

Investigating Web Service Account Remediation Advice

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It Can Happen to Anyone



Account compromises are inevitable.

What do you do when it happens to you?

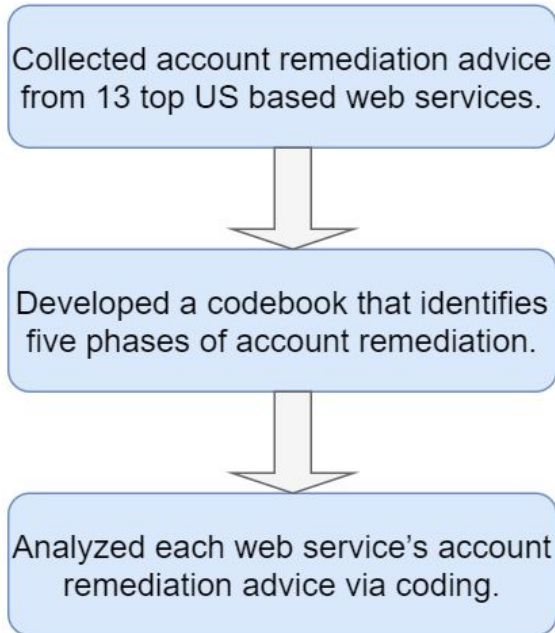
What is Account Remediation?

- A systematic process one performs when their online account becomes compromised.
- There are five phases to account remediation:
 1. Discover the compromise
 2. Recover access to the account
 3. Limit access to the account
 4. Restore the service to its pre compromise state
 5. Take action to prevent future compromises

Advice for Account Remediation

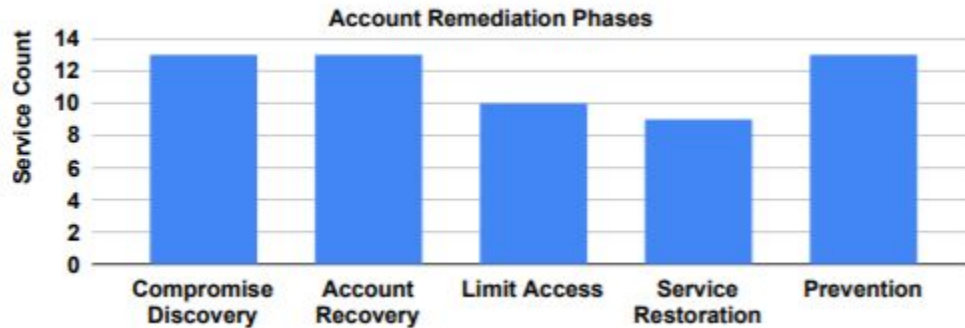
- Web services provide users with help pages on account remediation, however...
 - Account remediation is a technically complex process.
 - Very little research has taken place into investigating account remediation and the advice for it.
- The **quality of advice** for account remediation serves of paramount importance.

Methods



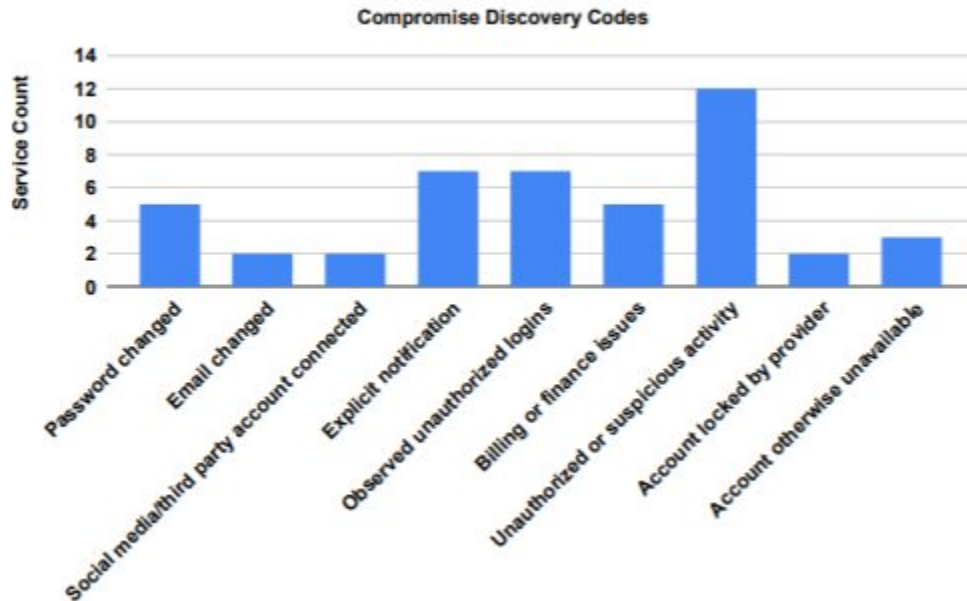
- Our codebook consists of 5 phases, each represented as categories that hold 31 single codes collectively:
 - Compromise discovery, account recovery, limiting access, service restoration, prevention.
- We performed a pilot study to develop our codebook by collaboratively coding nine services.
 - A single coder then coded the rest of the services.

Results: Do Services Discuss Each Phase?



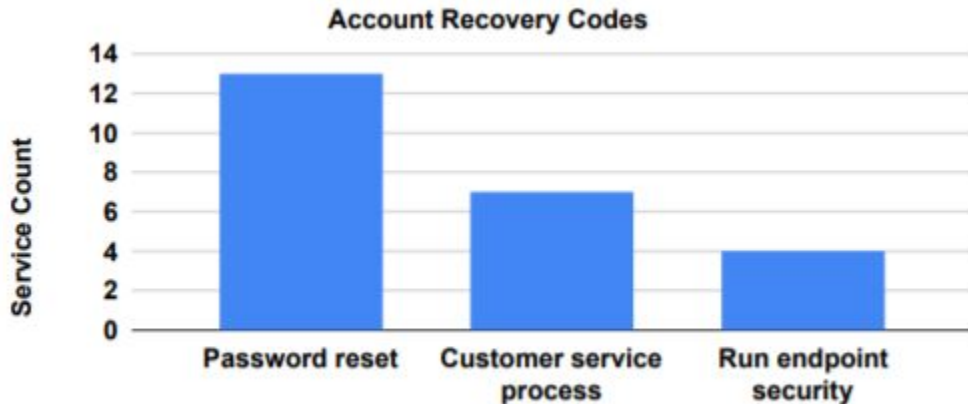
- Eight services mentioned at least one code from every phase.
- Limit Access and Service Restoration were the only phases not mentioned by all services.

Results: *Compromise Discovery Advice* is Non-Specific



- Only 33% of codes were mentioned in at least half of the services.
- Unauthorized or suspicious activity was the highest covered code with 12 services.

Results: *Account Recovery Advice* is Universal



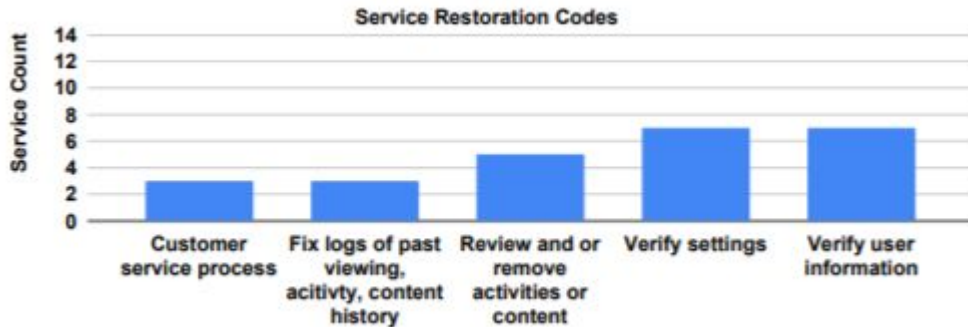
- Password reset was mentioned by all services.
- 66% of codes were mentioned in at least half of the services.

Results: *Limiting Access Advice is Sparse*



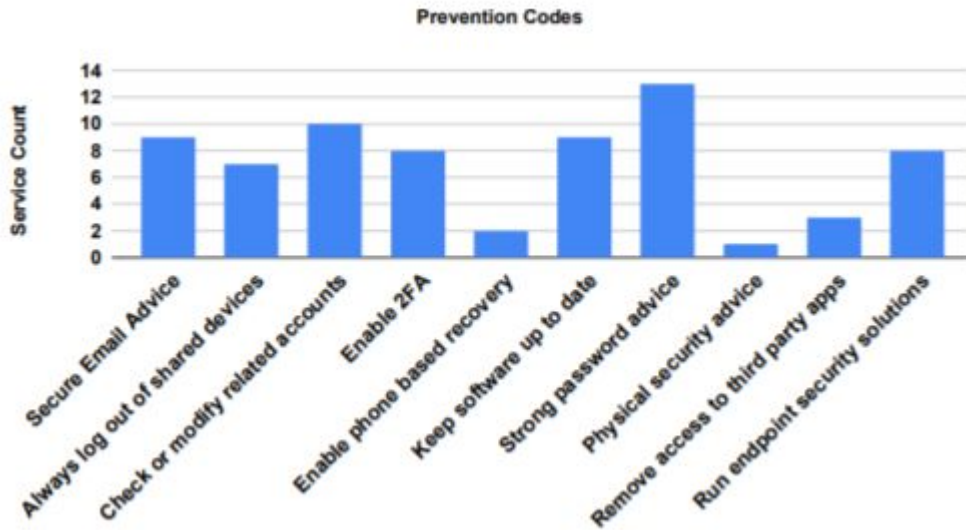
- No limit access code was mentioned in at least half of the services.
- 75% of codes were mentioned in fewer than 25% of services.

Results: *Service Restoration Advice* is Sparse



- Only 40% of codes were mentioned in at least half of the services.
- 60% of codes were mentioned in less than 40% of services.

Results: *Prevention Advice is Universal*



- 70% of codes were mentioned in at least half of the services.
- Strong password advice was mentioned in all services.

Takeaway and Questions?

- Important advice from all phases in account remediation is not universal.
- Limiting account access and service restoration is critical for account remediation, but is underwhelmingly covered by services.

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