



FUZZYLOGIC

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DevOps Automation Makes Big Wins a Done Deal at iOffer

iOffer is an online marketplace where users can buy and sell practically anything. Established in 2002, iOffer.com has more than 100 million items for sale and thousands of active buyers and sellers.

This successful eCommerce company found it needed to completely re-architect its server and networking infrastructure – most of which hadn't been updated in a decade – and adopt a DevOps-based methodology for infrastructure management to service increasing web traffic and flourishing customer demand.

Older, end-of-life, and underperforming infrastructure was causing significant business problems; it couldn't keep pace with the company's steady growth

- **With hardware out of warranty and no support contracts** for load balancers and other networking hardware, replacement parts were expensive and resolving failures was increasingly challenging.
- **Underperforming compute, network, and storage resources** made running applications to process customer transactions problematic.
- **Older virtualization technology and legacy platform cruft** made modern DevOps/automation practices awkward to implement.
- **Frequent alerts with no clear actionable path to resolution** fatigued the team.

iOffer sought an expert to:

- address the myriad issues in infrastructure management and reliability
- architect a new, fully automated, performant environment that would help, not hinder, the business as it continued to grow
- pass on to staff the knowledge to properly maintain and scale the infrastructure

The company determined Fuzzy Logic, led by Principal Lee Whalen, was the right fit for their needs.

*“There's always a hesitation when there is an unknown. I hadn't worked with Fuzzy Logic before. But Lee presented himself very professionally and seemed very forthcoming in wanting to share all of his expertise. **The fact that he was very knowledgeable about our system combined with his past experience helped us overcome that unknown factor.** He seemed like somebody who would be very easy to work with.”*

– Ian James, iOffer CTO

Designing and building a new solution from the ground up

Fuzzy Logic architected, designed, and automated infrastructure solutions for iOffer that would **support more than twice as many transactions per second and significantly improve infrastructure scalability and reliability.**

Initially, Fuzzy Logic worked with iOffer to assess the existing network state – what was working, and what wasn't. Talking with and listening to executive owners about where they wanted the business to go, Fuzzy Logic provided recommendations on a new hardware platform (F5 load balancers, a Cisco Nexus switch fabric, and Dell servers) that would help them get there and beyond. Fuzzy Logic produced **a fresh network architecture with an eye towards security, performance, and future scalability.**

In a subsequent engagement, replacement hosting options were evaluated, and an alternative was found that **cut hosting costs by 80%** while matching the previous site's SLA. The contemporary network was promptly implemented at the new site with concurrent automation, upgrade, and migration of the infrastructure. Fuzzy Logic had discussions with the technical staff about pain points with the legacy infrastructure and how things could be improved post-migration. Each of these

concerns were addressed with the new platform using a DevOps/high-automation methodology. Service by service, **each component was rebuilt into a modern operating system** (Ubuntu 16.04 LTS), **thoroughly tested for compatibility and functionality, automated** (primarily with Puppet, some with Ansible) **and migrated to the new site.**

“If you point to any particular piece of our infrastructure, Fuzzy Logic has improved it.

Everything is automated – all the provisioning, new services. We have a complex setup with all the applications, databases, storage and search servers. Fuzzy Logic set it up in a way that we’ll be able to continue to grow each of the services.”

– Ian James, iOffer CTO

Fuzzy Logic stayed engaged with iOffer post-migration to train in-house resources and lead the cutover efforts to minimize interruption to users.

Optimized & automated infrastructure leads to less worry, better reliability and response time, plus hundreds of thousands of dollars in recurring annual savings

As a result of working with Fuzzy Logic, iOffer now has enough compute capacity, network performance, and automation available to **process 500% more customer transactions**, eliminating the bottlenecks to scaling their business.

With the additional search- and application-server capacity readily available at a moment's notice, **site response time and customer engagement has been improved.**

With consistency in the new configuration and automated software updates, **outage times have been significantly reduced** from 'hours per month' to a mere 'minutes per quarter'.

A new monitoring system graphs historical performance at multiple levels, allowing the company to **easily predict and take action to prevent potential issues**, such as running over capacity, well before it becomes a problem.

The new monitoring system has reduced unnecessary alerts, allows for quicker recovery, and **only asks for engagement when business-affecting/clearly actionable events require it.**

“The biggest thing is we don't need to worry that there's going to be alert at 1 a.m. on a Saturday morning, which was happening almost weekly before this migration and took its toll on everyone. In fact, we used to get alerts several times a week about something going down with no way to fix the underlying cause.

Now it's easy to fix underlying causes when we see an alert so that it won't happen again. It's taken that weight off and allowed us to concentrate on our core competencies, which is creating this application for people to buy and sell products worldwide.”

– Ian James, iOffer CTO

On top of all these benefits, Fuzzy Logic has helped improve iOffer's bottom line – the company has seen **more than \$500,000 per year in hosting cost savings.**

Beyond the results achieved, iOffer values Fuzzy Logic's dedication and reliability throughout the engagements.

“Lee was very responsive. He would respond to communication promptly even if it was a night or a weekend. He was working nights and weekends during the month leading

up toward the cutover to make sure everything went smoothly, which I really appreciated.

– Ian James, iOffer CTO

Big Wins

In their work together, Fuzzy Logic and iOffer:

- **saved half a million dollars** annually in hosting costs
- **reduced alerts and alerting-fatigue, increased MTBF and decrease MTTR** – reducing outage times from a few hours per month to minutes per quarter
- **increased compute power and automation** to be able to process 500% more transactions
- **increased visibility** into their systems
- **reduced staff time and energy** needed to address issues with infrastructure

“I'd recommend Fuzzy Logic to others. You can depend on Lee to do the things that he says he's going to do. I'd say this project definitely couldn't have happened without him.”

– Ian James, iOffer CTO

About the Players

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 virtualization, 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, e-commerce, and banking.

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