



AWS CLOUD WAF CASE STUDY

INDUSTRY: HEALTHCARE (PUBLIC SECTOR)

INTRODUCTION

In today's digital landscape, ensuring the security and compliance of web applications is paramount, especially for platforms dealing with sensitive health information. Saathcare, a digital and physical companion platform, faced significant security challenges in protecting patient data and adhering to healthcare regulations. This case study explores how implementing AWS Web Application Firewall (WAF) provided a robust solution to their security and compliance needs.

ABOUT THE CUSTOMER

Saathcare Global is a pioneering platform dedicated to providing comprehensive support and care for patients with chronic diseases. Saathcare endeavoured to create a companion platform, built for chronic disease patients that will aid them at every step of their often years-long journey that treats them with empathy, respect, and compassion while keeping their medical information private and secure. By offering both digital and physical companion services, Saathcare ensures that patients receive continuous and personalized care tailored to their unique needs. The platform's commitment to patient well-being necessitates stringent security measures to protect sensitive health information.



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CHALLENGES

Saathcare faced several critical challenges in ensuring the security and compliance of their web applications:

- **Data Security:** Protecting sensitive patient data from cyber threats, including SQL injection, cross-site scripting (XSS), and other common attacks.
- **Regulatory Compliance:** Ensuring adherence to HIPAA and other healthcare regulations.
- **Access Control:** Securing administrative interfaces from unauthorized access.
- **Threat Mitigation:** Blocking malicious traffic and mitigating the risk of Distributed Denial of Service (DDoS) attacks.
- **Operational Efficiency:** Reducing the burden on the IT team while maintaining robust security measures.

SOLUTIONS

To address these challenges, we implemented a comprehensive AWS Web Application Firewall (WAF) solution for Saathcare. The key components of the solution included:

Managed WAF Rules:

- **SQL Injection Rule:** Protection against SQL injection attacks.
- **Common Rule Set:** Addressing a wide range of known web application vulnerabilities.
- **Amazon IP Reputation Rule:** Blocking requests from known malicious IP addresses.
- **Anonymous IP List Rule:** Blocking traffic from anonymous proxies and VPNs.
- **Admin Protection Rule:** Securing administrative interfaces from unauthorized access.



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Custom Rule Development:

We developed and implemented custom rules tailored to SathCare's specific needs, focusing on the protection of sensitive patient data and maintaining application availability.

Testing and Validation:

All rules were rigorously tested in a staging environment to ensure they did not disrupt legitimate traffic. Continuous monitoring for false positives and fine-tuning of the rules ensured optimal performance and security.

Continuous Monitoring and Adjustment:

- **Continuous Monitoring:** Monitoring WAF logs and traffic patterns for new threats and anomalies.
- **Regular Reviews and Updates:** Regularly reviewing and updating rules based on evolving threats and compliance updates. Automated updates for managed rules ensured ongoing protection against emerging threats.

LEAP IMPACT

The implementation of the AWS WAF solution yielded significant positive outcomes for SathCare:

Enhanced Security:

- **Data Protection:** Effective protection of sensitive patient data from cyber threats.
- **Cyber Attack Mitigation:** Reduced risk of SQL injection, cross-site scripting (XSS), and other common attacks.
- **DDoS Mitigation :** Successfully mitigated the risk of DDoS attacks, ensuring the availability and reliability of the platform.



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Regulatory Compliance:

Ensured compliance with HIPAA and other healthcare regulations, providing peace of mind to Saathcare and their patients.

Improved Access Control

Secured administrative interfaces, preventing unauthorized access and potential data breaches.

Operational Efficiency

Reduced the burden on Saathcare's IT team through automated rule updates and continuous monitoring, allowing them to focus on core business activities.

CONCLUSION

By implementing the AWS WAF solution, Leapcodes helped Saathcare achieve a robust security posture, compliance with regulatory requirements, and enhanced protection for their patients' sensitive data. This case study highlights the effectiveness of tailored security solutions in addressing specific client challenges and ensuring the safety and reliability of healthcare platforms.

By leveraging these strategic insights, Saathcare is well-positioned to continue its growth trajectory, delivering exceptional value to its customers while maintaining a robust and secured cloud infrastructure.



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