Best Practices for Detecting and Reporting a Common Point of Purchase (CPP)

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Agenda

• Introduction
• Data Compromise Trends
• Small Merchant Security Initiatives
• Five Steps to Report a Common Point of Purchase (CPP)
• Key Takeaways
• Questions and Answers
**Data Compromises**

**Typical Data Compromise and Counterfeit Cycle**

**Entry**
- Hackers targeting internet-exposed remote access systems as initial intrusion points
- Once in, attackers conduct network reconnaissance using diagnostic tools/techniques to identify systems with access to payment data and isolate specific user accounts
- They create custom attack scripts and tools to further extend access

**Card Data Theft**
- Payment card data is extracted with specialized, difficult to detect malware
- Malware is named to appear as legitimate security software in some cases
- Stolen card data is encrypted to avoid detection
- In many recent intrusions, traces of attacker activity are removed, including self-deleting malware

**Monetization**
- Payment data is used to commit fraud, often across countries via coordinated criminal activity
  - Gift cards
  - High-value goods
- Cards carry a typical value of between US$20–US$60 on underground markets

**Note:** There may be a significant lag between a breach and monetization.
Data Compromise Trends
# Visa Security Pillars

## Remove sensitive data
- **Devalue Data**
  - Render data useless for criminals, reducing incentive for payment breaches
  - Tokenization
  - EMV

## Protect Data
- **Safeguard payment data**
  - Encryption
  - PCI

## Prevent fraud
- **Harness Data**
  - Identify fraud before it occurs and increase confidence in approving good transactions
  - Risk-Based Authentication
  - One-time Passcode
  - Dynamic CVV2
  - Breach Response

- **Empower Consumers**
  - Engage cardholders as an underutilized resource in fighting fraud
  - Transaction Alerts
  - Spend Controls
  - Geolocation
Transactional Threat Intelligence

Intelligence comes from recognizing fraud patterns, predicting fraud activity

- Cardholders report fraud to their bank
- Banks report fraud to Visa (CPP)
- Visa reports fraud to other banks
- Breach found, stopped

One major limitation: **What if there’s no fraud?**
In 2015, total CAMS alerts increased to the highest level in 3 years.

Because of the sheer magnitude of the number of small merchants worldwide and especially in the United States, Level 4 merchants or small merchants make up the majority of reported compromises.

Investigations revealed cyber criminals exploiting inadequate controls to gain unauthorized access to the POS systems of small level 4 merchants and then ultimately to their payment card data.

*2016 year-to-date through February
Global Fraud and Breach Investigation Trends

Breach Events by Merchant Level

<table>
<thead>
<tr>
<th>Entity Type</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016*</th>
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</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>1%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>0%</td>
</tr>
<tr>
<td>Level 2</td>
<td>1%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>1%</td>
</tr>
<tr>
<td>Level 3</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Level 4</td>
<td>92%</td>
<td>93%</td>
<td>93%</td>
<td>91%</td>
</tr>
<tr>
<td>Agent</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- As a proportion of the total number of breach events, L4s remain the vast majority of compromise cases (93% in 2014-2015)
- Almost half of the at-risk accounts distributed in 2015 were attributed to L4 merchants
- Level 4 merchants outnumber L1s in the U.S.
- Fewer level 1 and 2 breaches in 2015
- U.S. Level 1/Level 2 entities comprised 53% of the total accounts distributed for 2015 – related to large hotel and restaurant events.
- Threat actors are targeting smaller interconnected merchants in large numbers

*2016 year-to-date through February
Breach Trends by Merchant Category Code (MCC)

- Restaurant segments are increasing at a faster rate because they fall in the small business or hospitality industry that are serviced by Integrator Resellers (IR)
- Quick service restaurants, supermarkets, and lodging make up the other top MCCs

Source: Compromised Account Management System (CAMS); data is for Visa Inc. only and represents breach events for which a CAMS was sent.

*2016 year-to-date through February
Small Merchant Security Initiatives
According to Trustwave Global Security Report 2015, 94% of POS compromises are related to weak remote access security and weak or default passwords.
## QIR and PCI DSS Validation Requirements*

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 31, 2016</td>
<td>Acquirers must communicate to Level 4 merchants that beginning January 31, 2017, they must use PCI-certified Qualified Integrators and Resellers for point-of-sale application and terminal installation and integration</td>
</tr>
<tr>
<td>January 31, 2017</td>
<td>Acquirers must ensure that Level 4 merchants using third parties for POS application and terminal installation and integration engage only PCI QIR professionals</td>
</tr>
<tr>
<td>January 31, 2017</td>
<td>Acquirers must ensure that Level 4 merchants annually validate PCI DSS compliance or participate in the Technology Innovation Program</td>
</tr>
</tbody>
</table>

*Single-use terminals without Internet connectivity are excluded from these requirements.*
Five Steps to Report a Common Point of Purchase (CPP)
Goal is to Contain Compromises Quickly and Mitigate Issuer Losses by Sending At-risk Accounts via Proactive Compromised Account Management System (CAMS) Alerts

**Visa Investigations**
- Receive Suspected Common Point of Purchase (CPP) Reports
- Visa validates Merchant / Agent and Acquirer information
- Fraud Incident Tracking Case Created / Updated
- Visa sends CPP details to Acquirer to investigate
- Visa sends At-Risk accounts to Issuers for CPPs reported by 2 or more issuers

**Acquirer Bank Investigations**
- Acquirer receives CPP report from Visa
- Acquirer begins investigation & containment process
- Acquirer has 10 days to contain breach
- Once contained acquirer validates merchant is compliant
- Acquirer reports to Visa that case is contained and merchant / agent is compliant
Best Practices: Determining and Reporting a Common Point of Purchase

- Start with similar types of fraud - Card present vs. Card Not Present (CNP)
  - CNP is under reported – Visa encourages issuers to report both CP and CNP fraud schemes despite the liability shift and the chargeback rights
- Fraud transactions should be subsequent to legitimate CPP
- Confirm accounts; do not tie to known previous CAMS events
- Review legitimate usage for 90 – 180 days
  - Identify merchants in common with all accounts
  - Consider false positives (i.e., commonly-shopped merchants)
- Do not exclusively rely on social media boards such as FICO to drive or steer your decisioning for CPP reporting
  - It’s a good tool to use to validate but you should not exclusively rely on it
- Only report CPPs to Visa with at least 10 accounts
  - Report CPPs in weekly batches
  - Do not re-report CPPs unless material changes
CPP Reporting Overview

Step 1

Step 2
- Download New Americas CPP Reporting Form

Step 3
- Complete CPP Form and include accounts!

Step 4
- Log into VOL

Step 5
- Send CPP form to Visa using VOL E-mail
Step 1
• Enroll in VOL

Step 2
• Access the CPP form on VOL:
  → Risk
  → Fraud Risk Products & Solutions
  → Common Point of Purchase (CPP)
Changes to New CPP Reporting Form

Americas CPP Form

- Card Acceptor ID
- Merchant Name / City / State
- Fraud Amount
- Acquirer BIN
- Merchant Category Code
- Total Number of Fraud Accounts
- Exposure Start & End Dates
- Issuer Name

NEW FIELDS
- Issuer Contact Name
- Issuer Contact Email
- POS Entry Mode Code
- Visa Accounts
Note: The Card Acceptor ID fields must be formatted as TEXT to maintain the exact formatting
(Step 3 cont.)

- Accounts Must Be Provided With All CPPs
- Second tab of CPP Form - Provide Visa accounts associated with each merchant name reported
- Use only two columns to report multiple merchants and associated accounts
- Account column must be formatted as TEXT to properly maintain the account numbers

Step 4

- Log into VisaOnLine (VOL)

Step 5

- Send CPP form to usfraudcontrol@visa.com only using secure VOL E-mail

Note: New form goes into effect April 30, 2016
Compromised Account Management System (CAMS) Overview

- Compromised Account Management System (CAMS) notifies financial institutions when their accounts are at risk due to a compromise and provides critical information such as:
  - At-risk Accounts
  - Expiration Dates
  - Data Elements Involved
- Visa CAMS provides important updates on compromised accounts to subscribers as soon as it becomes available.
- Best practices of analyzing CAMS data to their fraudulent accounts – not known in CAMS then provide CPP with new details.
- Visa CAMS alerts now contain merchant name when they have gone public for large events.
Account Compromise Response Strategies

**Before**
(identifying a data compromise)

- Consider Issuing EMV Cards!
- Analyze fraud patterns on “at risk” accounts, test fraud mitigation rules
- Report CPPs to Visa

**During**
(preventing fraud once a compromise is confirmed)

- Download accounts from CAMS
- Flag impacted accounts and monitor activity
- Leverage Visa Advanced Authorization (VAA)
- Align fraud controls to type of data exposed

**After**
(on-going, monitoring)

- Adjust fraud rules based on how fraud is trending
- Report fraud to Visa using Visa’s Fraud Reporting System
- Consider reissuance strategy as applicable

Note: Best Practices for Issuers on VOL CPP Site
Key Takeaways
Conclusion and Recap: The Benefits of CPP Reporting

1. We expect attack techniques to evolve along with security

2. Issuer CPP Reporting is critical intelligence to help monitor the security of the payment eco-system
   - Visa encourages Issuers to increase Card Not Present CPP reporting
   - CNP fraud has grown globally as the channel has grown, regardless of EMV

3. New CPP form with accounts will help Acquirers more quickly to investigate and contain events

4. Never send CPP forms (which must have Accounts!) through regular email. Always use your secure Visa OnLine Email for CPP submissions.
Questions and Answers