Ambit Energy’s Competitive Advantage? It’s Really a DevOps Software Company

**Industry**
Retail energy provider

**Background**
Ambit Energy provides gas and electric service to retail customers in more than 50 U.S. markets. The company was named the fastest growing company in 2010 in the United States by Inc. Magazine — and has been in the top 5,000 fastest growing ever since.

**Challenge**
Ambit Energy couldn’t deploy fast enough to support its rapidly growing business without considerable pain.

**Solution**
Puppet Enterprise automates everything from infrastructure setup & management to application deployment.

**Results**
- Deployments up to 1,200 times more frequent.
- IT team can manage 500 servers, up from 30 before Puppet.
- No maintenance windows needed.
- IT team can be more strategic.
Investing in IT yields fast growth to $1B — and beyond

“I credit a lot of our growth to our investment in IT systems, which is as much as a software company would invest — and in some ways, that’s what we really are,” says Robert Rudduck, Ambit Energy’s director of architecture and DevOps. The company’s IT staff of more than 100 people write the software applications that run the business, using Puppet Enterprise to deploy that software and manage Ambit’s IT infrastructure.

Fast growth brings its own problems

Ambit Energy started up in 2006 as a direct selling company, using a network of consultants to sell gas and electric services to retail customers. The company has grown to more than $1 billion in annual revenue, and serves more than 50 U.S. markets.

Operating in so many markets, Ambit needs to take account of varying regulations and market rules in many different competitive energy markets. The company also has to integrate with different incumbent utilities that own the power lines and generation plants; each of these has its own rules for managing customers. To compete effectively, Ambit has to adapt to frequent changes throughout its markets, and maintain accurate billing to keep its retail customers satisfied.

Ambit runs its infrastructure and applications primarily on Windows and .NET. Before introducing Puppet Enterprise in November 2013, the IT team performed all software deployments by hand, and was able to manage about 30 application servers (compared to more than 500 in various environments since the team has been managing app servers with Puppet). CIO John Burke felt it was taking too long to develop and deploy applications with one-off scripts and manual deployment, and asked the team to find a solution.

In order to continue growing rapidly and sustainably in a highly regulated and competitive industry, Ambit needed automation so the company could respond quickly and with agility to ever-changing market conditions and its own business needs.
Automation gives you speed and quality

“Our mantra is ‘ automate everything,” Robert says. That includes automating the entire lifecycle of virtual machines, from provisioning to end-of-life, Ambit’s internally built web services framework and messaging framework, and more.

Most of Ambit’s tools are built internally, other than Microsoft Team Foundation Server and Puppet Enterprise. The integration of these tools has given Ambit a fast-moving continuous delivery platform that now allows the company to release code continuously throughout the day, up from a handful of quarterly or monthly releases, all while achieving ever-higher quality standards. Roll-forward is now a true option, and deployment-related rework is near zero.

Enabling DevOps with tools the entire team can use

In addition to delivering new features and updates more frequently, and with fewer bugs, Ambit’s IT team now benefits from the enhanced collaboration that DevOps practices and tools provide. Everyone can use Puppet, not just developers or admins.

“Our DevOps guys are not developers who code in Ruby — that’s not how they solve problems,” Robert said. “With Chef you have to write a ton of Ruby code, and you have to have the dev mindset. Because of Puppet’s resource-oriented DSL, you don’t have to think like a developer; you can just think about the state of your resources. Puppet is great for us; I can’t think of any other way we would have gone.”

Robert Rudduck is the director of architecture and DevOps at Ambit Energy, a Dallas-based retail energy provider. Robert’s experience of bringing innovative development practices to healthcare, government services, and utilities has been instrumental in Ambit’s transition from running legacy IT systems to running continuous delivery in a highly scalable environment based on micro-services.

Top outcomes of using Puppet Enterprise

• The team deploys 30 to 40 applications to production per day, up from monthly or quarterly releases.
• Changes made to production environments so quickly that no maintenance windows necessary. Before Puppet Enterprise, multi-hour maintenance windows were a regular necessity.
• The IT team is able to manage over 500 application servers in multiple environments, up from around 30 before Puppet, with the same size team.
• Puppet’s resource-oriented DSL lets Ambit’s IT staff think about the state of their resources; they don’t have to think like developers in order to make infrastructure changes.