



P H A R M M D

Medication Therapy Management Meets Private Cloud

PharmMD doubles performance while reducing costs.

Founded in 2006 by pharmacists Clayton McWhorter and Fred McWhorter, PharmMD offers a range of medication therapy management (MTM) solutions. Through these services, the company assists physicians and pharmacists in monitoring patient health while cutting down on the problems, risks, and waste resulting from medication misuse.

After hosting with a major public cloud provider, PharmMD moved to Rackspace Private Cloud, which allows them to automate their infrastructure within a private cloud where they can address their security concerns while lowering overall costs.

SECURITY

PharmMD is one of the first startups in the medication management therapy space, which is poised for enormous growth thanks to new government regulations. "As part of Centers for Medicare & Medicaid

Services (CMS) changes, requirements were put in place that all health plans had to do medication therapy management, which identifies when people that have drug therapy problems," chief marketing officer and former CTO Gregory Green explains. "Our solutions identify patients that are using incorrect dosages or being prescribed medications that have negative interactions, suggest generic alternatives to reduce costs, and intervene on behalf of employers or health plans to correct those gaps in care." As a healthcare SaaS dealing with personal

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James Scollard

Senior Systems Architect, PharmMD

AT-A-GLANCE

CUSTOMER'S BUSINESS:

PharmMD offers a range of medication therapy management solutions.

CHALLENGES:

PharmMD needed the benefits of cloud in a private environment.

RACKSPACE® SOLUTION:

Rackspace® Private Cloud

BUSINESS OUTCOME:

Rackspace Private Cloud has allowed PharmMD to double performance and address compliance while reducing costs.

health information, PharmMD has strict security requirements. "When we look to a public cloud, we need a hosting provider our customers are satisfied with," says Green. "Our previous host wouldn't sign necessary agreements, so we were forced to look elsewhere."

In considering their next move, Green says, "We looked at possible abstraction and virtualization technologies we could use, and the general consensus was to move to VMware. We already had it, and I didn't want to bring yet another virtualization offering in. However, our senior systems architect was adamant that we look at OpenStack."

After a frustrating first attempt to investigate OpenStack® on its own, PharmMD turned to OpenStack founder Rackspace for guidance. Through discussions with Rackspace and an eye-opening business case, the team realized

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that purchasing their own hardware and deploying Rackspace Private Cloud in a colocation facility could satisfy their security requirements while boosting performance and lowering costs.

LOWER SPEND, GREATER STABILITY

In PharmMD’s early days, their sine-wave growth inspired an ad hoc approach to infrastructure. While public cloud enabled this spontaneity, senior systems architect James Scollard says the lack of planning also led to inefficiency and overspending. “A lot of our infrastructure design was never right-sized or designed for making most efficient use of hardware,” he says. “We would just spin stuff up and never cull out older stuff—it caused a lot of cost creep.”

The company also faced stability issues. “Block storage volumes would vanish, we’d lose elastic IPs, ephemeral disks would just drop... things like that,” Green says. “We would build RAID 10 arrays with four block storage volumes to get past performance limitations, but when you lost a volume it would put your array at risk. The failures we were experiencing were causing more and more problems.”

PharmMD has begun to migrate their infrastructure—including 100 VMs and a 30-node analytics platform—to their new environment, which makes use of OpenStack Nova compute, Cinder block storage, and LDAP integration features. This new implementation will boost performance and stability without increasing cost. “We’ve overbuilt to double the amount of performance,” Scollard says. “For the cost

of around eight months of hosting with our previous provider, we have not only managed to replace our previous infrastructure entirely, but also gained close to 50% more hardware and disk capacity. Compared to what we were paying at our previous host, we are more stable, and our environment will pay for itself.”

OUTSOURCING AND AUTOMATION

Core software support for Rackspace Private Cloud provides PharmMD the benefits of Rackspace managed services, even in a third-party facility. Remote login allows Rackspace to handle a variety of management and operational tasks for the company, including installation, patching, troubleshooting, bug fixes, and capacity management for their OpenStack-powered Private Cloud. This 24x7x365 support maximizes stability and performance and saves PharmMD the additional expense of hiring operations staff.

Besides outsourcing infrastructure management, PharmMD has further streamlined its process by hiring and training experts in Opscode Chef. PharmMD’s Chef developers can automate tasks that were once time-consuming and manual, which allows them to stay on schedule with tight project timelines. “From the moment we have a contract, we have 90 days to go live,” Green says. “Project plans get built like that. In a perfect world it’d be 90 days, but historically, it’s usually 3-4 weeks.” Chef allows PharmMD to make productive use of Rackspace Private Cloud rather than wasting time on manual setup.

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