOps Engineer at TASC

Results

Automation Offers TASC with Springboard to the Cloud

Having already cut deployment time by 75%, TASC wanted to know if they could go even faster. "If you've worked with Amazon EC2 or any cloud platform you'll know it is pretty easy to get set up. Spinning up environments is easy but left unmanaged, to run all day, they can be very costly and reduce a lot of the benefit of going to the cloud," says Gildenzoph. "The success we'd achieved automating deployments in our own data center got us wondering what we could do creating environments and deploying apps in the cloud. We were already using F5 to push releases to our target platforms. What if we changed our deployment model to connect with EC2 instead?"

TASC did some cost modelling and identified quick-win savings, by moving everything from dev and test through to QA and staging platforms to the cloud. While Amazon offers its own automation tools, TASC continued using CA because they wanted the freedom to move to other providers. Also, they could integrate with Amazon from the CA platform using RESTful Web Services. TASC is realizing huge cost savings with no need for unused computing resources on premises and unlimited capacity on tap. The budgeted spending on extra SAN capacity is no longer necessary. These achievements have not passed unnoticed at TASC. "This success led our senior management to become very interested in moving our production systems into the cloud," says Gildenzoph.

"Instead of deploying a software component we package the artifacts of an Amazon Machine Image (AMI) and deploy the entire image. Is this production ready? The beauty is that we're getting good at this. We've already done 17,000 deployments."
- John Gildenzoph, DevOps Engineer at TASC

TASC is already automating the development and deployment of next generation Java and Docker apps it is creating as microservices. With Automic Continuous Delivery Automation it can easily introduce and swap out individual components within its delivery pipeline. Currently, the company is transitioning from SVN to GIT and extending its pipeline to orchestrate Spring Cloud configuration management, service discovery using Nginx and log management with Kibana.

Flitter concludes, "We rely more and more on Automic Continuous Delivery Automation, and are experiencing increasing return on our automation investment and the toolset that supports our business. The CA automation tools have helped us grow and become agile for our customers, both internally and externally. It's also helped us grow into areas that, quite frankly, other companies and other organizations haven't been able to move into."

For more information, please visit ca.com/automation.

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