



CASE STUDY

AWS Solutions

Leading Life Sciences company gets technology solution they can trust

The Client

Our client is a leader in clinical technology, with thousands of people working towards the same goal: using the latest technology to help the life science industry bring life-saving new treatments to the public.

“
...facing issues regarding an uptime of applications as there was no high availability built-in.”

1. Frequent DoS attacks
2. Infrastructure not being highly available
3. Application not being highly available

The Challenge

Before coming to Healthcare Triangle Inc (HTI), our client's solutions page and blog - located in a hosting provider's data center - were facing issues regarding an uptime of applications as there was no high availability built-in.

With the goal to design a highly available, low latency, reliable and flexible infrastructure, the client decided to move their applications from the hosting provider to Amazon Web Services (AWS).

After the complete infrastructure went into production, it was brought under the managed services of HTI. Our 24x7 monitoring and support identified and eliminated multiple DoS attacks and increased the uptime of the application, thereby providing improved performance and delivery.

As a part of our managed services, HTI does a periodic review of the infrastructure. With the results from the review and the history of incidents, our managed services team identified the issues listed to the left.

AWS and Partner Solutions

HTI is a Cloud solutions provider that consults, implements, and manages services for our customers on AWS Cloud. Security, reliability, and performance are the three key goals that HTI sets forth during any phase of its operations.

We designed a highly-available architecture on AWS which will provide a secure, rich user experience. This solution used a large array of Amazon Web Services (AWS) products, including:

- **Amazon VPC** – to create secure application infrastructure
- **Amazon EC2** – to run front-end web servers
- **Amazon CloudFront** – to deliver static content to end users with low latency
- **Amazon S3** – to store static content and backups
- **Amazon RDS** – for centralized scalable database infrastructure
- **Amazon CloudWatch** – to monitor their AWS setup closely
- **AWS Elastic Load Balancers** – to distribute incoming requests to Amazon EC2 instances
- **AWS Simple Notification Service (SNS)** – to send notification alarms

Security Solution



As the application was exposed to frequent DoS attacks, the HTI managed services team suggested that the application be front ended by Unified Threat Management (UTM) to keep the application secure at all times. This improved the performance of the application by avoiding the frequent DoS attacks that brought down the performance, thereby providing improved security.

Results

Our client saw the following business benefits almost immediately:

Infrastructure and Application High Availability: Spreading the infrastructure across multiple availability zones provided high availability during any hardware failure in any of the nodes, or in the case of availability zone failures.

Better Performance: The application load was distributed to multiple instances placed under an elastic load balancer, which resulted in load sharing and improved performance of the whole infrastructure.

Improved Security: The application was front ended by a UTM application to avoid DoS attacks. This had a positive impact on the performance of the application and improved security.

Low Latency: With CloudFront distribution, Medidata solutions achieved low latency delivery of static content by caching resources at multiple edge locations. This further improved performance of the whole infrastructure, as it offloaded static content delivery from instances.

Ease of Management: Medidata solutions used Amazon RDS for their database. As Amazon RDS is a managed database solution, it provides improved performance, high availability and minimal database management efforts.

For additional information and advice, book a free conversation with our experts.

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Reinforcing Healthcare Progress™

Healthcare Triangle, Inc.™ (HTI) reinforces healthcare progress through breakthrough technology and extensive industry know-how. We support healthcare providers and payors, hospitals and Pharma/Life Sciences organizations in their effort to improve health outcomes by enabling the adoption of new technologies, data enlightenment, business agility and accelerate responding to immediate business needs and competitive threats. The highly regulated healthcare and life sciences industries turn to HTI for our expertise in digital transformation on the cloud, security and compliance, data lifecycle management, healthcare interoperability, clinical and business performance optimization. Our headquarters is located in Pleasanton, California and we have employees throughout the US.

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