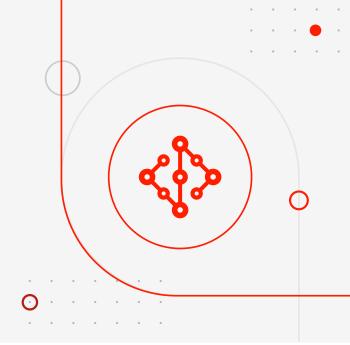


# **CASE STUDY**

# UK-based Charity Customer



Introduction 01



## **Company Overview**

SysGroup is a trusted provider of penetration testing, cyber maturity assessments, and compliance solutions. We empower organizations to secure their infrastructure, reduce risk exposure, and build long-term cyber resilience.



# **Client Background**

Our client, a UK-based charity, supports critical services for communities across the country. With an increasing reliance on digital infrastructure and websites to deliver services, the charity recognized the importance of proactively testing its security posture to protect sensitive data and maintain stakeholder confidence.

Challenges 02



#### **Initial Situation**

The charity required an independent review of its external infrastructure and public-facing websites to identify vulnerabilities that could be exploited by malicious actors. No prior penetration testing had been conducted recently, meaning potential risks could have remained undetected.



## **Objectives**

- Simulate the perspective of an external attacker using black-box testing.
- Identify exploitable vulnerabilities across servers, websites, and services.
- Provide clear remediation recommendations to strengthen defenses.

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Solution 03



## **Approach**

SysGroup performed a **three-day black-box penetration test** of the charity's external IP addresses and websites. The test mimicked real-world attack scenarios, combining automated and manual techniques aligned to OWASP standards and industry best practices.



## **Implementation**

- Conducted reconnaissance, port scanning, and vulnerability analysis across 7 IPs and multiple web applications.
- Verified findings to eliminate false positives, focusing on vulnerabilities with real-world exploit potential.
- Delivered a comprehensive technical report outlining each vulnerability, its risk rating, evidence, and prioritized remediation recommendations.

Results 04



## **Outcomes**

- Identified one medium-risk issue: an outdated version of OpenSSH on one host, requiring verification of patch backporting or upgrade.
- Exposed low-risk findings including accessible administrative interfaces, third-party hosted scripts without integrity checks, misconfigured HTTP headers, and weak cipher suites.
- Highlighted a best practice gap where website CMS versions were visible, increasing the risk of targeted exploits.



#### **Benefits**

- Enabled the charity to understand its external attack surface and address vulnerabilities before they could be exploited.
- Delivered actionable recommendations, such as restricting admin panel access, disabling CBC ciphers, and enforcing HSTS headers.
- Increased awareness of the need for ongoing penetration testing and proactive patch management.
- Provided assurance to trustees, partners, and donors that the charity is committed to safeguarding sensitive systems and data.

Conclusion 05



#### Summary

SysGroup successfully conducted an external penetration test for the charity, simulating real-world attacker behavior to uncover vulnerabilities. The engagement delivered clear, prioritized remediation guidance that significantly improved the charity's cyber resilience.



## **Future Plans**

To maintain robust security, the charity plans to conduct regular penetration tests, implement continuous patching and monitoring processes, and adopt security best practices across its digital infrastructure. SysGroup will continue to support with proactive testing, advisory services, and compliance guidance.