



CASE STUDY

# Automated Gift Card Fraud

## OVERVIEW

### How Shape Defeated Account Hijackers and Saved Tens of Millions of Dollars.

A Fortune 500 retailer, manages a gift card program with a stored value of over \$5B. Cybercriminals targeted the program, stealing tens of millions of dollars from the company and its customers. Attackers used credentials spilled from other website breaches to hijack customer accounts and steal funds from gift cards. Fraudulent login attempts

exceeded a million per day and made up over 90% of the traffic to the login URL. Traditional defenses, like web application firewalls, intrusion detection and prevention services, and fraud analytics, failed to prevent these ongoing automated attacks. The Fortune 500 retailer deployed the Shape solution and completely eliminated account hijackings.

#### RETAILER DESCRIPTION



**\$5B gift card program**

global consumer brand

**~20M accounts**

mostly linked to gift cards  
and credit cards

**Balance transfers allowed**

from one gift card to another

#### FRAUD AND CHALLENGES



**~1000 accounts**

hijacked per day via credential  
stuffing attacks

**Bots and account checkers**

primary attack tools

**\$50**

average balance of  
hijacked accounts

#### SHAPE SOLUTION

- Eliminated all account hijacking and saved tens of millions of dollars.
- Blocked malicious bots & automated attacks.
- Reduced chargeback fees and customer support calls.





*The problem was with other websites. Our customers reuse the same passwords across multiple sites. When other sites get breached, fraudsters use those spilled credentials to hijack my customers' accounts.*

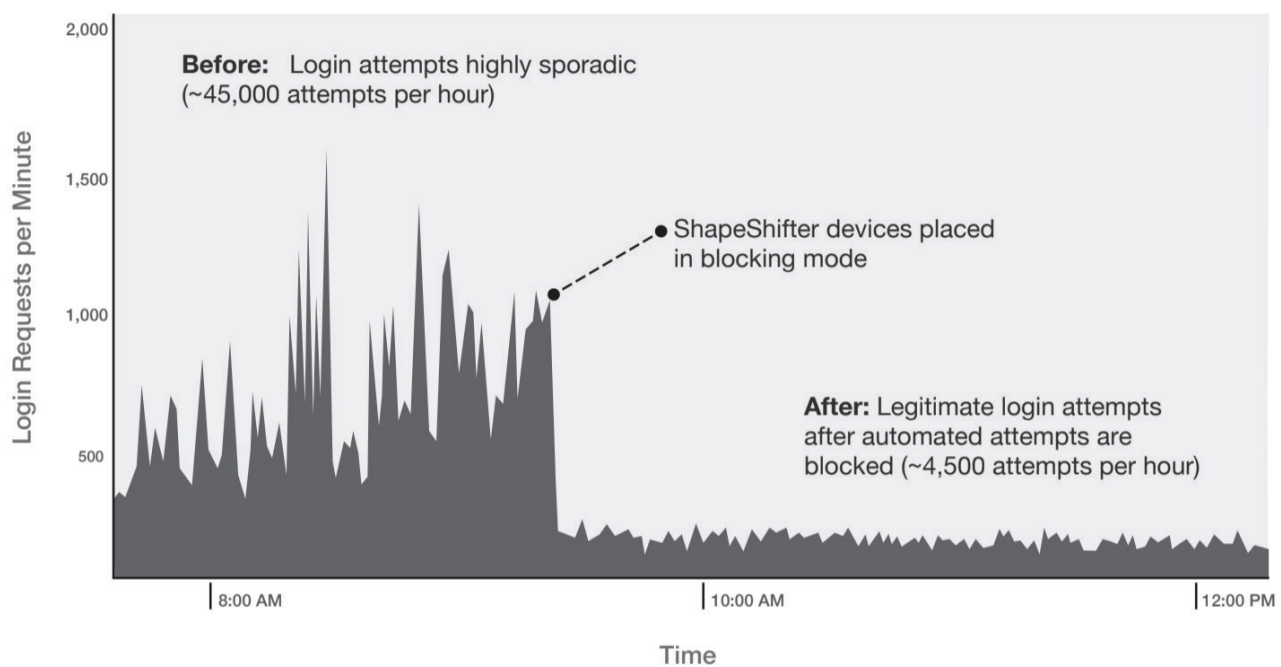


- explained retailer's CISO

## WHY SHAPE?

A Fortune 500 retailer sought out Shape after their WAF, IP reputation feeds, rate limits, and other defensive measures failed to stop credential stuffing attacks. Attackers used botnets, automated account checkers, and web proxies to defeat security

measures. At peak, the attacks on the retailer web application involved over 100,000 new IPs that were used once, and never again. Some of the attackers also mimicked browser, or browser agent behavior to simulate human visitor behavior.



## SHAPE SOLUTION BENEFITS

- Defended Fortune **500** retailer's website in real-time and successfully deflected automated attacks.
- Deployed new countermeasures as attackers adopted different approaches.
- Deployed and integrated with retailer's web infrastructure within **2 weeks**.



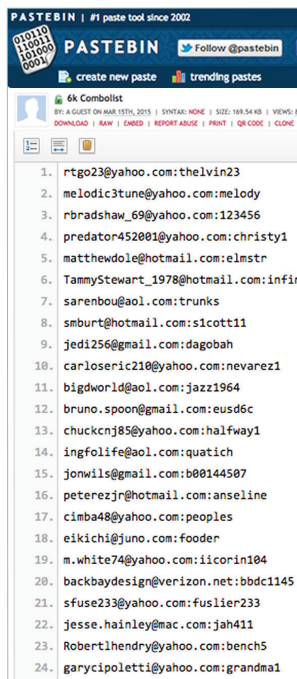
*The Shape team worked with my team to go live in two weeks from start to finish. Unlike traditional security solutions, we don't need more training or headcount to get value out of Shape's solution. They've completely blocked the attackers without inconveniencing my users or imposing on my team.*



- explained retailer's CISO

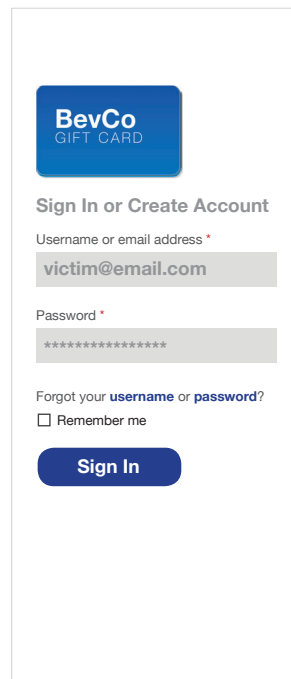
## ANATOMY OF ATTACK

### Automated of Attack



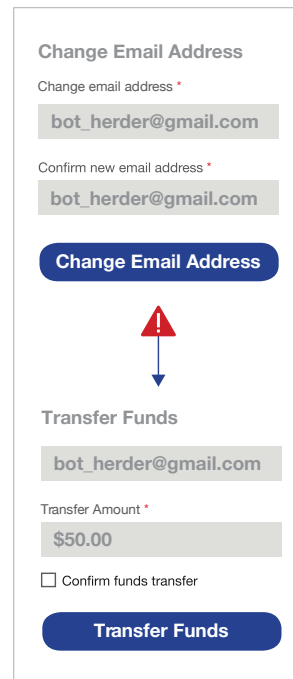
#### Stage 1

Attackers acquired spilled credentials from the open web (criminal marketplaces and password dump sites).



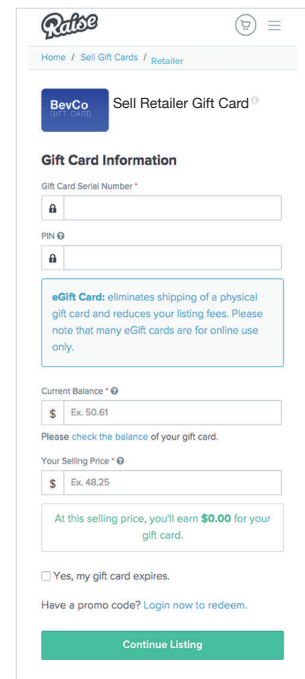
#### Stage 2

Attackers tested credentials, using distributed bots, web proxies, and other tactics to evade defense.



#### Stage 3

Attackers hijacked accounts when the credentials were valid.



#### Stage 4

Attackers sold gift cards via secondary markets such as eBay and Raise.com, for 85-90% of their value.

## CONCLUSION

Following a successful initial deployment, the Fortune 500 retailer is rolling Shape out to protect additional web applications and API services used by mobile applications. The retailer has eliminated \$10s of millions in fraudulent transactions and chargeback fees. The retailer also benefits on an ongoing basis from threat intelligence (collected and correlated across all Shape deployments) and consultation provided by Shape's anti-automation experts to stay ahead of cybercriminals.



Part of F5

Shape Security defends the world's largest enterprises from sophisticated cyberattacks and fraud. Shape customers include three of the Top 5 US banks, five of the Top 10 global airlines, three of the Top 5 global hotels and two of the Top 5 US government agencies. The company has raised \$100M+ from Kleiner Perkins, Google Ventures, Eric Schmidt, and other leading investors to build an advanced web, mobile, artificial intelligence, and machine learning platform for global scale application defense. The Shape platform, covered by 50 issued patents and 100+ additional patent applications, prevented over \$1B in fraud in the last year. Shape was named by CNBC as one of the 50 most disruptive companies in the world. Today, the Shape Network defends 1.4 billion user accounts from account takeover and protects \$1B of in-store mobile payments worldwide.