WHITE PAPER | Coronavirus Themed E-mail Phishing

Date **February 3, 2020** **TLP: WHITE**

Health Sector Cybersecurity Coordination Center (HC3) | HC3@HHS.GOV

Executive Summary

Recently, malicious cyber threat actors have been leveraging the current news cycle to launch Coronavirus themed cyberattacks at their targets. Prominent news reporting and the resulting elevated concern for the Coronavirus issue is being used as context for a malicious email phishing campaign. The phishing emails contain links to malware that is frequently used to target healthcare organizations and their IT systems.

Attempting to exploit human greed, fear, and curiosity are common tactics among phishing campaigns – malicious e-mails deliberately crafted to entice the recipient to click a link or open an attachment in the e-mail which, while appearing helpful, compelling, or interesting, actually contains malicious code. Victims who interact with malicious links or attachments may expose their systems, networks, and valuable information. These exposures allow an attacker to use infected systems as a platform to launch additional attacks. The new Coronavirus themed phishing campaign is attempting to capitalize on concerns about the Coronavirus, a respiratory illness currently in the news and frequently making headlines. Researchers are reporting that these Coronavirus themed phishing emails contain links and downloads for the Emotet malware. At least one campaign has been identified as attempting to impersonate the Centers for Disease Control and target Americans and other English-speaking victims.

Countermeasures and Mitigations

Recommended actions to protect against such an attack are to implement:

- User awareness and training to help identify and avoid phishing scams
- Operationalization of Indicators of Compromise
- Automatic banners for any e-mails that originate outside the organization
- Use of blacklisting of malicious sites and whitelisting for known trusted sites
- Integrate anti-spoofing technologies Sender Policy Framework (SPF), Domain Keys Identified Mail (DKIM), and Domain-based Message Authentication, Reporting and Conformance (DMARC)
- Update operating systems and applications with the latest security updates, including 3rd party software
- Implement and update endpoint security systems

Endnotes

Industry Best Practices Resource

- https://www.phe.gov/Preparedness/planning/405d/Pages/hic-practices.aspx

Open source news resources

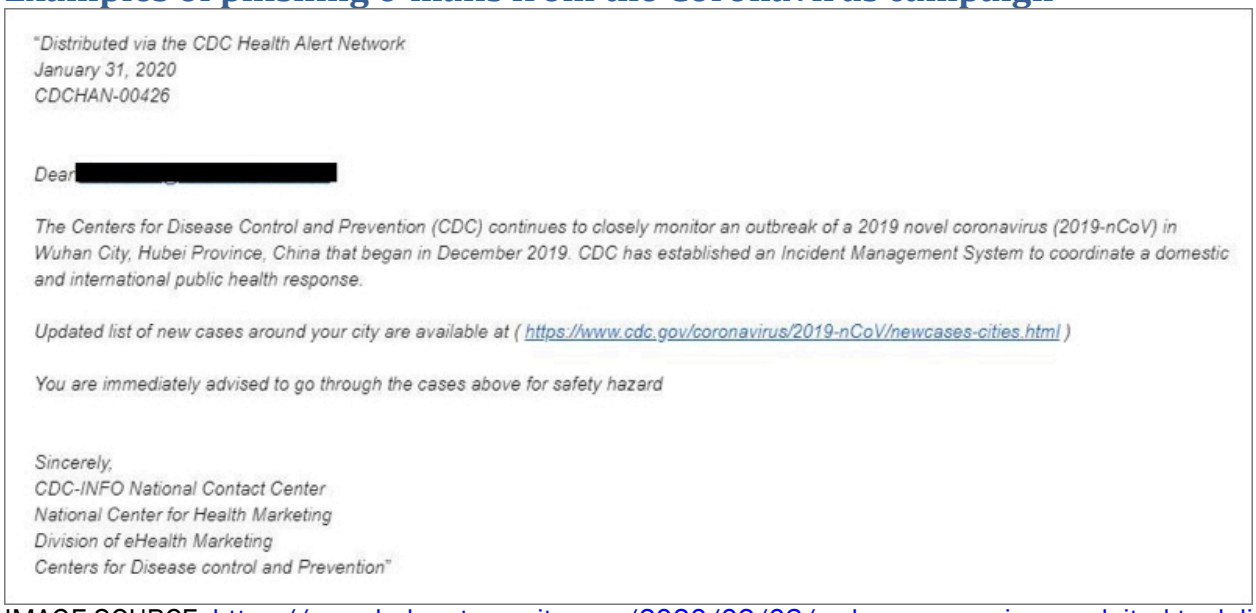
- https://www.govtech.com/blogs/lohrmann-on-cybersecurity/coronavirus-scams-prepare-for-a-deluge-of-phishing-emails-fake-alerts-and-cyberthreats.html
- https://www.proofpoint.com/us/corporate-blog/post/emotet-leverages-coronavirus-and-greta-thunberg-again-while-coronavirus-threats
- https://www.independent.co.uk/life-style/gadgets-and-tech/news/coronavirus-china-computer-virus-face-mask-malware-emotet-a9314761.html
- https://www.straitstimes.com/tech/wuhan-virus-hackers-exploiting-fear-of-bug-to-target-computers-gadgets
- https://www.techrepublic.com/article/hackers-using-coronavirus-scare-to-spread-emotet-malware-in-japan/

- https://www.helpnetsecurity.com/2020/02/03/wuhan-coronavirus-exploited-to-deliver-malware-phishing-hoaxes/
- https://exchange.xforce.ibmcloud.com/collection/18f373debc38779065a26f1958dc260b
- https://www.straitstimes.com/tech/wuhan-virus-hackers-exploiting-fear-of-bug-to-target-computers-gadgets
- https://threatpost.com/coronavirus-propagate-emotet/152404/
- https://www.wired.com/story/coronavirus-phishing-scams/
- https://www.csa.gov.sg/singcert/alerts/malicious-cyber-activities-leveraging-wuhan-coronavirus-situation
- https://www.kaspersky.co.za/blog/coronavirus-used-to-spread-malware-online/25570/
- https://www.bleepingcomputer.com/news/security/coronavirus-phishing-attacks-are-actively-targeting-the-us/
- https://blog.knowbe4.com/heads-up-scam-of-the-week-coronavirus-phishing-attacks-in-the-wild?nCOV-2019-bc-index
- https://www.bleepingcomputer.com/news/security/coronavirus-phishing-attacks-are-actively-targeting-the-us/
- https://www.itwire.com/security/criminals-use-coronavirus-fears-to-launch-%E2%80%98theft-malware%E2%80%99-says-analyst.html
- https://securitybrief.eu/story/cyber-criminals-exploiting-coronavirus-fears

Contextual information

- https://www.cdc.gov/coronavirus/index.html

Examples of phishing e-mails from the Coronavirus campaign



"Distributed via the CDC Health Alert Network
January 31, 2020
CDCHAN-00426

Dear [redacted]

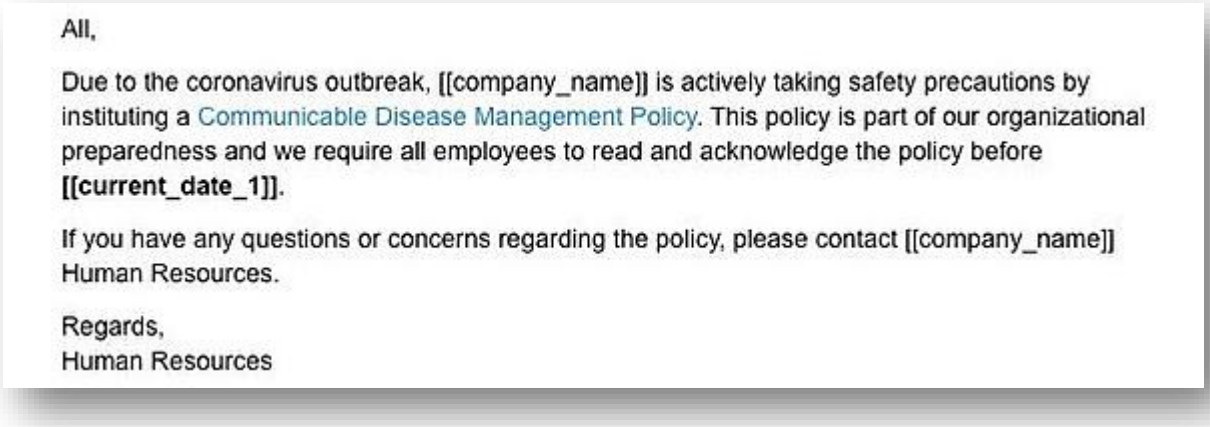
The Centers for Disease Control and Prevention (CDC) continues to closely monitor an outbreak of a 2019 novel coronavirus (2019-nCoV) in Wuhan City, Hubei Province, China that began in December 2019. CDC has established an Incident Management System to coordinate a domestic and international public health response.

Updated list of new cases around your city are available at (https://www.cdc.gov/coronavirus/2019-nCoV/newcases-cities.html)

You are immediately advised to go through the cases above for safety hazard

Sincerely,
CDC-INFO National Contact Center
National Center for Health Marketing
Division of eHealth Marketing
Centers for Disease control and Prevention"

IMAGE SOURCE: https://www.helpnetsecurity.com/2020/02/03/wuhan-coronavirus-exploited-to-deliver-malware-phishing-hoaxes/



All,

Due to the coronavirus outbreak, [[company_name]] is actively taking safety precautions by instituting a Communicable Disease Management Policy. This policy is part of our organizational preparedness and we require all employees to read and acknowledge the policy before **[[current_date_1]]**.

If you have any questions or concerns regarding the policy, please contact [[company_name]] Human Resources.

Regards,
Human Resources

IMAGE SOURCE: https://blog.knowbe4.com/heads-up-scam-of-the-week-coronavirus-phishing-attacks-in-the-wild?nCOV-2019-bc-index

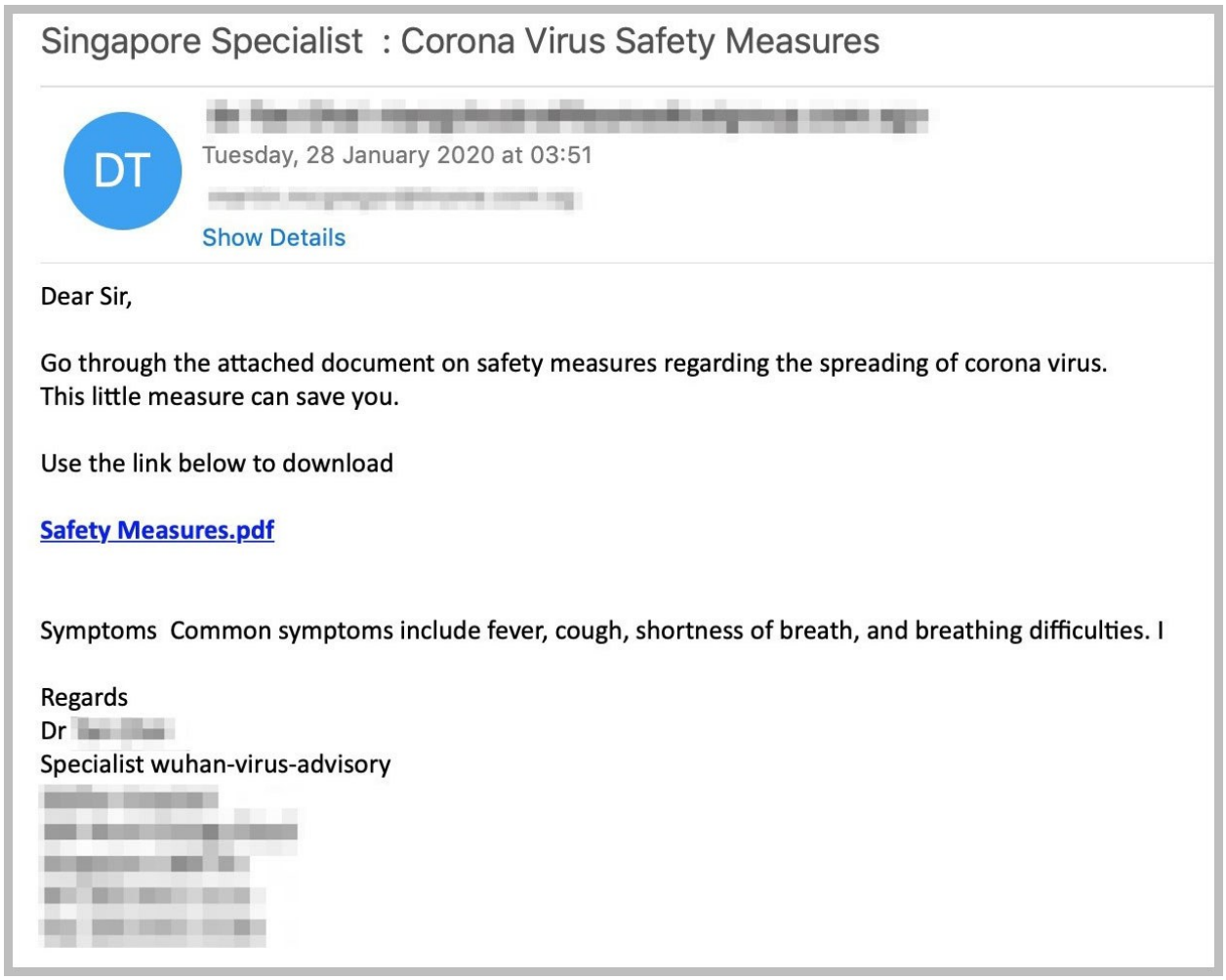


IMAGE SOURCE: https://www.wired.com/story/coronavirus-phishing-scams/