

Barracuda Networks, Inc.

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CHALLENGES

- DoS attacks
- Non-High Availability of Infrastructure
- Latency

The Challenge

Client's page and blog solutions that is located in a hosting provider's data center were facing issues regarding the uptime of the applications, as there was no high-availability built-in and frequent DoS attacks. With the goal to design a highly available, low latency, reliable and flexible infrastructure, the customer decided to move their applications from the hosting provider to Amazon Web Services (AWS).

The Solution

WATI designed an architecture on AWS for this customer, to provide high-availability, rich user experience and security of applications. This solution used a large array of Amazon Web Services (AWS) components, including:

- *Amazon VPC – to create secure application infrastructure
- *Amazon EC2 – to run their 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

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Security Solution

As the application was exposed to frequent DoS attacks, the solution included front-ending the applications with Unified Threat Management (UTM) to keep them 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 & Benefits

The Customer recognized the following business benefits:

- ***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.