ZERONORTH™

CASE STUDY

Cytobank

Ensuring Continuous Regulatory Compliance by Integrating and Automating Security Testing Tools

Interview with Angela Landrigan, Ph.D., Director of Products and Security Officer, Cytobank

How is Cytobank advancing biomedical research?

Cytobank is a cloud-based platform that accelerates biomedical research productivity using machine learning tools. With our platform, researchers can quickly move from data to insight using data visualization, advanced algorithms and collaboration capabilities. Cytobank stores large volumes of sensitive biomedical data from pharmaceutical companies and academia. Customers — clinical researchers, scientists and academics — use our supervised and unsupervised machine learning algorthims and collaboration capabilities to more quickly and accurately detect biomarkers for safety and efficacy in immunology and immuno-oncology research areas.

How does the cloud make this possible?

We are using the benefits and capabilities of the cloud, namely scalability, compute power and "anywhere access" to data, so that researchers can comprehensively analyze larger, more complex data sets. These data sets include cytometry, genomic and clinical variables. The compute capabilities of the cloud enable customers to analyze larger datasets and iterate on analysis strategies for optimized analysis pipelines.

In addition to these analytic tools, our cloud-based platform enables process automation, as well as collaboration within and among institutions.

Where they were previously emailing spreadsheets and files back and forth, pharmaceutical researchers and academics can now access, work on and discuss the same data sets in real-time, reducing error, increasing security and accelerating discovery, all using the same version of the analysis workflow. And because many of our customers are involved with early-stage clinical trials, transparency and reproducibility are extremely important for audits.

At-a-Glance

Goals

- Maintain the confidence of Cytobank platform users to securely store and share critical data and research.
- Ensure alignment with ISO27001, FISMA, FIPS 199/200, NIST Special Publications 800 Series and HIPAA standards as well as individual customer security requirements.
- Automate security testing process by integrating existing security tools including Brakeman, Nmap, Nikto and Qualys.

Results with ZeroNorth

- Consolidated existing, disparate security testing tools; automated and scheduled routine scans.
- Automating testing, and having issue notification and prioritization via dashboards and email, has freed up engineers and DevOps teams to focus on technology initiatives.
- Confidence in the Cytobank platform's security posture.

What is Cytobank's approach to technology and security?

As a technology innovator, our goal is to leverage best-in-class technology for our platform and maintain the highest security standards. We host our platform on AWS because it provides the scalability, performance and security we need. Cytobank's information security governance is aligned with ISO 27001, FISMA, FIPS 199/200, NIST Special Publications 800 Series and HIPAA. Based on these frameworks, we have developed and implemented an information technology security and privacy program that includes a set of written policies, procedures and security controls designed to ensure the privacy and security of information. Cytobank uses advanced technology to monitor our security program and controls on a continuous basis and is committed to ongoing security improvement. In addition to our own standards, our customers conduct periodic penetration tests to ensure we're bullet-proof and compliant.

How has ZeroNorth helped Cytobank achieve its security goals?

It's important that we secure the Cytobank platform at the code base and server configuration level. In keeping with our focus on best-in-class technology and on automation, we chose to use the ZeroNorth platform for continuous, automated security. Prior to working with ZeroNorth, we had a manual approach, triggering scans as it made sense at different milestones. Now, with ZeroNorth, we are able to automate and schedule scans at the code and server level to ensure we are always up to date with a secure platform. Our existing security tools include Brakeman, Nmap, Nikto and Qualys. By integrating and automating these tools under the ZeroNorth platform, we have eliminated gaps, reduced risk and are on top of any issues as they surface. We also have one centralized view of our environment through an integrated dashboard.

Using ZeroNorth has freed up resources to focus on more strategic initiatives and has given us confidence that we are achieving the highest standard of security that both Cytobank and our customers demand.

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—Angela Landrigan, Director of Products and Security Officer, Cytobank

Find Out More

To learn more about how the ZeroNorth platform can provide continuous visibility into your security posture, or to request a demo, reach out to us at **secure@ZeroNorth.io**.

Cytobank

Background

For researchers on the frontiers of complex biology, Cytobank provides a cloud-based storage and analysis solution optimized for high-parameter workflows. Cytobank enhances research productivity by enabling scientists in biopharmaceutical companies and academia to:

- Explore multiple hypotheses simultaneously with machine learning methods implemented with high ease-of-use.
- Automatically secure, organize, annotate and preserve source data for fast and efficient confirmation and compliance.
- Securely collaborate with colleagues across disciplines and geographies.
- Tap into Cytobank's deep expertise in complex biomedical technologies.