GAC Capacity Development Workshop on DNS Abuse

DNS Security Threats reported to Law Enforcement, and by Law Enforcement

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UK - Reporting Volume



Businesses - % among those Businesses - % among those who identified a breach who who identified a breach who identified an attack vector of identified an attack vector of phishing others impersonating oraganisation in emails or 100% online 80% 30% 60% 20% 40% 10% 20% 0% 0% 2017 2018 2019 2020 2021 2022 2017 2018 2019 2020 2021 2022

- Action Fraud is the UK's national reporting centre for fraud and cyber crime.
- In 2020 2021 (most recent public report)
 - Action Fraud received 875,622 reports of fraud
 - leading to £2.35bn reported losses.
- 80% of reported fraud was cyber enabled.
- The report identified phishing emails as the key enabler for criminals to initiate cyber attacks and fraud

U.S. Internet Crime & Complaint Center (IC3.gov)



IC3.gov Top 5 Types of Internet Crime (past 5 Years)

32,538 2022 23.903 "DNS Abuse" 2021 Tech Support 15,421 2020 13,633 is not tracked as a 14,408 2019 category. 2018 39,416 39,360 BUT... Extortion 76,741 43,101 51,146 There are categories of 51,679 DNS Abuse which are 82,478 Non-Payment/ 108,869 tracked in IC3 reports: Non-Delivery 61,832 65.116 58,859 51,829 Personal Data 45,330 Breach 38,218 50,642 300,497 323,972 Phishing 241,342 114,702 26,379

Case Study - Phishing

- Information received from Police report that a victims social media account had been hacked.
- The victim who was a 17 year old reported that the hacker was asking for more passwords.
- They reported loss of accounts including Snapchat, Instagram, TikTok and their Gmail account.
- Suspect identified
- History of hacking social media
- Warrant at home address finding active phones.
- Evidence on mobile phones of mass phishing.

Case Study - Phishing

The Suspect used the phones to send out hundreds of phishing messages to young girls. The accounts used were hacked accounts of other young girls.



Case Study - Phishing



Here's a real domain (but redacted by me):

usaauth.VENDOR.TLD

Here's a real domain (but redacted by me):

usaauth.VENDOR.TLD

Here's a phishing domain (also redacted):

usaauth-signinVENDOR.TLD

Case Study: Reporting Phishing Attacks in the Real World

| Whois Record f | for UsaAuth-SigniN VENDOR.TLD | | | |
|--------------------|---|---|--|--|
| - Domain Profile | | | | |
| Registrant | REDACTED FOR PRIVACY | | | |
| Registrant Org | REDACTED FOR PRIVACY | | | |
| Registrant Country | СН | | | |
| Registrar | Registrar IANA ID: ### URL: http://www. URL Whois Server: whois. server abuse@registrar.email (p) +555-55555 | | | |
| Registrar Status | ok | | | |
| Dates | 4 days old Created or 2023-05-11 Expires on 2024-05-11 Updated on 2023-05-11 Presentation Note: Reported to Registrar, Registry, Cloudflare, & Host on 2023-05-12 | + | | |
| Name Servers | ARYANNA.NS.CLOUDFLARE.COM (has 26,036,787 domains) | | | |
| Tech Contact | REDACTED FOR PRIVACY REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY | | | |
| | info@ registrar.email (p) REDACTED FOR PRIVACY xREDACTED FOR PRIVACY (f) REDACTED FOR PRIVACY xREDACTED FOR PRIVACY | | | |
| IP Address | 104.21.31.155 - 739 other sites hosted on this server | | | |
| IP Location | 🖅 - California - San Jose - Cloudflare Inc. | | | |
| ASN | March AS13335 CLOUDFLARENET, US (registered Jul 14, 2010) | | | |

Summary of facts:

- 1. Domain looks like an important login portal to a federal agency
- 2. Vendor is target of ongoing phishing attacks
- Domain is newly created (reported within 1 day of registration by Law Enforcement)

Case Study: Reporting Phishing Attacks in the Real World

| Whois Record | for UsaAuth-SigniN VENDOR.TLD | | |
|--------------------|--|---|--|
| 🗕 Domain Profile | | | Desired Action: |
| Registrant | REDACTED FOR PRIVACY | | Registrar (clientHOLD) and/or |
| Registrant Org | REDACTED FOR PRIVACY | | Registry (serverHOLD) |
| Registrant Country | СН | | |
| Registrar | Registrar IANA ID: ### URL: http://www. (p) + 555-555-55555 | | What happened: May 12 - Cloudflare adds interstitial warning of fraud |
| Registrar Status | ok | | May 14 - Registry : 'as we don't host nor |
| Dates | 4 days old Created or 2023-05-11 Expires on 2024-05-11 Updated on 2023-05-11 Presentation Note: Reported to Registrar, Registry, Cloudflare, & Host on 2023-05-12 | • | register the domain', 'not in position to act' absent a court order |
| Name Servers | ARYANNA.NS.CLOUDFLARE.COM (has 26,036,787 domains) DILBERT.NS.CLOUDFLARE.COM (has 26,036,787 domains) | + | May 15 - Registrar "we |
| Tech Contact | REDACTED FOR PRIVACY REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY, REDACTED FOR PRIVACY | | are merely the registrar" and don't control use of the domain, will notify Reseller |
| | (p) REDACTED FOR PRIVACY XREDACTED FOR PRIVACY (f) REDACTED FOR PRIVACY XREDACTED FOR PRIVACY | | May 16 - Registrar confirms Reseller |
| IP Address | 104.21.31.155 - 739 other sites hosted on this server | + | <u>deleted</u> domain. |
| IP Location | 🌆 - California - San Jose - Cloudflare Inc. | | 1 |
| ASN | March AS13335 CLOUDFLARENET, US (registered Jul 14, 2010) | | |
| | | | |

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Case Study: Reporting Phishing Attacks in the Real World

>> so why not get a court order?

>> if domain is suspended by the *Registrar* or *Registry*, is the domain still dangerous?

>> if the content *Host* removes the content, is the domain still dangerous?

Taking action "at the DNS Level"...

... vs at "Hosting Level"

| | DOMAIN NAME | TTL | TYPE | RECORD |
|----------|------------------|-----|------|----------------|
| | RALNBOWBANK.COM. | 160 | А | 101.14.66.2 |
| | RALNBOWBANK.COM. | 160 | A | 222.14.10.4 |
| <u> </u> | RALNBOWBANK.COM. | 160 | A | 23.124.228.102 |
| | RALNBOWBANK.COM. | 160 | A | 101.14.66.22 |





Key Takeaway

- Phishing is DNS Abuse
- **Phishing** is top reported Internet crime
- Phishing enables many other crimes
- Swift action against
 Maliciously Registered
 Domains has <u>BIG</u>
 IMPACT on DNS Abuse

(and cybercrime)



Prior GAC Contributions on DNS Abuse

- GAC Statement on DNS Abuse (18 Sep. 2019)
 - Protecting the public from security threats and DNS Abuse is an important public policy issue.
 - If the public is to trust and rely upon the Internet for communications and transactions, those tasked with administering the DNS infrastructure must take steps to ensure that this public resource is safe and secure.
- Since the GAC's endorsement of the Law Enforcement Due Diligence Recommendations (<u>Brussels</u> <u>Communiqué</u>, June 2010) the GAC has continuously sought to increase the effectiveness of ICANN contracts and their enforcement in mitigating DNS Abuse with Registrars (<u>Dakar</u> <u>Communiqué</u>, Oct 2011) and with New gTLD Registries (<u>Beijing Communiqué</u> Safeguards Advice, Apr. 2013)
- In the <u>Beijing Communiqué</u> Safeguards Advice (11 April 2013) the GAC advised that "six safeguards should apply to all new gTLDs and be subject to contractual oversight" including:
 - Security checks While respecting privacy and confidentiality, Registry operators will periodically conduct a technical analysis to assess whether domains in its gTLD are being used to perpetrate security threats, <u>such as pharming, phishing, malware, and botnets</u>. If Registry operator identifies security risks that pose an actual risk of harm, Registry operator will notify the relevant registrar and, if the registrar does not take immediate action, suspend the domain name until the matter is resolved.



/Questions?