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Monthly Cyber Briefing

March 2024





Logistics

- All attendees in "Listen Only Mode"
- Please ask content related questions in Q&A
- Recording and final slides shared within 48 hours
- Please take a few minutes to provide feedback via survey prompt at the end of this session



Agenda & Speakers

- Cyber update
- Quarterly Threat Review



Steve Cagle
CEO
Clearwater



Dave Bailey
VP, Consulting Services
Clearwater



Steve Akers
CTO, Managed Security Services,
CISO

Clearwater



Cyber Update

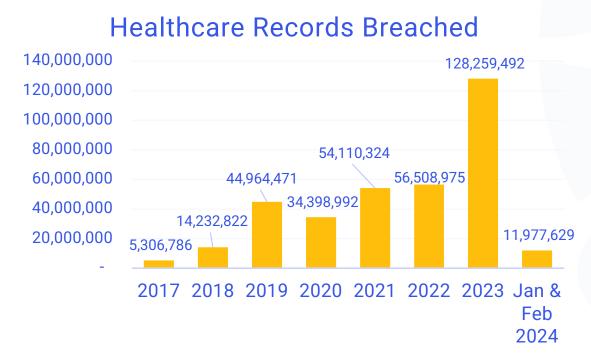
Steve Cagle





Breach Reports via OCR Breach Portal¹

- 135.3M records reported breached in 2023, and increase of 139% vs 56.5 million in 2022
- 734 breaches reported in 2023 vs 720 in 2022, a slight increase year over year
- About 12 million records (104 breaches) reported Jan Feb 2024. Annual run Rate of 72M records ... however,
 Change Healthcare Breach (not yet reported) has the potential to be one of largest of all time in healthcare



Top Breaches Reported to OCR in 2024

- Concentra Health Services, Inc. 4.0M (PJ&A)
- Integris Health 2.4M Ransomware
- North Kansas City Hospital 502K (PJ&A)
- Medical Management Resource Group (dba American Vision Partners) 2.35M – Hacked Network



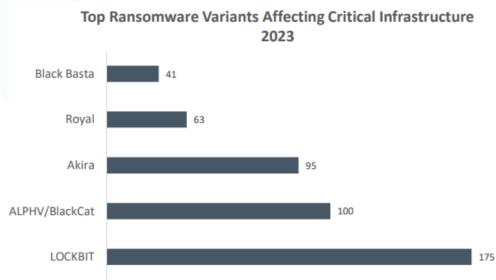
2023 FBI Internet Crime Report (just released)

Infrastructure Sectors Affected by Ransomware



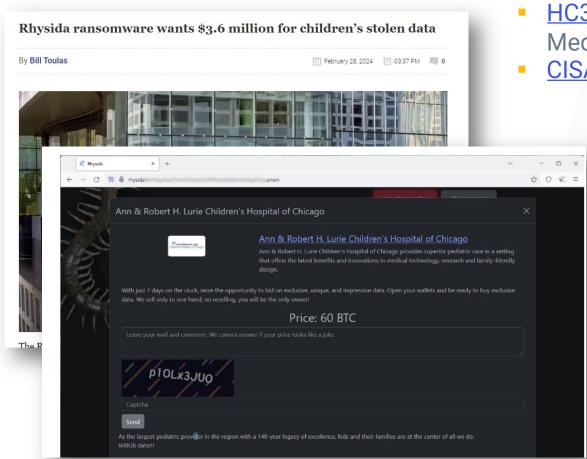
2023 FBI Internet Crime Report.pdf

- Healthcare continues to be the most targeted critical infrastructure industry by ransomware gangs
- Total losses from internet crime increased in the U.S. by 22% in 2023 to \$12.5 Billion





Rysida Ransomware – Lurie Children's Hospital, Chicago



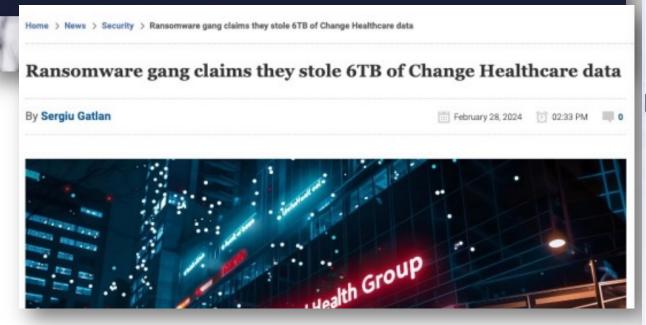
- HC3 issued a sector alert 8/4/23 following Prospect Medical Attack.
- CISA issued a Rhysida Ransomware Advisory 11/15/23



Blackcat/ALPHV Change Healthcare Ransomware

Outages from Change Healthcare cyberattack causing financial 'mess' for doctors

Change Healthcare's parent company discovered that a cyber threat actor breached part of its network, according to an SEC filing.





Darkweb BLOG POST from BlackCat

Change Healthcare - Optum - UnitedHealth

2/28/2024, 5:19:59 PM

UnitedHealth has announced that the attack is "strictly related" to Change Healthcare only and it was initially attributed to a nation state actor.

Two lies in one sentence.

Only after threatning them to announce it was us, they started telling a different story.

It is true that the attack is centered at Change Healthcare production and corporate networks,but why is the damage extremely high? Change Healthcare production servers process extremely sensitive data to all of UnitedHealth clients that rely on Change Healthcare technology solutions. Meaning thousands of healthcare providers,insurance providers,bharmacies.etc...

Also being inside a production network one can imagine the amount of critical and sensitive data that can be found.

ALPHV

Collections /

The list of affected Change Health partners that we have sensitive data for is actually huge with names such as:

- Medicar
- Tricare
- CVS-CareMark
- Loomis - Davis Vision
- Davis Visior - Health Net
- Health N
- Teachers Health Trust
- Tens of insurance companies and ot

Anyone with some decent critical thinking will understand what damage can be done with such intimate data on the affected clients of UnitedHealth/UnitedHealth solutions as well, beyond simple scamming/spamming.

After 8 days and Change Health have still not restored its operations and chose to play a very risky game hence our announcement

So for everyone both those affected and fellow associates to understand what is at stake our exfiltrated data includes millions of

- active US military/navy personnel PII
- medical record
- dental records
 payments information
- Claims information
- Patients PII including Phone numbers/addresses/SSN/emails/etc...
- 3000+ source code files for Change Health solutions (for source-code review gents out there)
- Insurance records
- many many more

UnitedHealth you are walking on a very thin line be careful you just might fall over.

PS: For all those cyber intelligence so called expert dumbasses we did not use ConnectWise exploit as our initial access so you should base your reports you tell people on actual facts not kiddi speculations.



Akira Ransomware Advisory



HC3 Alerts 9/12/23 & 2/7/24

- First identified in May of 2023 has claimed at least 81 victims
- Relatively new but potentially former Conti ransomware group members
- Attacking U.S. focusing on Northeast U.S., CA, TX, IL
- Recent attack on Bucks County PA computeraided dispatch system (911 services)
- Significant threat to healthcare industry per Health and Human Services' Health Sector **Cybersecurity Coordination**
- Double extortion techniques

Lockbit - Cat and Mouse Game

December cyberattack on Chicago community hospital claimed by LockBit gang

LockBit ransomware operations seized by law enforcement in 'Operation Cronos'

News Feb 20, 2024 • 3 mins

LockBit returns after takedown with new extortion threats

Simon Hendery February 26, 2024

- More than 2,000 entities have been targeted in LockBit ransomware attacks, over \$120 million in ransoms paid
- State Department offering \$15 million for information leading to LockBit arrests
- Operation Cronos took down LockBit infrastructure ~Feb 19th
- Lockbit re-emerged several days later, promising to improve its own security while also increasing attacks against government sector

"I need to attack the .gov sector more often and more, it is after such attacks [by law enforcement/FBI]" - LockBitSupp posted in 2,800-word message

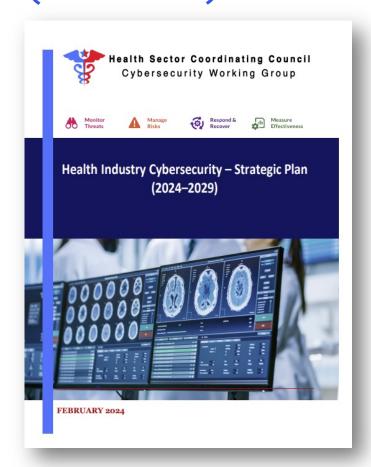


Continued Threats from Russian Threat Actors Expected

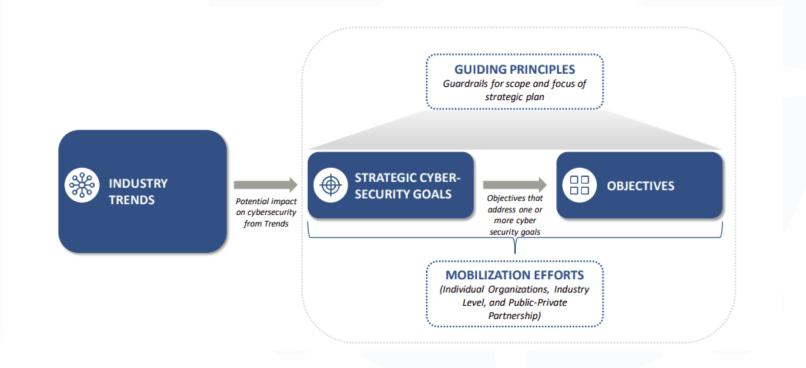




HSCC Health Industry Cybersecurity Strategic Plan (HIC-SP)



Projected 5-year industry trends informed identification of broad cybersecurity goals realized by actionable implementing objectives to move the sector toward a more cyber-secure and resilient posture.





5-Year Cybersecurity Goals To Meet Industry Trends

The health industry will pursue ten cybersecurity goals to meet the challenges posed by industry trends.

Goal 1

Healthcare and wellness delivery services are user-friendly, accessible, safe, secure, and compliant.

Goal 2

Cybersecurity and privacy practices and responsibilities are understandable to healthcare technology consumers and practitioners.

Goal 3

Cybersecurity requirements are readily available, harmonized, understandable, and feasible for implementation across all relevant healthcare and public health subsectors.

Goal 4

Health data, commercially sensitive research, and intellectual property data are reliable and accurate, protected and private, while supporting interoperability requirements.

Goal 5

Emerging technology is rapidly and routinely assessed for cybersecurity risk, and protected to ensure its safe, secure, and timely use.

Goal 6

Healthcare technology used inside and outside of organizational boundaries is secure-by-design and secure-by-default while reducing the cybersecurity burden and cost on technology users.

Goal 7

A trusted healthcare delivery ecosystem is sustained with active partnership and representation between critical and significant technology partners and suppliers, including non-traditional health and life science entities.

Goal 8

Foundational resources and capabilities are available to support cybersecurity needs across all healthcare stakeholders regardless of size, location, and financial standing.

Goal 9

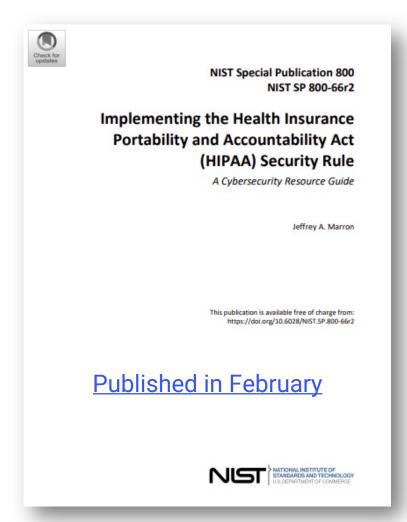
The health and public health sector has established and implemented preparedness response and resilience strategies to enable uninterrupted access to healthcare technology and services.

Goal 10

Organizations across the health sector have strong cybersecurity and privacy cultures that permeate down from the highest levels with-in each organization.



NIST SP 800-66 r2 Aligns with Asset Based Risk Analysis



Risk Assessment, initially part of Appendix E in rev 1, is now distinctly outlined as Section 3 in rev 2. The content aligns with SP 800-30 and the NIST IR 8286 series of documents.

- States the need to identify all systems and components with ePHI
- Risk assessment is the process by which an must include all systems and processes, including remote workers or systems that are managed by service providers
- Risk tolerance and risk appetite should be clearly defined and weighted. Risk mitigation and management efforts must be tailored appropriately.
- Regulated entities should not view risk assessment as a one-time, static task but as an ongoing activity



NIST Cybersecurity Framework 2.0 Released



NIST CSF 2.0 just released...

- New Govern function to emphasize cybersecurity risk management outcomes
- Broadens the scope to any sector
- Number of tools for "quick start" to help smaller businesses
- Advice for creating profiles tailored to an organization's unique risk posture

Please refer to our July Cyber Briefing featuring <u>Dave Bailey's</u> <u>presentation on NIST 2.0.</u>



Expect OCR Enforcement to Increase if Funding is Provided



"HHS will also continue to work with Congress to increase civil monetary penalties for HIPAA violations and increase resources for HHS to investigate potential HIPAA violations, conduct proactive audits....in the interim, HHS will continue to investigate potential HIPAA violations.

Introduction to the Strategy of the U.S. Department of Health and Human Services



Annual Report to Congress on Breaches of Unsecured Protected Health Information

For Calendar Year 2022

As Required by the
Health Information Technology for Economic and Clinical
Health (HITECH) Act,
Public Law 111-5, Section 13402

Submitted to the
Senate Committee on Finance,
Senate Committee on Health, Education, Labor, and Pensions,
House Committee on Ways and Means, and
House Committee on Energy and Commerce

U.S. Department of Health and Human Services Office for Civil Rights

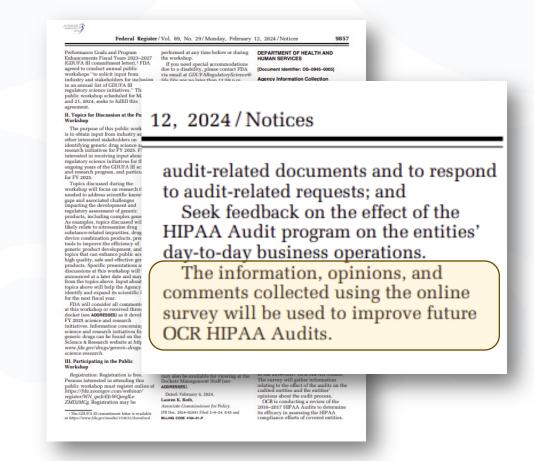
- Two Resolution agreements (Corrective Action Plans)
 announced in last 30 days, including one for \$4.75 Million.
- HHS Strategic Plan released in December outlines additional regulations and resources for enforcement
- 2022 OCR Compliance Report to Congress (published Feb 2024) called out multiple times it needs more funding for enforcement
- Asked Congress to increase HITECH civil monetary penalty caps be increased
- HHS plans to update HIPAA Security Rule process beginning this spring



OCR Auditing Program Likely to Resume

Audits have not been conducted since 2016 - 2017 however the expectation is that auditing program will go into effect at end of 2024

- OCR published in Federal Register that it is surveying previous auditees to learn from the previous program and improve future program
- In Annual Report to Congress OCR noted that "..it is currently developing the criteria for implementing future audits should financial resources become available."
- Funding discussions underway with Congress per HHS ViVE presentation





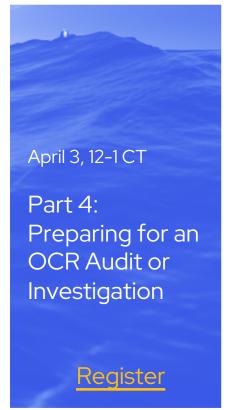
HIPAA Audits On the Way – Clearwater Free Education

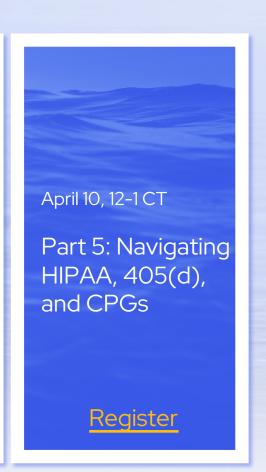
Register to attend Clearwater's 5 Part Series to Prepare for Anticipated Audits













Recommendations

- Continue to monitor threat alerts from CISA, Health Sector Cybersecurity Coordination Center (HC3)
- Relatively immature? Leverage the 405(d) Health Industry Cybersecurity Practices (HCIP)
- Review scope and cadence of vulnerability management program, and ensure capabilities are in place for rapid patching or implementing other mitigating controls
- Ability to detect, respond, and contain an attack is critical
- Conduct on going threat hunting, and perform a compromise assessment
- Update and test incident response plans
- Conduct a Business Impact Analysis to feed into risk analysis and risk management programs
 - Review impact of each system based on business or clinical process
 - Include all systems, locations and technologies in scope of Risk Analysis
 - Assess unique risks for each information system
 - Make sure you keep it up to date



Quarterly Threat Review

Dave Bailey Steve Akers



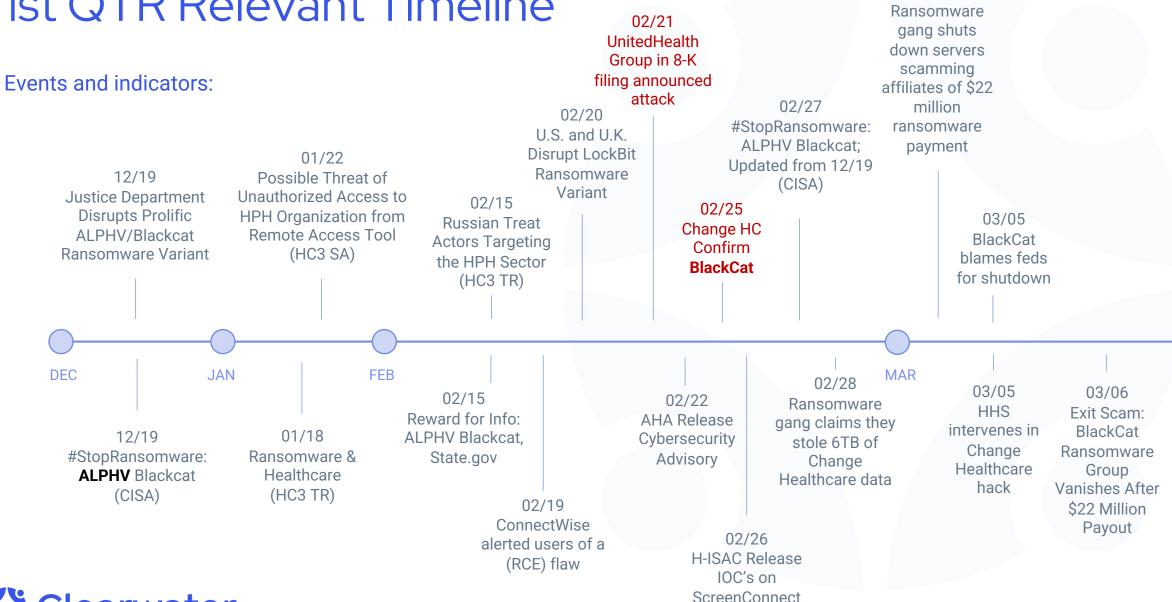


Change Healthcare Incident Update

- Mandiant and Palo Alto Networks working incident response: initial phase complete
 - The initial attack vector is defined, and all IOC's captured
- Shifting efforts to full data center rebuild/restoration; ETA of EOW
 - Offline Data Center is "quarantined"
- Change will provide documentation for systems coming back on-line
 - 3rd party penetration testing attestation
 - Attestation new system is not connected to the quarantine area
- BlackCat shuts down servers scamming affiliates of \$22 million payment: blames feds
 - Reports of BlackCat vanishing or pulling off the "exit-scam" & selling the source code for the malware for the hefty price of \$5 million.
- Be aware of scams taking advantage of the Change Incident



1st QTR Relevant Timeline





03/04

Relevant Threat Reports



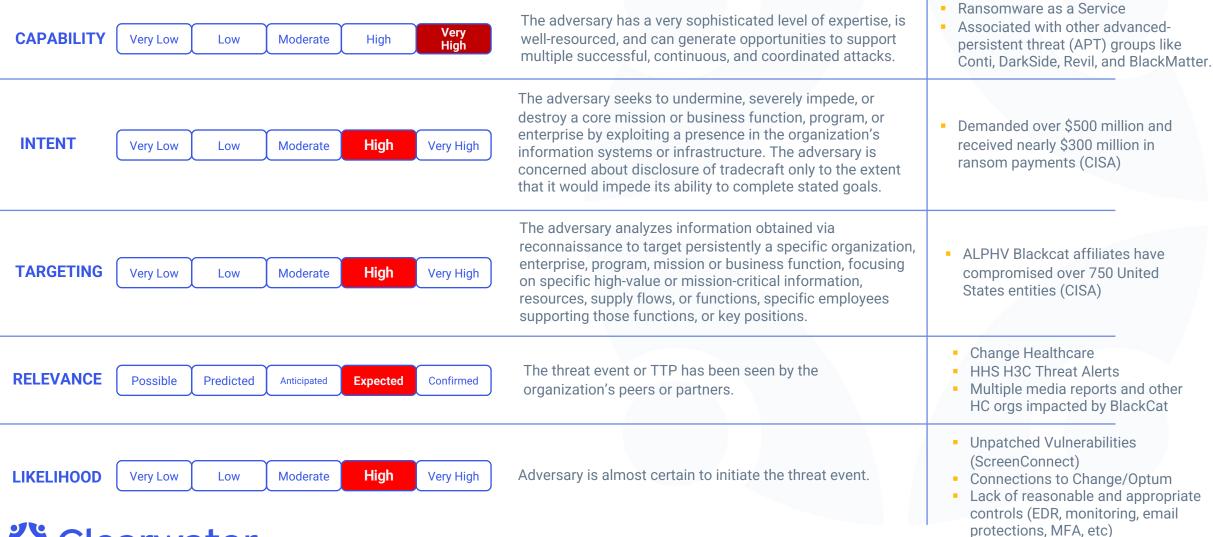






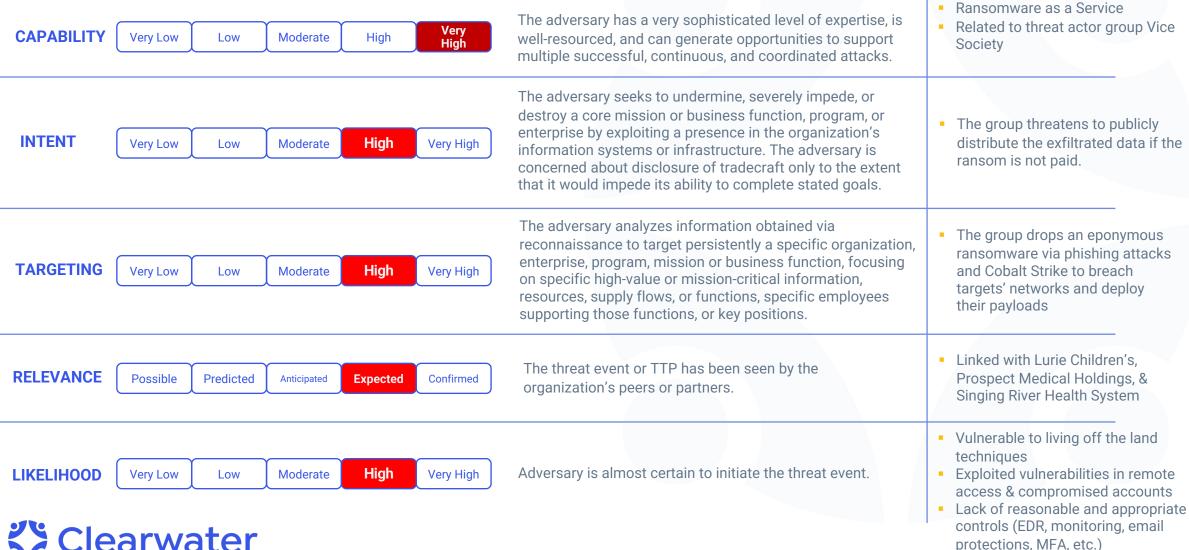


Threat Actor Spotlight: Characteristics of ALPHV/BlackCat



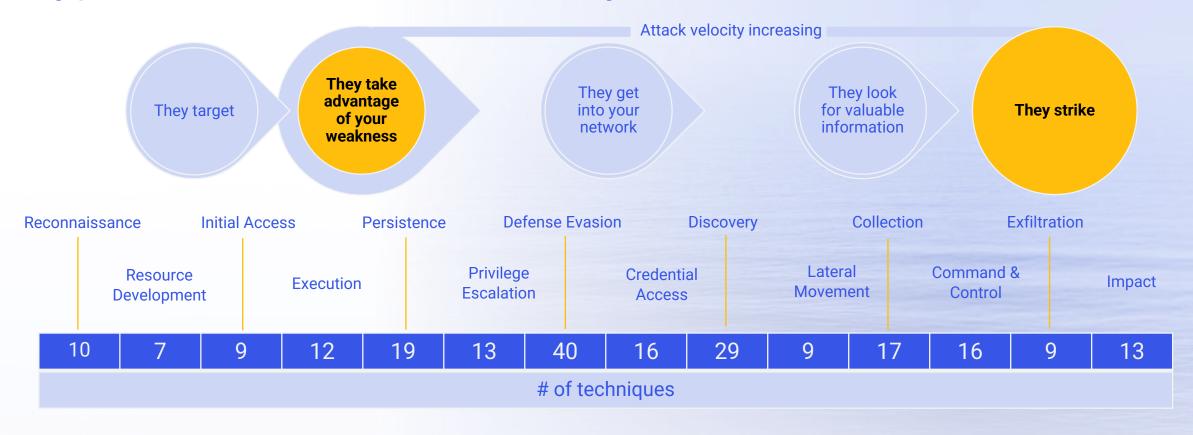


Threat Actor Spotlight: Characteristics of Rhysida





Typical Ransomware: How They Attack



MITRE ATT&CK Enterprise Tactics



Dwell Times Decreasing

- Improved Coverage
- Better Detection Capabilities
- Use of MSSPs
- External Notifications
 - Partners
 - Gov't / ISACs
 - Bad Actors







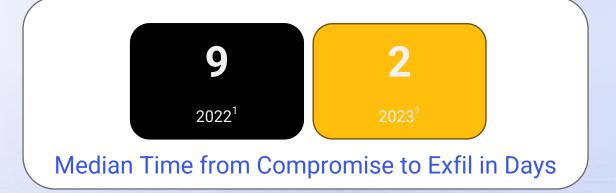
¹Palo Alto Unit 42 2024 Incident response Report ²Secureworks annual State of The Threat Report Dec 2023

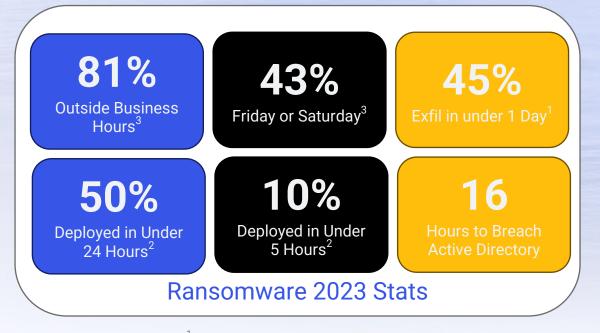
³Sophos Active Advisory Report 2023

⁴Mandiant M-Trends 2023 Report

Attack Velocity Increasing

- Speed and Stealth reduces chance of detection
- Focused on simpler/quicker
 - Grab and Go, versus targeted
- Top Paths Scan and Exploit and Stolen Creds Tied (32%)
 - Record Zero Days in 2023
- Initial Access Brokers







¹Palo Alto Unit 42 2024 Incident response Report

²Secureworks annual State of The Threat Report Dec 2023

³Sophos Active Advisory Report 2023

⁴Mandiant M-Trends 2023 Report

Recommended Actions and Response

Response Actions

- Disconnect and/or Block Change Healthcare/Optum connections
- Continually check your environment for IOC's: ScreenConnect and Blackcat
- Formally initiate

 Incident Response if
 you discover any IOCs &
 conduct a Compromise

 Assessment
- Provide workforce awareness on potential scams

Risk Management

- Determine criteria and establish risk tolerance to restore/unblock Change Healthcare/Optum connections
- IT/Security provide decision-makers with:
 - Current Security
 Posture
 - Known relevant information on incident

Cyber Resilience

- Validate and rehearse your plans
- Validate the effectiveness of your controls; Security Control Validation
- Provide continuous awareness to the workforce

Assumptions

- The following capabilities are in place (at a minimum):
- Security Continuous Monitoring
 - SOC, EDR
 - Logging
- Vulnerability
 Management Program
- Vendor Risk Management
- MFA and PAM









We are here to help.

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

Upcoming Events



HIMSS Global Health Conference & Exhibition
March 11-15, 2024

HIMSS | March 11-15 Booth #1618, Cybersecurity Command Center





HIPAA Audits 5 Part Webinar Series:

- 1. March 13
- 2. March 20
- 3. March 27
- 4. April 3
- 5. April 10



HCCA | April 14-17

Andrew Mahler presenting "How Safe Is 'Safe Harbor'? Balancing De-identification, Anonymization, and Pseudonymization of Health Data with Privacy Risks"



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