SECURING AIRLINE COMMERCE: PENETRATION TESTING FOR AWS CLOUD INFRASTRUCTURE

CUSTOMER SNAPSHOT

INDUSTRY	Technology – Software & Services; Transportation
CUSTOMER	Global provider of digital solutions for the travel and transportation industry, supporting airline operations and digital retail workflows
SERVICES PROVIDED	Cloud Penetration Testing, PCI Segmentation Testing

> "The segmentation testing was the most important part. We had clues that something might be off. And when Bishop Fox came in, they confirmed that and uncovered even more that we didn't expect. It was a wake-up call."
>
> — PRINCIPAL, ENTERPRISE SECURITY & ARCHITECTURE

THE CHALLENGE:

The global travel technology provider delivers customized commerce solutions for major global airlines, each supported by dedicated infrastructure, creating significant operational and security complexity at scale. As its AWS footprint expanded, security leadership grew concerned that prior assessments were not keeping pace, particularly as most findings were low severity.

As a PCI-regulated payment processor, the organization also needed to validate that its cardholder data environments were truly isolated. The team suspected segmentation gaps and potential misconfigurations introduced through templated deployments but lacked the visibility to confirm those risks across its growing cloud environment.

SECURITY CHALLENGES

- Validate the effectiveness of PCI segmentation controls across AWS environments
- Identify high- and critical-risk exposures not previously detected
- Assess whether templated infrastructure could be propagating hidden misconfigurations
- Gain deeper, actionable insight beyond automated scanning results

> "Our environment is so large and complex that it's impossible for any one to fully map it out. That's why we suspected there could be misconfigurations or gaps that had gone unnoticed."
>
> — PRINCIPAL, ENTERPRISE SECURITY & ARCHITECTURE

THE SOLUTION

The customerengaged Bishop Fox to perform PCI segmentation testing and a deep AWS penetration assessment aimed at uncovering hidden risks, not just satisfying compliance requirements. Throughout the engagement, the team worked closely with internal stakeholders, delivering detailed, actionable findings that clearly explained impact and remediation steps.

GOALS OF THE ENGAGEMENT

- Identify critical- and high-severity issues that could expose sensitive data or violate PCI compliance
- Verify the segmentation controls of the cardholder data environment (CDE)
- Discover any vulnerabilities that would expose PCI data to the external network or allow an attacker to gain access to the internal network

> “The difference was the depth. Bishop Fox didn’t just run a scanner. They explained how the issue was discovered, why it mattered, and what we needed to do. That saved us time and gave us confidence that we were addressing the right things.”
>
> — **PRINCIPAL, ENTERPRISE SECURITY & ARCHITECTURE**

THE OUTCOME

The results of the assessment confirmed the customer’s concerns and exceeded expectations in terms of depth and value. Bishop Fox uncovered findings that had not been flagged in prior assessments and enabled the customer to take immediate action.

KEY RESULTS

- Identified previously unknown attack paths enabling lateral movement and unauthorized access to PCI data, including decryption of cardholder records due to cryptographic weaknesses
- Eliminated systemic IAM misconfigurations by rebuilding shared server templates used across environments
- Strengthened PCI audit readiness through detailed remediation documentation and improved segmentation enforcement
- Increased customer confidence with clear evidence of risk reduction and corrective action
- Improved credential governance and access controls after demonstrating cross-domain Active Directory pivoting into the production PCI environment

> “The report went straight to our infrastructure team, and they started remediation immediately. That kind of clarity doesn’t happen often. It made my job easier and helped us respond faster.” — **PRINCIPAL, ENTERPRISE SECURITY & ARCHITECTURE**

ABOUT BISHOP FOX

Bishop Fox the leading expert in offensive security, providing comprehensive assessment of modern environments with continuous attack surface management, red tea~~ming, and penetration ~~testing for applications, cloud, network, and products. We’ve worked with more than 25% of the Fortune 100, half of the Fortune 10, eight of the top 10 global technology companies, and all of the top global media companies to improve their security.

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