HC3: Analyst Note

August 19, 2022 TLP: White Report: 202208191500

Vishing Attacks on the Rise

Executive Summary

Voice phishing, also known as vishing, is the practice of eliciting information or attempting to influence action via the telephone. Over the past year, HC3 has noted a marked increase in these attacks across all sectors. Social engineering techniques continue to remain successful in providing initial access to target organizations, and the HPH sector should remain alert to this evolving threat landscape with an emphasis on user awareness training. Recently, a large U.S. company fell victim to a cyber attack that leveraged sophisticated phishing techniques involving phone calls to gain access to the victim organization.

Report

Phishing campaigns continue to be an effective way to gain unauthorized access to target networks by both cybercriminal and state-sponsored threat actors. According to security vendor Agari, the use of 'hybrid vishing' saw a massive 625% growth in Q2 2022. Hybrid vishing threats, also referred to as "callback phishing," are multi-stage attacks that differ from traditional vishing by first interacting with the victim via email. The objectives of these attacks are usually to obtain sensitive information or distribute malware. Callback phishing attacks were first introduced by the 'BazarCall/BazaCall' campaigns that appeared in March 2021 to gain initial access to corporate networks for ransomware attacks.

In May 2022, a major U.S.-based telecommunications company suffered a cyber incident that relied on a series of sophisticated vishing attacks against an employee. The threat actor— which was identified as an initial access broker (IAB) with ties to the UNC2447 cybercrime gang (the Lapsus$ threat actor group) and the Yanluowang ransomware operators— gained access from a user that had enabled password syncing via Google Chrome and had stored their work credentials in their browser, enabling that information to synchronize to their Google account. After obtaining the user's credentials, the attacker attempted to bypass multifactor authentication (MFA) using a variety of techniques, including vishing and MFA fatigue, which is the process of sending a high volume of push requests to the target's mobile device until the user accepts, either accidentally or simply to attempt to silence the repeated push notifications they are receiving.

HC3 has previously observed numerous phishing campaings in the HPH sector that leverage vishing techniques. For instance, in September 2020, threat actors posing as employees of a Michigan, U.S.-based health system carried out a vishing campaign that involved calling patients to steal their member numbers and protected health information (PHI). These fake phone calls even "spoofed" caller ID and appeared to be originating from a legitimate phone number belonging to the healthcare entity. Advanced Persistent Threat (APT) groups, or state-sponsored threat actors, are even known to use voice-changing software to successfully trick targets into installing malware.

Analyst Comment

HC3 assesses with high confidence that threat actors will continue to evolve their tactics, techniques, and procedures (TTPs) when conducting phishing attacks due to prior success in gaining initial access. Security researchers recently found a way to use just a series of emojis to deliver an exploit to a target. While this method requires specific circumstances to occur for the emoji exploit to work, this demonstrates the constantly evolving threat landscape and difficulty in detecting malware.

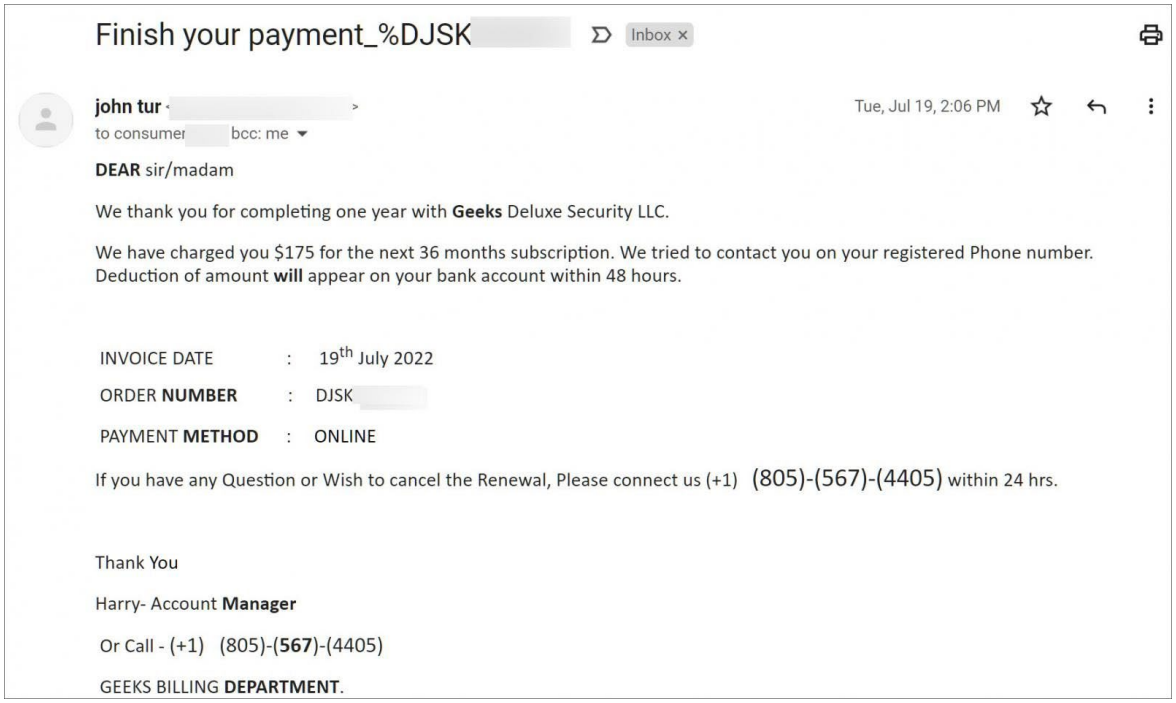
HC3: Analyst Note

August 19, 2022 TLP: White Report: 202208191500

How to Identify Vishing/Phishing

- Suspicious emails claiming a free trial has ended for a service for which the recipient never signed.
- Unexpected emails containing only the name, address, and phone number of an unrecognized organization.
- Individuals asking callers to navigate to a website to cancel a subscription they did not sign up for.
- Emails from a Gmail account with the name of a high-level individual in medical research.
- Phone calls or emails pretending to be from a government entity, such as a Department of Health or major technology company.

Below is an example of a vishing campaign email. It includes email before the call, typically presenting the victim with a fake subscription/invoice notice. The recipient is advised to call the phone number listed to resolve any issues with the charge, but instead of a real customer support agent, the call is answered by phishing actors who then offer to resolve the problem by tricking the victim into disclosing sensitive information or installing remote desktop tools on their system. The threat actors may then install further backdoors or spread to other machines.



Finish your payment_%DJSK Inbox ×

john tur Tue, Jul 19, 2:06 PM

to consumer bcc: me

DEAR sir/madam

We thank you for completing one year with **Geeks** Deluxe Security LLC.

We have charged you $175 for the next 36 months subscription. We tried to contact you on your registered Phone number. Deduction of amount **will** appear on your bank account within 48 hours.

INVOICE DATE : 19th July 2022

ORDER **NUMBER** : DJSK

PAYMENT **METHOD** : ONLINE

If you have any Question or Wish to cancel the Renewal, Please connect us (+1) (805)-(567)-(4405) within 24 hrs.

Thank You

Harry- Account **Manager**

Or Call - (+1) (805)-(**567**)-(4405)

GEEKS BILLING **DEPARTMENT**.

Figure 1. Example of Email

Mitigations

- User training and awareness of new phishing campaigns targeting the HPH sector.
- Confirm receipt of an email from a known sender via a trusted communication method or contact.
- Secure VoIP servers and look for evidence of existing compromise (such as web shells for persistence).
- Block malicious domains and other indicators associated with campaigns, such as those mentioned above.
- Stay up-to-date with the latest health-themed scams and fraud schemes i.e. COVID-19 and Monkeypox.
- Consider switching your organization's MFA setting or configuration to require a one-time password (OTP) versus a push notification to mitigate MFA fatigue.

References

Alok Patidar, "MFA Prompt Bombing: Is it a New Threat Vector to Worry About?" August 7, 2022. https://securityboulevard.com/2022/08/mfa-prompt-bombing-is-it-a-new-threat-vector-to-worry-about/

Bill Toulas, "Callback phishing attacks see massive 625% growth since Q1 2021." August 15, 2022. https://www.bleepingcomputer.com/news/security/callback-phishing-attacks-see-massive-625-percent-growth-since-q1-2021/

CyberArk Blog Team, "Don't Fall for MFA Fatigue or Next-Level Phishing Attacks," August 18, 2022. https://www.cyberark.com/resources/blog/don-t-fall-for-mfa-fatigue-or-next-level-phishing-attacks

Ionut Arghire, "APT Group Using Voice Changing Software in Spear-Phishing Campaign," April 6, 2021. https://www.securityweek.com/apt-group-using-voice-changing-software-spear-phishing-campaign

Jessica Haworth, "MFA fatigue attacks: Users tricked into allowing device access due to overload of push notifications." February 16, 2022. https://portswigger.net/daily-swig/mfa-fatigue-attacks-users-tricked-into-allowing-device-access-due-to-overload-of-push-notifications

Jill Aitoro, "What Cisco did right: A CISO's perspective on the breach." August 12, 2022. https://www.scmagazine.com/feature/incident-response/what-cisco-did-right-a-cisos-perspective-on-the-breach

Lawrence Abrams, "BazarCall malware uses malicious call centers to infect victims," March 31, 2021. https://www.bleepingcomputer.com/news/security/bazarcall-malware-uses-malicious-call-centers-to-infect-victims/

Lisandro Ubiedo, "Current MFA Fatigue Attack Campaign Targeting Microsoft Office 365 Users." February 14, 2022. https://www.gosecure.net/blog/2022/02/14/current-mfa-fatigue-attack-campaign-targeting-microsoft-office-365-users/

Lorenzo Franceschi-Bicchierai. "This String of Emojis Is Actually Malware," August 15, 2022. https://www.vice.com/en/article/wxnj49/this-string-of-emojis-is-actually-malware

Mutare, "Executive Report: Voice Network Threat Survey 2022." July 20, 2022. https://www.mutare.com/executive-report-voice-network-threat-survey-2022/

Spectrum Health, "Spectrum Health Warns of "Vishing" Scam," September 14, 2020. https://newsroom.spectrumhealth.org/spectrum-health-warns-of-vishing-scam/

Steve Zurier, "Nearly half of organizations experienced a vishing or social engineering attack in the last year." July 20, 2022. https://www.scmagazine.com/news/social-engineering/nearly-half-of-organizations-experienced-a-vishing-or-social-engineering-attack-in-the-last-year

William J. Nowik, "Vishing: What It Is, How To Detect It & How To Prevent It." https://www.wolfandco.com/resources/insights/vishing-what-it-is-how-to-detect-it-how-to-prevent-it/

HC3: Analyst Note

August 19, 2022 TLP: White Report: 202208191500

Contact Information

If you have any additional questions, we encourage you to contact us at HC3@hhs.gov.

We want to know how satisfied you are with the resources HC3 provides. Your answers will be anonymous, and we will use the responses to improve all future updates, features, and distributions. Share Your Feedback