

CLOUD RULES #43

A cloud in motion tends to stay in motion.

Opscode + Voxel = automation domination

Leveraging Hosted Chef for Efficient Management of Platform Configurations, Scalability for Cloud Hosting and Automated Infrastructure.

► The Challenge

Voxel is a New York-based provider of hybrid cloud hosting and managed services with over 1,000 customers. With the company's roots in scalable Linux application hosting, Voxel has evolved into a provider of highly automated infrastructure and delivery services for everybody from media giants such as major TV networks to start up application developers providing the next killer web application. As part of its promise to deliver highly scalable infrastructure, Voxel requires an efficient and fast platform for configuring systems in an easy, repeatable, fast and accurate manner. These requirements have driven Voxel to demand that all aspects of its deployment strategy be based in software and not reliant on manual configuration changes.

► The Solution

After evaluating several solutions, Voxel selected Hosted Chef by Opscode to serve as its underlying infrastructure automation platform. Voxel plans to power both its internal infrastructure and client environments, where the company manages all aspects of the application environment on behalf of the customer. Dubbed "ProManaged Hosting," the Voxel managed hosting offering is known in the industry to provide an exceptional layer of support to its customers, particularly those who require fast and accurate provisioning of application environments. To that end, Voxel has incorporated features of Hosted Chef into its Hosting API - enabling users to simultaneously order new server infrastructure, choose appropriate configuration or application groups and deploy, scale and manage their hosting platforms throughout their entire lifecycle.



LOCATION : New York, NY

INDUSTRY : Cloud Hosting

INFRASTRUCTURE : Cloud
Computing

► The Results

- Combined with Voxel's open Hosting API (hAPI), Voxel is able to scale its managed hosting business, server count, and customer base more efficiently
- Rapid and automated deployment of servers and application environments
- Significant time and resource savings while delivering superior service to the end customer

Voxel, a New York-based provider of hybrid cloud hosting and managed services, offers hosting locations in New York, Amsterdam and Singapore to serve its base of more than 1,000 customers. The company, founded in 1999, offers leading-edge hosting technology, including its VoxCAST Global CDN delivery, instantly available physical and virtual servers via VoxCLOUD, as well as a full API, infrastructure management tools and expert support via its ProManaged hosting services. Voxel offers the next-generation hosting experience required for today's scalable web and business applications.

With its roots as an open source, highly automated hosting provider, Voxel quickly branched out into the IT network and IT delivery business. In 2005, the company built its first content delivery network to help customers automatically scale the delivery of their applications to a growing base of end-users around the world while improving performance. "That went so well that we got religious about providing people consumption based services," said Voxel Chief Operating Officer, Zachary Smith. "We re-tooled our existing physical server and virtual platform to be fully accessible via open API's to be deployed anytime, anywhere, by either our customers or our expert support engineers."

"Using Hosted Chef has enabled us to offer an unprecedented level of automation to our customers. Hosted Chef, when combined with our powerful infrastructure APIs, enables our customers and internal staff to automate complicated application environments with complete accuracy and fast turn-up time. The use of Opscode's platform has increased our efficiency and our service offering to our customers."

▶ Zachary Smith
Voxel COO

Voxel brought its vision of on-demand infrastructure to its customers in 2010, allowing for hybrid contract terms that brought the benefit of committed, contracted resources with the flexibility of burstable, usage-based compute, storage and delivery infrastructure. In addition, the company continued to offer its same options of unmanaged (hardware support only) and fully managed support services across these billing and platform models. The value proposition to customers lie in Voxel's ability to mix and match different platforms, different management levels, and different contract terms to get an infrastructure platform that fits the client's overall budget, performance and security requirements.

As a company highly focused on automation, Voxel immediately recognized the need to introduce more sophisticated configuration management to both its

internal platforms as well as its customer infrastructure environments. In simple terms, Voxel envisioned customers ordering a new server using hAPI and then having to spend hours installing and configuring the software necessary to run their application. In today's world, where customers often require dozens or hundreds of servers to scale for peak demand, infrastructure automation was becoming a must have. Voxel needed to provide its customers a faster and more efficient way to automate deployment of their servers and application environments.

To fulfill these needs, Voxel chose Opscode's Hosted Chef because of its robust configuration management, open configuration standards and platform independence from an operating system level. In using Hosted Chef, Voxel moved to designing the infrastructure of its client in code -- bringing the benefits of repeatability, agility, and version-control, as well as the functionality of a centrally managed data store, to its customers. Hosted Chef takes dynamic, "infrastructure aware" actions that are tightly integrated with Voxel's infrastructure APIs across any portion of a given environment. Those integrations enable Voxel to scale more quickly and better manage its servers saving both time and money.

Says Raj Dutt, CTO for Voxel, "Server management needs to be done, whether we do it for our customers or they do it themselves. We wanted that process to be repeatable, fast and accurate, with software - not a physical person - performing configuration changes."

He added, "We wanted our customers to be able to leverage their automation platforms to deploy entire infrastructure stacks, not just the server. And we wanted them to be able to use more of our infrastructure. Rather than just ordering another server and configuring it for their app, Opscode's Hosted Chef can write in software what their location stack needs to look like and then can use APIs to register that role against Voxel servers. It becomes what it needs to become using the instructions written and stored within Hosted Chef. Customers can now order a new server and we can have it up in 2 to 3 minutes, fully configured and ready to serve their application."

With a talented team of systems administrators overseeing the operation of thousands of servers, Voxel could have opted to write its own configuration engine, a task that would have diverted the team from doing what it does best. "We wanted to take a lot of the repetition and brute force out of their work day," says Dutt, "And allow them to focus on their domain knowledge and expertise, and then apply that across large amounts of servers without having to manually log in to every server and configure them."

Using Hosted Chef enables those administrators to express the task at hand in software without having to "brute-force"

a machine into doing what's required. "It makes our operation more efficient and allows us to scale our customers better and faster," continues Dutt. "If you get a top-of-program CNN mention, for example, and have to go from 10 servers to 100 to manage the subsequent traffic to your site, you can't manually configure the additional 90 servers in a short period of time. It can't be done. We're able to leverage Hosted Chef to automatically bring up capacity as needed."

Another important consideration for using Opscode was its open-source nature. "We followed Opscode and Puppet," says Dutt. "Opscode is a lot more in tune with our idea of dynamic infrastructure and on-demand infrastructure, which was right up our alley and something we could relate to. Seeing the vibrant community that Chef has was another big motivator for us. The initial impression that solidified it was that Hosted Chef thinks of infrastructure as code, and we believe the way that people deploy their infrastructure was backwards, especially when you compare the way people deploy software. Hosted Chef makes deploying infrastructure very similar to deploying software in terms of how repeatable it is."

Concludes Smith, "Using Hosted Chef has allowed us to scale our managed hosting business, server count and customer base more efficiently. We believe Opscode's transparent, open approach to automating infrastructure management has enough momentum to become the way for system and software developers to approach server management."

▶ About Opscode

Opscode is the leader in cloud infrastructure automation. We help companies of all sizes develop fully automated server infrastructures that scale easily and predictably; can be quickly rebuilt in any environment, and save developers and systems engineers time and money. Opscode's team is comprised of web infrastructure experts responsible for building and operating some of the world's largest websites and cloud computing platforms. Opscode is headquartered in Seattle.

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