

Fuzzy Logic *Rules*

November 2015

Automating Barclays Daily Deals Website

Acquired by Barclaycard in June 2012, Analog Analytics was handed a project to build a daily deals website for Barclays Bank *yesterday*. Analog Analytics, searching for a contractor to automate high-traffic international environments quickly, selected Fuzzy Logic for its performance at Endurance International and Mimecast, as well as principal Lee Whalen's proven ability to "automate all the things."

Coming on board in December 2013, Fuzzy Logic found the core Analog Analytics team fully invested and eager to implement DevOps concepts like rapid deployment, short iterations, and automated testing and deployment. Just as the team was ready to begin rapid sprints to build, test, and implement a flexible and highly responsive promotions website, they hit a roadblock.

Barclays security, physically located in the UK and wholly anonymous, insisted on maintaining their old waterfall project management style, including two-week turn-around times for change review.

Every activity was suspect. The team heard decrees such as:

Staging virtual machines must be provably shown to not share hardware with production machines.

Developers are forbidden to manipulate production servers.

Infrastructure virtual machine changes, including creating new VMs and installing utility packages, must be ordered via change request.

Navigating these deep bureaucratic waters required the combined efforts of Lee Whalen, who had become fluent in myriad, sometimes conflicting, compliance requirements from his experience at Mimecast, and the AA team manager. They completed *all* required product deploy change requests (more than a dozen every day) in time for the two-week turnaround. Continued application of the counter-flood won a dispensation to file *ex post facto* CR tickets, allowing the team to deploy twice a day.

Other wins that helped the team meet their goals included:

- Coaxing access to the production logs, streamed off-VM to a centralized server, in order to pull and sanitize a production database copy to feed into staging and development.
- Negotiating creation of a sandbox where the team could build and destroy networks, VMs, and servers at will, which kept the security team calm and relaxed while the project advanced.

After significant initial push-back, Fuzzy Logic and Analog Analytics won over Barclays security with a combination of compliance savvy, persistence, and a consistently stable environment, as well as reflected glory from their fast feature releases. Ultimately, they earned the security team's trust, enabling them offer new features in a matter of days rather than the rumored six-month lead times for internal teams.

Fuzzy Logic's biggest wins on the project?

- Automating the physical and virtual host management within a strict compliance environment for the Barclaycard Bespoke Offers portal based on CentOS, Rails 3, Unicorn, Nginx, Chef, and Redis/Resque.
- Saving over \$120k/ month in hosting fees by providing key support for an environment-wide migration from Rackspace fully managed hardware to a privately hosted Rackspace OpenStack.

In addition, Fuzzy Logic supported supported the team by:

- Writing extensive and detailed documentation to reduce new DevOps teammates' onboarding from two weeks to two days.
- Co-developing Vagrant-based provisioning to spin up complex environments with a single command, reducing a multi-day, highly manual process to two hours.
- Co-developing FogLibrary-based provisioning tool so that the same code and JSON-based configuration files could deploy independent of the cloud provider backend.

The Bespoke Offers portal came online before the end of 2013, after only a month in development. It traded from 2013 until October 2015, when Barclaycard announced its closure.

Fuzzy Logic

Based in Seattle, Washington, Fuzzy Logic serves clients worldwide, assisting development and operations teams in leveraging the power of the latest technologies in virtu-

alization, server administration, communication, and deployment to deliver solid products that are efficient, faster to market, and customer-friendly.

Fuzzy Logic's clients operate in diverse fields such as digital media, data analytics, healthcare, social networking, and banking.

www.fuzzylogic.com

Analog Analytics

Analog Analytics was a provider of a white-label software platform for digital coupons and daily deals promotions. Sold to Barclaycard in May 2012, the company's technology powered the Barclaycard's Digital Marketplace "Bespoke Offers" program from 2013 through 2015.

Barclaycard

Barclaycard is a global payment business, part of Barclays Retail and Business Banking, located in Northampton, UK. It is the leading UK credit card issuer, with over 10 million UK customers.

<https://www.home.barclaycard/>

Links for images

Bespoke Offers: <https://www.bespokeoffers.co.uk/>

Analog Analytics: <http://www.versatile-connections.com/analog-analytics---case-study>