

Monthly Cyber Briefing

June 6, 2024



Logistics

- All attendees in “Listen Only Mode”
- Please ask content related questions in Q&A
- Recording, final slides, resources and attendee certificate shared within 24 hours
- Please take a few minutes to provide feedback via survey prompt at the end of this session

Agenda & Speakers

- Cyber update
- Business email compromise and social engineering tactics



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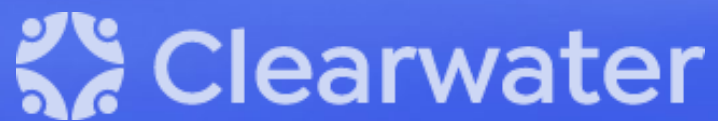


Ricoh Danielson

Information Security and
Incident Response – VCISO
1st Responder

Cyber Update

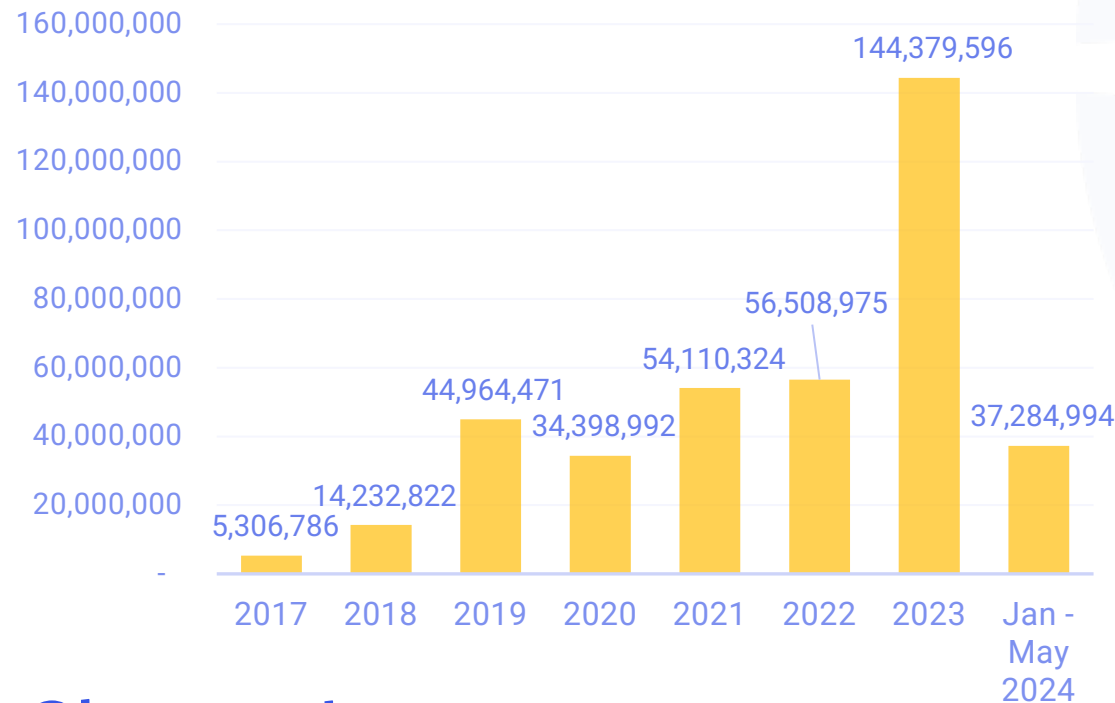
Steve Cagle



Breach Reports via OCR Breach Portal¹ and SEC

- 144.4M records reported breached in 2023, an increase of 61% vs 56.5M records in 2022
- 737 breaches reported in 2023 vs 720 in 2022, a slight increase year over year
- 38.3m records from 315 breaches in 2024; below 2023 pace, but does not include Change Healthcare breach

Records Reported Breached to OCR



Notable in May 2024 breach data

- Relatively “light” month of breaches, with 35 breaches and “only” 4.7m records reported as breached
- Largest breach WebTPA Employer Services, LLC 2.5m individuals affected
- DocGo Telemed – large medical transportation company – disclosed breach through SEC reporting

Change Healthcare Update

Product updates

● Uninterrupted / Fully Restored ● Partial Service Available ● Restoration in Progress ● Restoration Date Pending

<p>Acuity Revenue Cycle Analytics</p> <p>Acuity provides revenue cycle analytics for users of Clearance and Assurance</p> <p>Restored week of 4/1/2024</p>	<p>Assurance Reimbursement Management</p> <p>Batch claim submission, remittance management</p> <p>Restored week of 3/25/2024</p>	<p>CHC Cardiology PACs</p> <p>The on-premise management of images, reports, ECG, hemodynamics, waveforms, analytics, charge capture, and inventory management.</p>	<p>CHC Radiology PACs</p> <p>The integrated, on-premise web-based PACS system for radiologists.</p>	<p>CHC Workflow Intelligence</p> <p>The on-premise flexible medical imaging workflow rules engine for radiologists.</p>	<p>Payer Connectivity Services (PCS)</p> <p>EDI validation and editing, data routing to different repricers, third parties, end adjudication systems or processing paths</p> <p>Restored week of 4/25/2024</p>	<p>Payer Print Communication Multi-Channel Distribution System (MCDS)</p> <p>Ability for check/remittance print production</p> <p>Restore week of 4/15/2024</p>	<p>Payments - Electronic Providers</p> <p>Ability for electronic payment production</p> <p>Restored week of 3/4/2024</p>	<p>Pulse Revenue Cycle Benchmarking</p> <p>Pulse provides RCM KPI benchmarks for institutional claims utilizing Assurance client data</p> <p>Restored week of 4/1/2024</p>	<p>Reimbursement Manager</p> <p>Claim pricing</p> <p>Restored week of 03/25/2024</p>
<p>Clearance Patient Access Suite</p> <p>Benefits verification, authorization, financial engagement</p> <p>Restored week of 3/25/2024</p>	<p>Clinical Exchange</p> <p>Provider workflow enabling electronic prescribing, ordering and resulting integrated into EHRs</p> <p>Restored week of 4/15/2024</p>	<p>Compliance Reporter</p> <p>Enables NCQA Quality Measure Reporting for HEDIS / CMS Stars Deadlines, Client HEDIS Chart Abstraction Features</p> <p>Restored week of 4/1/2024</p>	<p>Coverage Insight</p> <p>Coverage discovery</p> <p>Restored week of 3/25/2024 <i>*Vendor Workaround</i></p>	<p>Eligibility</p> <p>Process real-time transactions</p> <p>Restored 4/3/2024</p>	<p>Revenue Performance Advisor (RPA)</p> <p>Automates E2E revenue cycle processes and provides real-time visibility into eligibility, claims and payment tracking, and denials management</p> <p>Restored week of 4/1/2024</p>	<p>Risk Manager</p> <p>Supports clients in managing value-based payment contracts</p> <p>Restored week of 4/15/2024* *date changed</p>	<p>Risk View</p> <p>Supports risk-adjusted payment models with advanced analytics</p> <p>Restored week of 4/29/2024</p>	<p>Stratus Imaging Analytics</p> <p>The cloud-native imaging analytics platform.</p>	<p>Stratus Imaging Archive</p> <p>The fully managed, cloud-native medical imaging archive for providers.</p>
<p>HealthQX</p> <p>Supports retrospective episode-based payment models</p> <p>Restored week of 4/8/2024</p>	<p>Hosted Payer Services (HPS)</p> <p>Payer hosting service for eligibility responses to providers</p> <p>Restored week of 3/28/2024</p>	<p>InterQual Customize</p> <p>Larger plans use this functionality to review and modify the criteria of releases for their own use.</p> <p>Restored week of 4/1/2024</p>	<p>Medical Network Exchange</p> <p>Claims, remittance, eligibility transaction processing</p> <p>Restored week of 3/25/2024</p>	<p>MedRX</p> <p>Pharmacy electronic claims for medical</p> <p>Restored week of 3/25/2024</p>	<p>Stratus Imaging PACS</p> <p>The full-featured, cloud PACS imaging solution.</p>	<p>Stratus Imaging Share</p> <p>The cloud-based medical-image-sharing platform.</p>	<p>Stratus Imaging Viewer</p> <p>The cloud-based imaging solution with imaging access.</p>		

[Information on the Change Healthcare Cyber Response - UnitedHealth Group](#)

CEO Testimony on Capitol Hill Takeaways



Andrew Witty
CEO, UnitedHealth Group
at Senate Finance Committee Hearings on
Change Healthcare Breach

**Failure to Address
Legacy Tech**

**Lateral Movement
for 9 Days
Undetected**

**Access Through
Stolen Credentials**

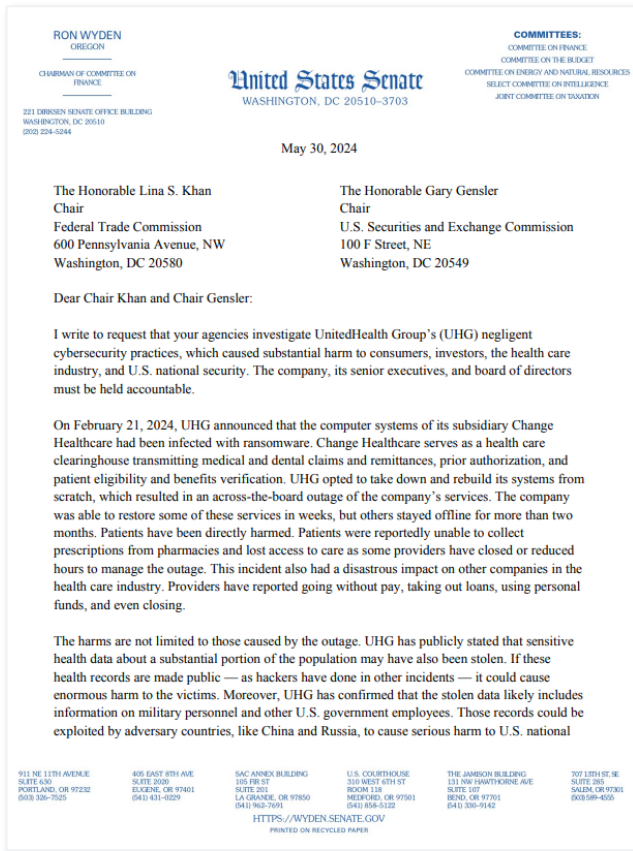
**Lack of Back-up
Separation –
No Viable IRP**

**No MFA on Remote
Access Server**

**Even with 7 Firms
Assisting, Months
to Recover**

Change Healthcare – SEC & FTC Investigation?

Senator Wyden calls on FTC and SEC to investigate UnitedHealth Group



- States harm caused to sector, patients, National Security and investors
- Says root cause of attack was that UnitedHealth CISO had no previous CISO experience
- Places negligence on CEO and Board of Directors
- Wants to know if laws were broken? If so, demands to “hold senior officials accountable”

Change Healthcare – OCR Update

OCR updates FAQs regarding Change Healthcare Investigation and Breach Reporting

- OCR's ransomware guidance provides specific information on the steps covered entities and business associates should take to determine if a ransomware incident is a HIPAA breach
- Reiterates that the covered entity is ultimately responsible for reporting breaches under HIPAA within 60 days of determination (for 500+ individuals affected)
- OCR will not consider the 60-calendar day period from discovery of a breach by a covered entity to start until it has received the information needed from Change Healthcare or UHG
- Business associates are required to notify covered entity of a breach within 60 days
- Covered entity may delegate reporting a breach to individuals to the business associate
- Only one entity needs to make notifications to the affected individuals

[Change Healthcare Cybersecurity Incident Frequently Asked Questions | HHS.gov](#)
[Fact Sheet: Ransomware and HIPAA | HHS.gov](#)
[Breach Notification Rule | HHS.gov](#)

Ascension Ransomware Attack Update

Nurses at Ascension hospital in Michigan raise alarms about safety following ransomware attack

Jonathan Greig, The Record. May 29, 2024



'It's putting patients' lives in danger': Nurses say ransomware attack is stressing hospital operations

Sean Lyngaas, CNN, May 29, 2024

- 140 hospital systems impacted by Black Basta ransomware May 8th
- Reported 3 days later; vendors notified to disconnect systems
- Pharmacy system, EHR, phone, imaging and other systems offline; some ambulance diversions
- Clinicians have reported orders for medication and imaging by hand
- Numerous reports concern of errors and impact to patient safety
- As of 5/31 at least one EHR is back online
- Reporting to have EHR widely available 6/14

[Cybersecurity Event Update | Ascension](#)

[Nurses at Ascension hospital in Michigan raise alarms about safety following ransomware attack \(therecord.media\)](#)

['It's putting patients' lives in danger': Nurses say ransomware attack is stressing hospital operations | CNN Business](#)

[Ascension restores EHR in 1st market after cyberattack \(beckershospitalreview.com\)](#)

Black Basta Threat Overview and TTPs

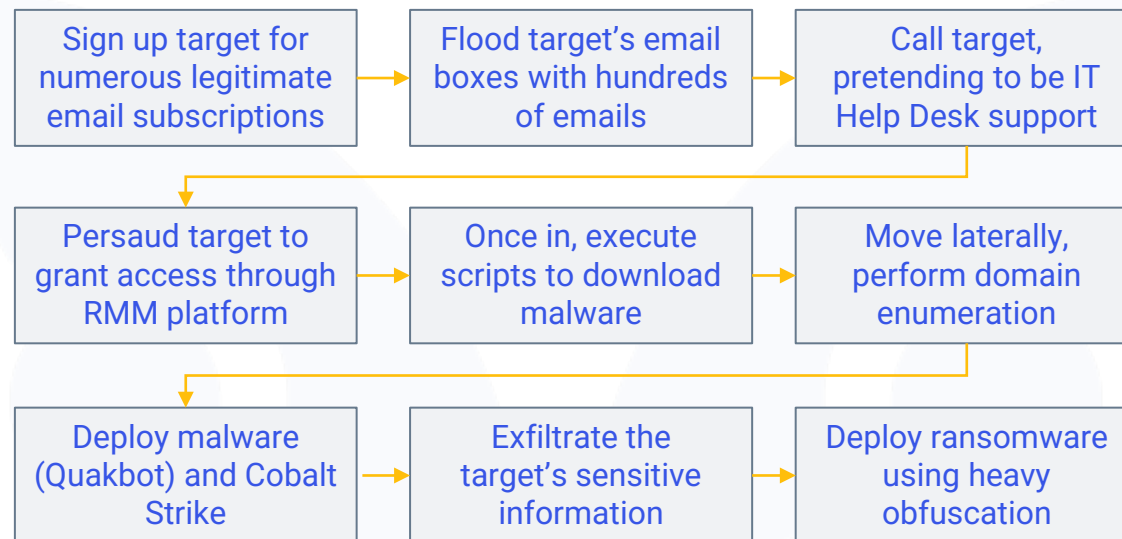
Black Basta has targeted over 500 entities including Chilean Government, American Dental Association, Dish Network, and recently Atlas Oil

```
root /vmfs/volumes# ls
bb.xlsx.basta 'IDA Freeware 7.6.desktop.basta' readme.txt
bcc kk.txt.basta ssd1.pcap.basta
die ll.txt.basta sss.jpeg.basta
dd.docx.basta logo.png.basta testing.elf.basta
debugf.py.basta pp.elf.basta
ff.doc.basta pp.txt.basta
root( /vmfs/volumes# cat readme.txt
Your data are stolen and encrypted
The data will be published on TOR website if you do not pay the ransom
You can contact us and decrypt one file for free on this TOR site
(you should download and install TOR browser first https://torproject.org)
https://aazsbsgya565vlu2c6bzy6yfiebkcbtvvcyvtolt33s77xypi7nypxyd.onion/

Your company id for log in: 01e
root( /vmfs/volumes#
ENCRYPTION
Done time: 14.5620 seconds, encrypted: 0.0016 gb
```

Black Basta was formed April 2022 (former Conti) and is known for its double extortion attacks and has specifically targeted healthcare since 2023. HC3 published warning in March 2023.¹

- Historical TTPs include spear-Phishing, Insider Information and buying Network Access
- Most Recent TTPs are “link listing” attacks



Addressing Threat of Black Basta

Review and act on CISA Advisory and H-ISAC Intel

[#StopRansomware: Black Basta \(cisa.gov\)](#)

[TLP WHITE - 2c4e32a6 - UPDATE: Black Basta](#)

Recommendations

- Baseline your environment for all installed remote monitoring and management solutions
- Ensure users are aware of established IT channels and communication methods
- Empower users to report suspicious phone calls and texts purporting to be from internal IT staff
- Monitor for IOCs that associated with Black Basta TTPs (and other suspicious activity or other)
- Install updates for operating systems, software, and firmware as soon as they are released
- Identify gaps in multi-factor authentication controls
- Update your Risk Analysis to include all information systems with ePHI and/or that are critical to operations

The image shows a screenshot of a joint cybersecurity advisory document. At the top, it reads 'TLP WHITE - 2c4e32a6 - UPDATE: Black Basta Threat Actor Emerges as a Major Threat to the Healthcare Industry'. Below this is the Health-ISAC logo. The main title is 'JOINT CYBERSECURITY ADVISORY' with 'TLP: CLEAR' and 'Product ID: AA26-131A' and 'May 10, 2024' to the right. The advisory is co-authored by the FBI, CISA, HHS, and MS-ISAC. The title of the advisory is '#StopRansomware: Black Basta'. A 'SUMMARY' section follows, containing a 'Note' about the advisory's purpose, a list of 'Actions for critical infrastructure organizations to take today to mitigate cyber threats from ransomware', and a paragraph about the advisory's origin. At the bottom, there is a section for reporting suspicious activity and a disclaimer about the document's classification as TLP: CLEAR.



Regulatory Update



National Security Memorandum 22

Represents a significant shift towards regulation of owners and operators of critical infrastructure, as it directs federal agencies to set “minimum requirements” and effective “accountability” mechanisms for the security and resilience of critical infrastructure” as well as “enforcement mechanisms”.

The Good

Solidifies Role of CISA, reinforcing Sector Risk Management Agents responsibilities and coordination with DHS for each critical infrastructure sector.

Shortfalls

Does not establish space or cloud as critical infrastructure. No funding to implement the objectives.

8 Objectives of NSM-22

1. Shared Responsibility
2. Risk-Based Approach
3. Minimum Requirements
4. Accountability
5. Information Exchange
4. Expertise & Technical Resources
5. International Engagement
6. Policy Alignment

OCR Increasing Enforcement, Audits – Risk Analysis in Focus

Statements by OCR Director Fontes Rainer during May 7th interview:



How HHS OCR Is Boosting HIPAA Enforcement; Here Come Audits
Director Melanie Fontes Rainer Discusses Agency's Top Priorities
Marianne Kolbasuk McGee (@HealthInfoSec) · May 7, 2024

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WASHINGTON

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A critical area of enforcement focus overall is the HIPAA Security Rule's requirement for conducting risk analysis, which continues to be a significant weakness among many regulated organizations of all sizes, especially for medium- and smaller-sized organizations.

“Poor risk analysis practices persist as a major contributing factor to many significant breaches reported to the agency.”

HHS OCR plans by the end of the year to publish a proposed update to the HIPAA Security Rule.

“We have reopened our HITECH audits. And so, we're proactively doing audits as well right now.”

FTC Updates Health Breach Notification Rule (“HBNR”)

The final rule will go into effect 60 days after its publication in the Federal Register (4/26/24)

1. Revises definitions to cover all health apps and similar technologies not covered by HIPAA
 2. Definition of “breach of security” includes both data security breaches and unauthorized disclosures
 3. The revised definition of “PHR-related entity” establishes that the Rule applies to entities that offer products and services through online services of vendors of personal health records, including mobile apps
 4. “Personal health record” includes drawing information from multiple sources matters
 5. Expands the use of electronic notice to consumers
 6. Notices to consumers must be “clear and conspicuous” and “reasonably understandable
 7. Covered entities must move quickly to notify consumers – and the FTC – about breaches involving 500 or more people
 8. The Final Rule adds cross-references, citations, and more information about penalties for non-compliance
- FTC Health Breach Notification Rule moves reporting more in line with HIPAA requirements
 - FTC has already enforced the rule and states it will continue to do so
 - FTC is further doubling down on its stance on breaches related to website or other tracking technologies

Compliance Recommendations

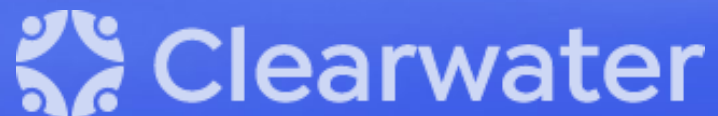
1. Complete Gap Assessments of HIPAA Rules following the OCR Audit Protocol & and FTC HPNR
2. Ensure OCR-Quality Risk Analysis is up to date
3. Assess your implementation of 405(d) HICP
4. Make updates to policies and procedures to address FTC Health Breach Notification Rule
5. Evaluate use of online tracking technologies

Business Email Compromise & Social Engineering Tactics

Dave Bailey

Steve Akers

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Distributed Denial of Service

- May 30, 2024, TLP: CLEAR
 - Healthcare Sector DDoS Guide
 - An attacker uses multiple systems (botnet) to send a high volume of traffic or requests to a targeted network (long term or burst)
- DDoS Resources: CISA, NIST, & Health-ISAC

<https://www.cisa.gov/news-events/news/understanding-denial-service-attacks>
<https://www.nist.gov/programs-projects/advanced-ddos-mitigation-techniques>
<https://h-isac.org/distributed-denial-of-service-ddos-attacks/>

Healthcare Sector DDoS Guide

Executive Summary

A Distributed-Denial-of-Service (DDoS) attack is a type of cyber attack in which an attacker uses multiple systems, often referred to as a botnet, to send a high volume of traffic or requests to a targeted network or system, overwhelming it and making it unavailable to legitimate users. With the number of attacks increasing every year, they can come at any time, impact any part of a website's operations or resources, and lead to massive amounts of service interruptions and huge financial losses. In the health and public health (HPH) sector, they have the potential to deny healthcare organizations and providers access to vital resources that can have detrimental impact on the ability to provide care. Disruptions due to a cyber attack may interrupt business continuity by keeping patients or healthcare personnel from accessing critical healthcare assets such as electronic health records, software based medical equipment, and websites to coordinate critical tasks. As such, this comprehensive DDoS guide is intended for target healthcare audiences to understand what DDoS attacks are; what causes them; types of DDoS attacks with timely, relevant examples; and mitigations and defenses against a potential attack.

Report

Not to be confused with Denial-of-Service (DoS) attacks, which usually attacks from a single system, a DDoS attack originates from multiple sources and sends a larger volume of traffic into the system at once, making it difficult for network administrators to quickly detect and eliminate the threat. DDoS attacks have continually grown in size and sophistication, but 2023 accelerated this trend at an unforeseen pace. Last year alone, cybercriminal groups, geopolitically motivated hacktivists, and malicious actors utilized the relatively inexpensive cost of launching DDoS attacks, the scale of massive botnets built from everyday digital and Internet of Things (IoT) devices, and protocol-level zero-day vulnerabilities to launch record-breaking attacks on businesses, government institutions, and, most disturbingly, on critical but vulnerable public infrastructure, including hospitals.

In most cases, the assumed goals are to cause damage, productivity loss, and financial losses and to gain public attention, which is why these threat actors select an increasingly broad range of victims who are known to have insufficient IT security. It is important to remember that DDoS attacks are targeted attacks for which the threat actors consciously select their targets. Threat actors utilize DDoS attacks due to the cost effectiveness and relatively low resources and technical skills needed to deploy this type of attack as a hacker does not have to install any code on a victim's server. Moreover, DDoS attacks are getting more sophisticated and complex while getting easier and cheaper to perpetrate as cyber criminals take advantage of the sheer number of insecure internet-connected devices.

Profile of a DDoS Attacker

DDoS attackers are often groups of attackers well known to authorities and use DDoS tactics to gain influence, disrupt government and military operations, or cause people to lose confidence in a market sector, company brand, or long-established institution. While any type of cyber threat actor (i.e., advanced persistent threats, cybercriminal groups, individuals, etc.) could orchestrate DDoS attacks, one of the biggest shifts in the DDoS threat landscape is the rise of hacktivist groups and the emergence of political motivation, rather than financial motivation, as the main driver for DDoS attacks.

Often considered a form of crowd-funded cyber terrorism, these groups present themselves as quasi-military organizations to solicit donations in cryptocurrency on social media channels to perpetrate DDoS

[TLP: CLEAR, ID#202405301200, Page 1 of 10]

Relevant Threat Reports: HHS HC3



5/23 Flashpoint is observing that Russian advanced persistent threat (APT) groups are evolving their tactics, techniques, and procedures (TTPs)—while also expanding their targeting. **They are using new spear-phishing campaigns to exfiltrate data and credentials by delivering malware sold on illicit marketplaces.**



4/10 The Department of Health and Human Services' Health Sector Cybersecurity Coordination Center (HC3) April 5 released an advisory on the top 10 ransomware groups targeting the health care sector. **HC3 has tracked over 530 attacks against the U.S. health care sector in the past six months, nearly half of them ransomware related. HC3 also recently released an advisory recommending actions to protect against advanced social engineering attacks targeting IT help desks in the health care sector.**

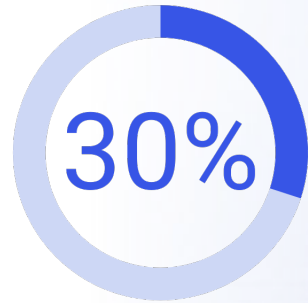


5/25 BEC attacks target human weaknesses, such as the tendency to trust authority figures, act impulsively, and respond emotionally to urgent requests. **These attacks often start with a phishing email and the theft of credentials, although spoofing is also used to impersonate an authority figure without access to their email account.**

By the Numbers – Bad Guys



3.4B phish sent daily



of phishing emails get opened

Most Common Words:

- Urgent 8%
- Important Updates 8%
- Important 5%
- Attention 2%



of businesses are targeted for spear phishing each year



24% of BEC was about payroll changes



of phish sites use SSL certs

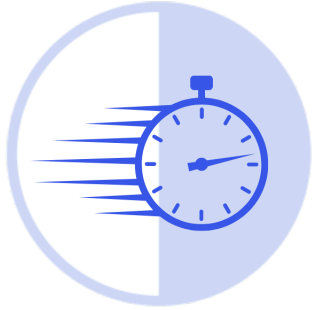


1M attacks using MFA bypass per month



10M TOAD attacks per month

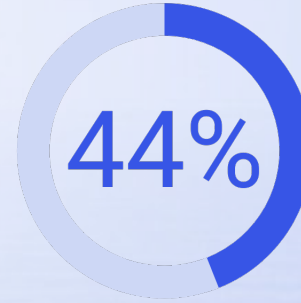
By the Numbers – Good Guys



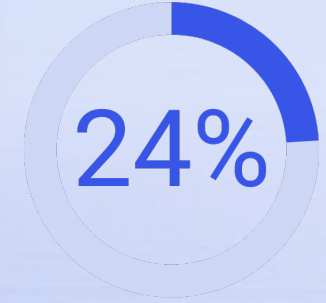
19% make risky decisions to save time



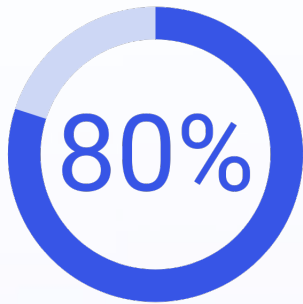
10% make risky decisions to meet a performance objective



44% take risky actions for convenience



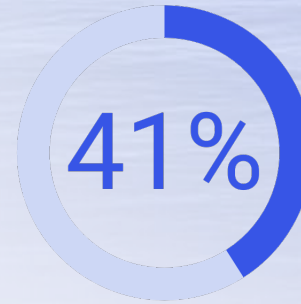
24% take risky actions for urgent deadlines



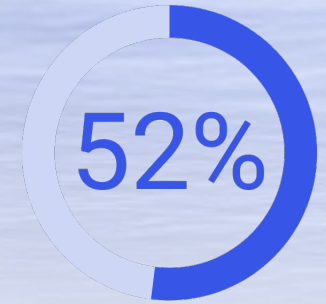
80% of social media users post job status and employer



50% of social media profiles are public



41% of staff feel responsible for security



52% of staff aren't sure if security is their responsibility

How to reduce the risk of BEC and Social Engineering

■ Staff Awareness

- Research is phase one of a BEC attack
 - Social presence of staff can be a significant source of information
 - Post Vacations and Plans before hand - increased plausibility
- Educate on what is BEC and Social Engineering
 - Samples, Goals, and Tactics
- Discuss ahead of time how to handle “payment, payroll, or wire” requests
 - Remove the concept of things like this being done in total secrecy
 - Secondary Validation
 - Don’t underestimate the influence of an apparent request from an executive
- Ensure all staff know part of their responsibility is cybersecurity
 - Highlight examples of their impact and how they can help



How to reduce the risk of BEC and Social Engineering

■ Technical Controls

- Implement, Confirm and Test Email Protocol Protections
 - DomainKeys Identified Mail (DKIM)
 - Sender Policy Framework (SPF)
 - Domain-based Message Authentication, Reporting, and Conformance (DMARC)
- Enable email access controls
 - MFA for all email access
 - GEO Fence
 - Don't ignore mobile devices
- Implement Strong Anti-Phish Protections
 - Two Layers not uncommon – should include URL and attachment scanning
 - Label all external emails as such



How to reduce the risk of BEC and Social Engineering



Technical Controls (cont'd)

Enable proper audit logging within Email Systems

- Don't assume Cloud Defaults are adequate – they are not



Operational Controls

Monitoring of Activities

Incident Response Planning

Regular Security Audits

Business Email Compromise Assessment



Q&A





We are here to help.

*Moving healthcare organizations to
a more secure, compliant, and
resilient state so they can achieve
their mission.*

Upcoming Events



Incident Response Webinar | June 20

- Partnering with 1st Responder and Jarrad Communications
- [Register Here](#)

June 10 - 12, 2024

Higher Education & Healthcare Research Compliance Conference

New Orleans, LA, United States

HCCA Research Compliance Conference | June 10-12 – New Orleans, LA

- Andrew Mahler Speaking on patient's rights in research studies



AHLA Annual Conference | June 24-27 – Washington, DC



Cyber Briefing | July 11

- With Bob Chaput on how to engage your C-suite and board in effective & ongoing Enterprise Cyber Risk Management dialogue.
- [Register Here](#)



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