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- Several types of remote access trojan ("RAT") malware were found.
- This would enable remote access into the infected computer to execute commands – like to install and detonate ransomware.









- The team began right away (Day 1) using offchannel communications.
- Worked to locate malware files and determine the channels for "C2" communication.
- Successful counterstrike ended on Day 12 (*e.g.*, quarantine malware, block C2 traffic, and reset passwords).
- This was done without setting off ransomware or significantly disrupting business operations.



Data security firm did a forensic investigation into the nature and scope of compromise:

- First evidence of intrusion was 4 weeks earlier
- Initial point of entry was likely spear-phishing
- 100 computers of various types infected
- Ten sets of stolen credentials, mostly IT staff
- No evidence of data "exfiltration" or searches





Phase 4 – Analyze

- Breach notification obligations:
 - Assortment of state statutes
 - Federal sectoral requirements, e.g., GLBA
 - PCI-DSS for payment card data
 - Foreign laws, e.g., GDPR
 - Contract clauses, e.g., DFARS 252.204-7000
- Business impact and reputational harm
- Data security liability exposure



Example: GLBA Guidelines

- "When a financial institution becomes aware of an incident of unauthorized access to sensitive customer information, the institution should conduct a reasonable investigation to promptly determine the likelihood that the information has been or will be misused."
- "If the institution determines that misuse of its information about a customer has occurred or is reasonably possible, it should notify the affected customer as soon as possible."

12 C.F.R. § Pt. 30, App. B



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Challenges & Lessons

- Key questions for notification analysis:
 - Was the defined type of data compromised?
 - Did the compromise amount to a "breach"?
 - If required, was there risk of harm?
- Notifying law enforcement
- Contract review for breach notification and data security clauses
- Data mapping and management



Evolving Duty of Cybersecurity

- Affirmative data security obligations:
 - Growing number of state laws
 - Federal sectoral requirements, e.g., GLBA
 - PCI-DSS for payment card data
 - Foreign laws, e.g., GDPR
 - Contract requirements, e.g., NIST SP 800-171
- Common law torts, e.g., negligence
- "Unfair or deceptive acts or practices" (UDAP)



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FTC Enforcement: Wyndham Hotels (2015)

The alleged "unfair" cybersecurity included:

- o Storing credit card data in clear text
- o Allowing simple passwords for sensitive servers
- Failure to use basic network safeguards (firewalls)
- Failure to adequately oversee the cybersecurity of hotels connecting to Wyndham's network
- o Allowing vendors unnecessary system access
- Failure to take reasonable measures for security investigations or incident response



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SEC Enforcement: Altaba/Yahoo! (2018)

- In December 2014, Yahoo's information security team became aware that nation-state hackers stole personal data of 108 million users and gained access to 26 email accounts.
- The 26 users with compromised accounts were notified, and their passwords reset.
- Yahoo's senior management and legal teams received internal reports about the breach.



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UK ICO Enforcement: British Airways (2019)

- In Summer 2018, British Airways suffered a cyberattack in which details from 380,000 booking transactions were stolen, including customer payment card data.
- On July 8, 2019, the UK Information Commissioner's Office (ICO) announced a penalty of about \$229 million under GDPR.
- This is the largest fine ever imposed for a data breach, and the first under GDPR.

