PROTECTING PATIENT GENOMIC DATA WITH ALERT LOGIC
IN AMAZON WEB SERVICES

"Next generation gene sequencing analysis has the promise to allow us to tailor care for patients with a broad range of conditions: congenital heart disease, muscular dystrophies, autism spectrum disorders, cancer and many more," said James Hirmas, GenomeNext Co-Founder and CEO. "We're dealing with massive amounts of data which represent human blueprints, so we need the most reliable and trusted security, and that's where Alert Logic comes in," said Hirmas. Security provided by Alert Logic gives GenomeNext and their clients the confidence that highly sensitive genomic data is protected.

GenomeNext feeds raw genome sequencing data into their novel, high-speed, computational algorithm and delivers comprehensive genomic insights into genetic variation and disease to healthcare and scientific organizations. Sequencing labs are experiencing exponential growth in data generation. This growth creates a computational bottleneck requiring "big-data" analytics and streamlined genomic workflow solutions. GenomeNext must ensure they have the computing power required to refine the process of gene sequencing and analysis to enable more accurate and faster diagnoses, better treatment and new discoveries.

GENOME NEXT

ABOUT

GenomeNext is a genomic informatics company dedicated to accelerating the promise and capability of predictive medicine and scientific discovery. We commercialize genomic analysis tools and integrated systems for the evaluation of genetic variation and function.

SOLUTIONS

Alert Logic Threat Manager with ActiveWatch: Managed intrusion detection and vulnerability scanning system

Alert Logic Log Manager with LogReview: Managed daily log review service

Alert Logic Web Security Manager with ActiveWatch: Active web application security, management included

SECURITY & COMPLIANCE REQUIREMENTS

GenomeNext looked to Amazon Web Services (AWS) for a flexible cloud infrastructure designed to meet their expanding business needs. AWS offers a broad set of global compute, storage, database, analytics, application, and deployment services that help organizations move faster, lower IT costs, and scale applications. AWS offers physical security, instance isolation, as well as protection for the foundation services; however, in a public cloud environment, security is a shared responsibility. It's up to GenomeNext to secure their infrastructure, operating systems, applications, and data.

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> - James Hirmas, GenomeNext Co-Founder

GenomeNext wanted a cloud-based delivery model with no physical hardware or software to manage and a flexible op-ex based licensing model. No on-premises datacenters means GenomeNext can focus on and invest in continually advancing and expanding their genomic analysis solutions. They also have a forward-looking approach as they grow and work with many healthcare organizations globally. This growth will require client-facing web applications and user interfaces to ensure compliance with government and regulatory requirements.

Hirmas knew that GenomeNext would need to add additional security layers to their AWS infrastructure. Security-as-a-Service (SaaS) with Alert Logic means secure websites for customers and threat avoidance 24x7. "We want our time and money spent on research, discovery and scientific advancement, not on building IT infrastructures and equipment. Alert Logic makes it possible for us to concentrate on our core business with the peace of mind that genomic data is secure and we are exceeding expectations related to government and regulatory compliance at the same time," said Hirmas.

As GenomeNext expands the information exchange between their partners and clients, the reassurance of Alert Logic security is vital. Security and compliance in the cloud is one less thing GenomeNext has to worry about in their AWS environment. Fully managed security solutions with experts in the Alert Logic Security Operations Center provide 24x7 continuous monitoring.

CHOOSING ALERT LOGIC FOR AMAZON WEB SERVICES

As a Cloud architect himself, Hirmas selected Alert Logic as his security solution because of the Alert Logic native AWS support.

- **Seamless integration with AWS.** It was important to GenomeNext to work with a security partner whose solutions worked natively in AWS.

- **Focus on managed security.** Given the highly sensitive nature of the genomic data GenomeNext is working with, it is essential the solution met key compliance requirements, including:

  - Ongoing log management to track and monitor behavior.

  - Intrusion detection to meet compliance requirements and provide ongoing insight into threats and vulnerabilities.

  - Scalable web application firewall (WAF) coverage. GenomeNext knew they would need comprehensive WAF coverage for all their public facing web applications as well as their intranet deployment.

Finally, even though GenomeNext was working in a public cloud environment, Hirmas knew they would still need support. Although their team is made up of extremely knowledgeable and talented engineers, developers, and scientific researchers, they are not security experts. Choosing Alert Logic freed the team from having to manage security on a day-to-day basis, while giving them confidence that their environment was being monitored around-the-clock 24x7.

ALERT LOGIC BENEFITS

With Alert Logic managing the security of his environment, Hirmas can focus on building out his research team and leave the time consuming task of 24x7 monitoring to Alert Logic. This benefit translates directly to their clients. GenomeNext can process their data faster with more researchers. "Alert Logic focuses on our IT security so we don't have to. We know what we need for our business to thrive and we are confident Alert Logic can deliver what we need when we need it to safeguard our infrastructure from threats and vulnerabilities," says Hirmas.

ABOUT ALERT LOGIC

Alert Logic, the leader in security and compliance solutions for the cloud, provides Security-as-a-Service for on-premises, cloud, and hybrid infrastructures, delivering deep security insight and continuous protection for customers at a lower cost than traditional security solutions. Fully managed by a team of experts, the Alert Logic Security-as-a-Service solution provides network, system and web application protection immediately, wherever your IT infrastructure resides. Alert Logic partners with the leading cloud platforms and hosting providers to protect over 3,000 organizations worldwide. Built for cloud scale, our patented platform stores petabytes of data, analyses over 400 million events and identifies over 50,000 security incidents each month, which are managed by our 24×7 Security Operations Center. Alert Logic, founded in 2002, is headquartered in Houston, Texas, with offices in Seattle, Dallas, Cardiff, Belfast and London. For more information, please visit www.alertlogic.com.

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