

A Case Study on AWS in Life Sciences

Upgrading infrastructure and improving innovation

Who is H3 Biomedicine?

H3 Biomedicine is a leading company in cancer genomics based drug discovery, delivering on the promise of precision medicine. The company was launched in 2011 with an unprecedented \$200 million funding commitment from Eisai plus additional funding for clinical programs.



H3
Biomedicine
Human. Health. Hope.

The Challenge

H3 had a significant on-premise infrastructure to support their scientists. As with all on-premise infrastructure, however, it was a challenge to quickly evaluate new software and keep up with the ever-increasing demand for compute and storage resources. H3 was well-aware of the advantages of cloud computing and had already established a presence in AWS, but wanted assistance from an AWS-focused consulting firm to accelerate the adoption of new services.



The Solution

Privo worked closely with H3 to improve their AWS infrastructure so it could act as a secure extension of their on-premise infrastructure. H3 had already developed a comprehensive IT automation framework written in Ansible. Privo was able to quickly understand the framework and began participating in its continued development collaboration with H3 personnel. Privo ported key life sciences applications to AWS, leveraging the infrastructure-as-code solution, and provided valuable architecture and configuration advice on AWS services such as CloudWatch, GuardDuty, IAM, RDS, and S3.

The Benefits



AUTOMATION

The infrastructure-as-code solution automates a myriad of IT management tasks, providing a common framework for both on-premise and cloud infrastructure, saving time and improving consistency. Privo offered valuable experience about best practices for AWS services as they were adopted by H3, and helped integrate those services into the framework.



RESILIENCE

The life sciences applications ported to AWS using the infrastructure-as-code solution included PSILO, from Chemical Computing Group, and FEP+, a workflow/algorithm implemented in Schrödinger's software suite. Privo had to de-couple the applications from their databases prior to migration. Now the applications can be redeployed in a matter of minutes in case of a problem.



INNOVATION

New applications and configurations can now be tested with much greater ease and flexibility, allowing scientists to spin up new infrastructure and destroy it when no longer needed. This makes it much less expensive--both in terms of time and money--to experiment with new workflows and allows H3 scientists to do more of their groundbreaking work.



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Working with Privo allowed us to accelerate a number of important AWS initiatives. Their experience with other life sciences firms has proven to be of great value to us.”

- Ed O'Connor, Director, Information Technology



Privo is a Premier AWS Consulting Partner with offices located in Boston and San Francisco we help customers migrate, manage, and optimize their infrastructure in AWS. Privo delivers these services across three main practice groups: DevOps, End User Computing, and AWS Cost Optimization.



AWS allows you to have an agile, cost-effective, and scalable infrastructure to enable operational efficiency, and simplify access to applications for end users. With AWS, companies of all sizes can focus more on their core business instead of IT administration.

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