



**SECURITY
DAYS**

 **headtechnology**
it · security · distribution · services

**YOUR TRUSTED
DISTRIBUTOR OF IT SECURITY
SOLUTIONS & SERVICES**

20+ years in IT, 15+ years in IT Security

Founder of largest vendor independent conferences in Baltics (Digital Era, DSS ITSEC)

Speaker in many international conferences

Member of ECSO, ENISA Awareness Raising Community, Latvian IT Association etc.

Worked as vendor, integrator, reseller, distributor

Organized Latvia's 1st external export / trade mission with national expo stand at Infosecurity Europe



Infosecurity Europe 2022 (London, UK)

Cybersecurity Forum 2022 (Katowice, Poland)

Moldova road to EU conference 2022 (virtual)

Ukraine CSO&CISO forum 2022 (October, Kiiv)

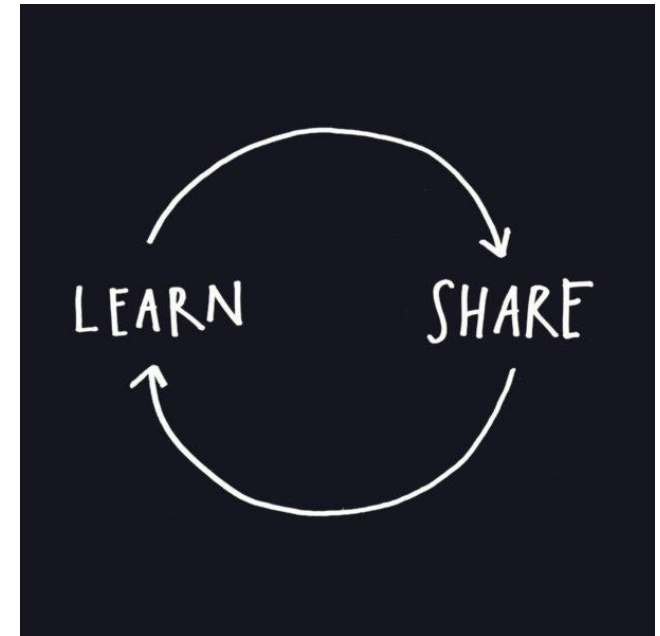
RSA Conference 2023 (San Francisco, USA)

ThinkIn 2023 (Copenhagen, Denmark)

PenteraCon 2023 (Munich, Germany)

LV ES Digitālā nedēļa 2023 & many more partner events accross EU

CyberWeek 2023 (TelAviv, Israel)



Where are we now?



We are up against 3 sophisticated adversaries



Cyber Criminals



Malicious Insiders



Nation States

More than 90% of attacks are financially motivated

Source: Verizon DBIR 2021

Motive

National Security
Infrastructure Attack

Espionage
Political Activism

Monetary Gain

Revenge

Curiosity

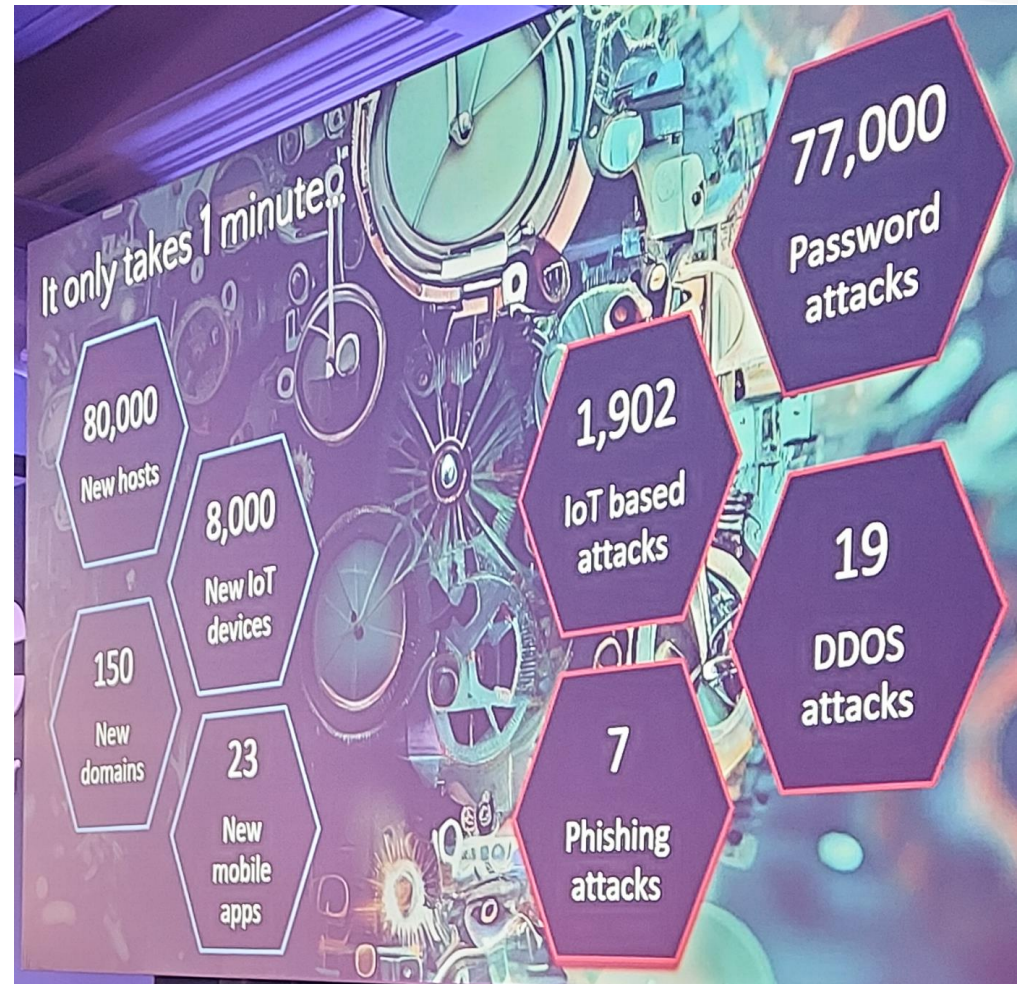
Organized crime

Insiders

Script-kiddies or hackers

Competitors, hacktivists

- 90%+ are automated attacks
- 8 trillions total economy «worth» (G7 top3)
- 85%+ of incidents involve human factor
- 61% of attacks involved valid credentials
- Microsoft reports that 80% of Azure users havent activated MFA..
- 65%+ victims notified by external parties
- More than a half of incidents are detected days, weeks, months, years after event...
- IF DETECTED AT ALL!



Reality check ..

- Continuous cyberwar (Ukraine and geopolitics)
- Cybercrime as a Service (financial motivation) & Darknet/Deepweb business (KPI's, sales, marketing etc.)
- Business Email compromise - phishing, fraud, scam, spam (payroll, invoice, attachments etc., ~156000 per day, 1h 12minutes to become a victim..)
- Denial of Service Attacks (push bombing too)
- Sophisticated targeted attacks (kill chain etc.)
- Botnets, bots, zombies
- AI (80%+ of all attacks are AI driven)
- IoT/OT (in)security & attacks on everything «smart»
- Critical infrastructure
- Intellectual Property Theft
- Personal (any) data issues & reputation attacks

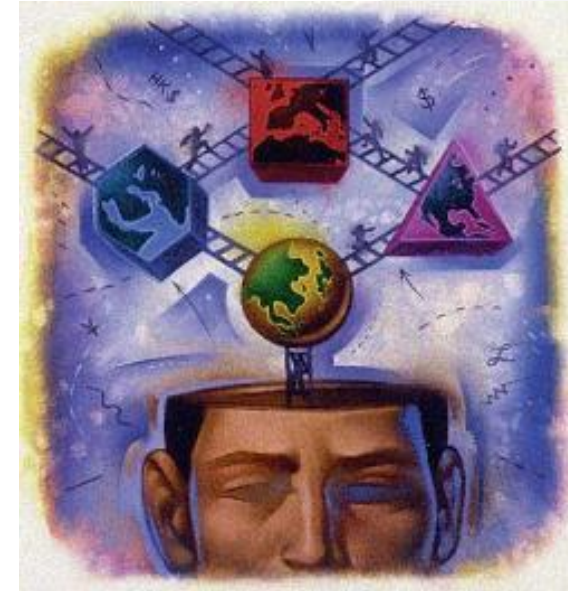
This had got nothing to do with size of country, region, enterprise, private or public person, organization, industry.



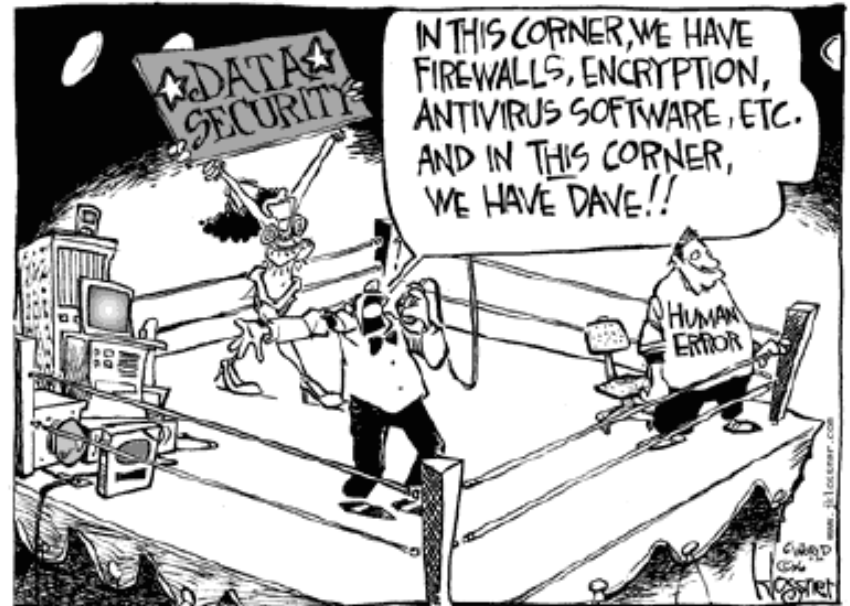
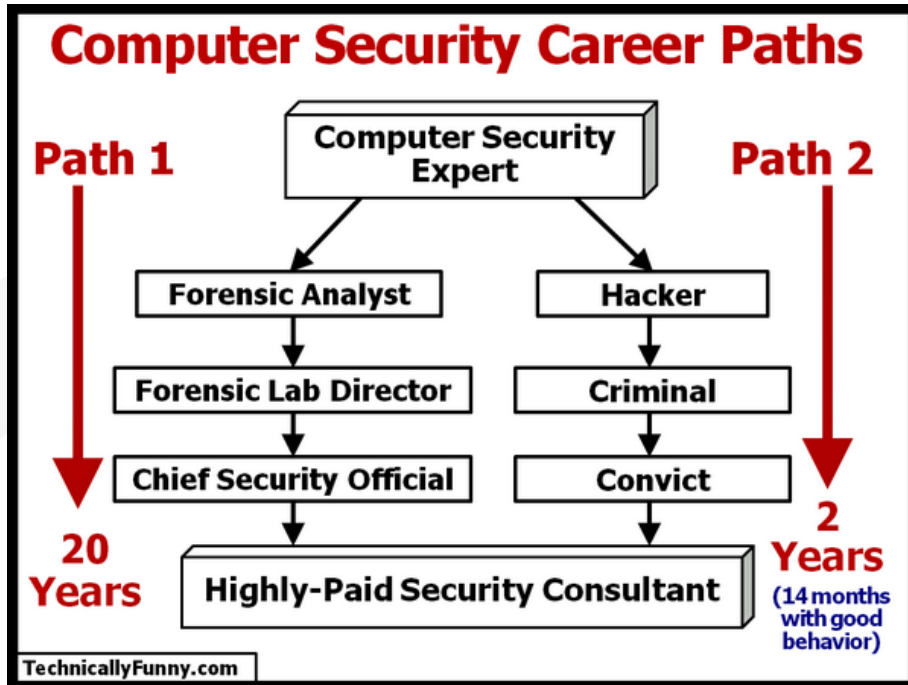
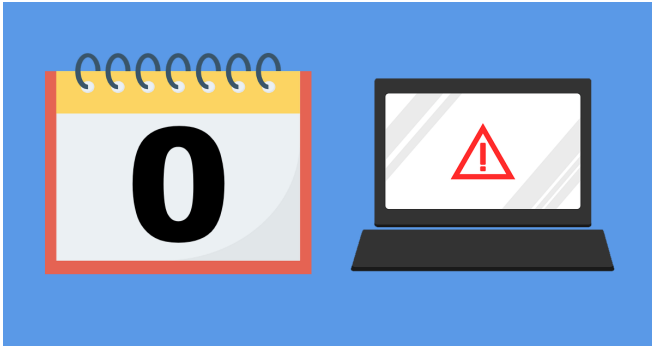


Goal and measures

- We don't want to be vulnerable, we don't want to be at risk.
- How do we measure that today? How often?
- First is the drive, motivation, curiosity, penalty?
- IT Audit (own, external?)
- Compliance standards audit and certification
- Vulnerability management
- Compliances (industry, country, GOV, regulator, internal, frameworks?)
- Pentests (how often, how wide/deep, costs)
- Own red, blue, purple, white, LGBT team
- Managing own security stack (AV, FW, VPN, antiSpam..)
- Outsourced and maybe even insured (SOC, MSSP etc.)
- Acknowledge risks.. (have faith and other voodoo stuff..)



Some constraints

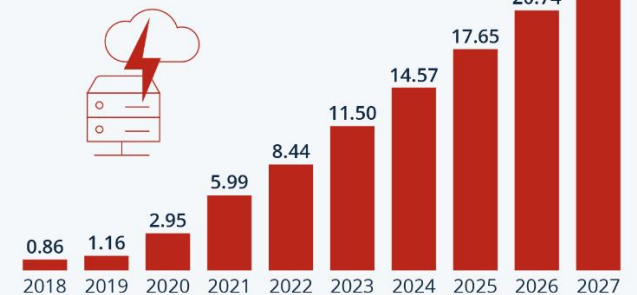


Few more constraints

- Too many standards, everything is changing too fast.
- Standards are outdated.
- Too many technologies and marketing attacks are sophisticated.
- Lack of HR. They burn out, change, are headhunted. Decide to work as dealers.
- Integrators stick to few vendors and push only them.
- Too much information or too much trust.
- Geopolitical issues.
- Economic issues. Expensive. Everything.
- Lack of political drive.
- Bad experience. Lack of trust.
- No knowledge and experience to restructure spending.
- Bureaucracy.
- No chance to control what is happening.
- Vendors buy each other.
- Crazy employees..

Cybercrime Expected To Skyrocket in the Coming Years

Estimated cost of cybercrime worldwide
(in trillion U.S. dollars)



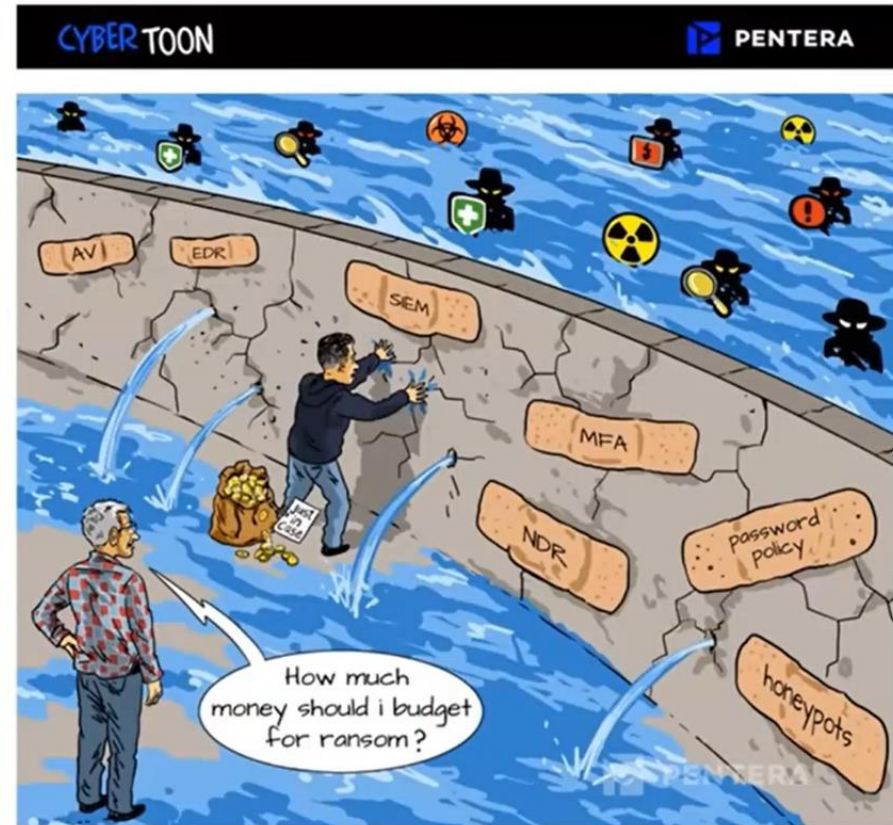
As of November 2022. Data shown is using current exchange rates.

Sources: Statista Technology Market Outlook,
National Cyber Security Organizations, FBI, IMF

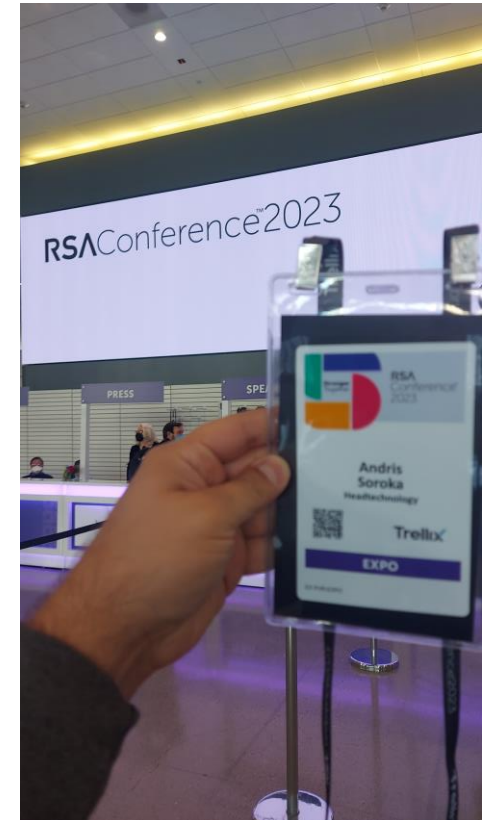


statista

- **Cybersecurity made in Europe. ECSO/ENISA stuff.**
- **Certifications of technologies. EAL/CC etc.**
- **Price / performance. Restructure budgets.**
- **Prevention/proactive vs Reactive/IR**
- **AI / ML / DL empowered.**
- **Game changer.**
- **Trust but take back the control.**
- **Market analysts. Threat Frameworks.**
- **Innovative!**



- **ENISA CYBERSECURITY MARKET ANALYSIS FRAMEWORK V2.0 (March 2023)**
- **Hype Cycle for Security Operations (July 2023)**
- **MITRE ATT&CK® Matrix for Enterprise (ongoing)**
- **NIST ZERO TRUST Architecture Technology Partners/Collaborators (ongoing)**
- **A Deep Dive Into The Forrester Wave™: Zero Trust Edge Solutions, Q3 2023**
- **ISACA, SANS Institute, Ponemon etc.**
- **Largest industry events – RSA, Defcon, Blackhat, B-Sides, Infosecurity etc.**



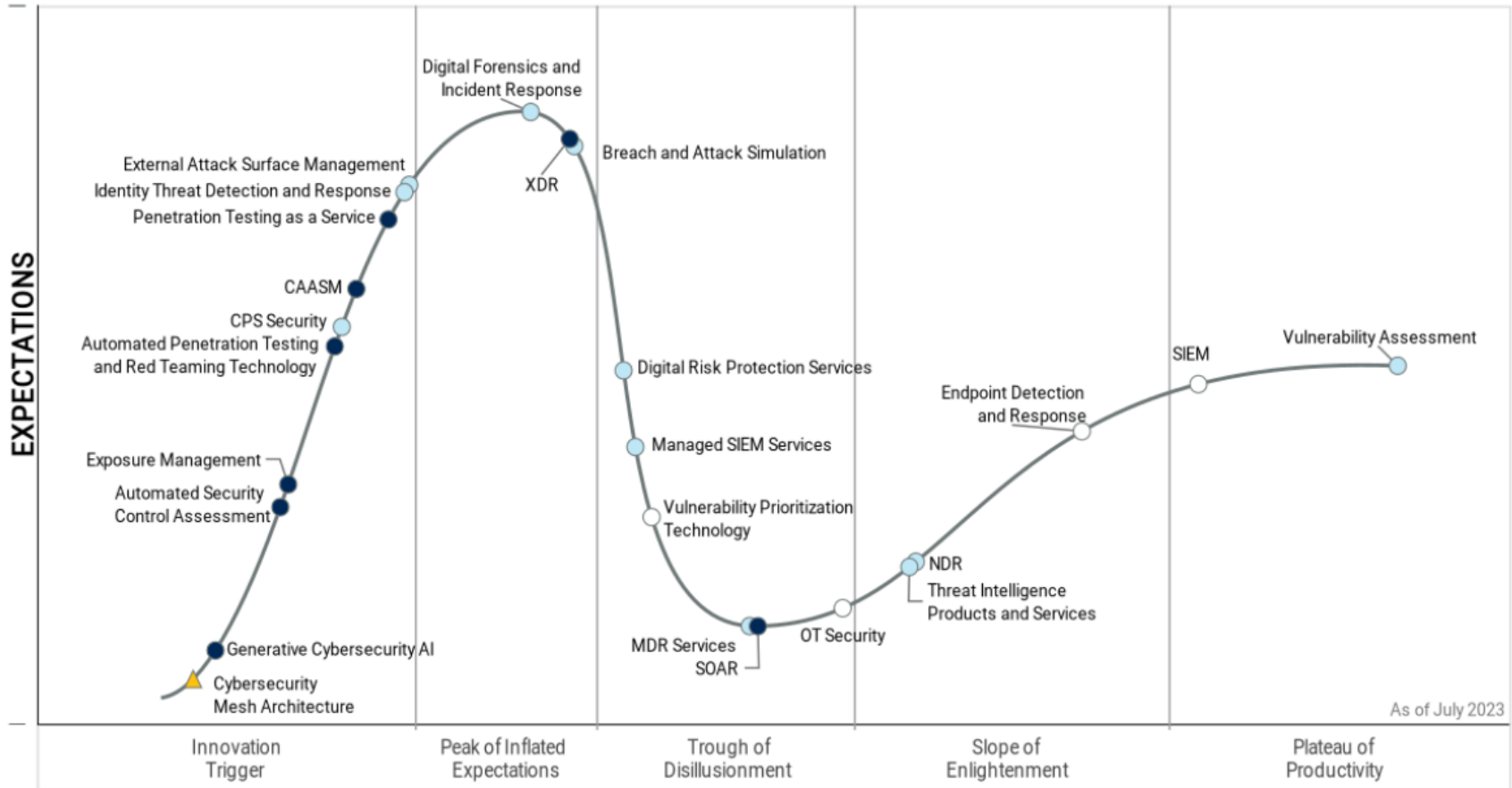
Some innovations&trends

- **Automated Cybersecurity Validation Platform – PENTERA**
- **ZERO Trust (SDP/ZTNA)**
- **(Multi-) Cloud Security**
- **Supply Chain Security (API as well)**
- **Reputation checkups (various)**
- **Quantum anything**
- **IoT/OT/Smart security (including medical and specific)**
- **Deep-Learning (DNA of malware)**
- **Various browsers, biometrics, behavioral solutions.**



SecOps Tech Hype 2023

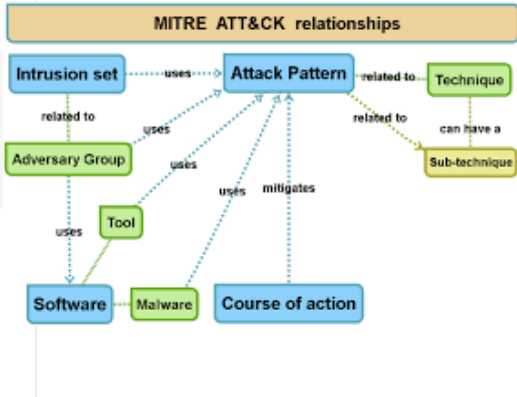
Hype Cycle for Security Operations, 2023



As of July 2023

Plateau will be reached: ○ <2 yrs. ● 2-5 yrs. ● 5-10 yrs. ▲ >10 yrs. ⊗ Obsolete before plateau

Reconnaissance 10 techniques	Resource Development 7 techniques	Initial Access 9 techniques	Execution 12 techniques	Persistence 19 techniques	Privilege Escalation 13 techniques	Defense Evasion 42 techniques	Credential Access 16 techniques	Discovery 30 techniques	Lateral Movement 9 techniques	Collection 17 techniques	Command and Control 16 techniques	Exfiltration 9 techniques	Impact 13 techniques
Active Scanning (3) Gather Victim Host Information (4) Gather Victim Identity Information (3) Gather Victim Network Information (5) Gather Victim Org Information (4) Phishing for Information (3) Search Closed Sources (2) Search Open Technical Databases (5) Search Open Websites/Domains (2) Search Victim-Owned Websites	Acquire Infrastructure (5) Compromise Accounts (2) Compromise Infrastructure (5) Develop Capabilities (4) Establish Accounts (2) Obtain Capabilities (5) Stage Capabilities (5)	Drive-by Compromise Exploit Public-Facing Application External Remote Services Hardware Additions Phishing (3) Replication Through Removable Media Supply Chain Compromise (3) Trusted Relationship Valid Accounts (4)	Command and Scripting Interpreter (3) Container Administration Command Deploy Container Exploitation for Client Execution Inter-Process Communication (3) Native API Scheduled Task/Job (5) Software Deployment Tools System Services (2) User Execution (3) Windows Management Instrumentation	Account Manipulation (5) BITS Jobs Boot or Logon Autostart Execution (14) Boot or Logon Initialization Scripts (5) Browser Extensions Compromise Client Software Binary Create Account (2) Create or Modify System Process (4) Event Triggered Execution (15) External Remote Services Hijack Execution Flow (12) Implant Internal Image Modify Authentication Process (3) Office Application Startup (5) Pre-OS Boot (5) Scheduled Task/Job (5) Server Software Component (5) Traffic Signaling (1) Valid Accounts (4)	Abuse Elevation Control Mechanism (4) Access Token Manipulation (3) Boot or Logon Autostart Execution (14) Boot or Logon Initialization Scripts (5) Create or Modify System Process (4) Domain Policy Modification (2) Escape to Host Event Triggered Execution (15) Exploitation for Privilege Escalation Hijack Execution Flow (12) Process Injection (12) Scheduled Task/Job (5) Valid Accounts (4)	Abuse Elevation Control Mechanism (4) Access Token Manipulation (3) BITS Jobs Build Image on Host Debugger Evasion Deobfuscate/Decode Files or Information Deploy Container Direct Volume Access Domain Policy Modification (2) Execution Guardrails (1) Exploitation for Defense Evasion File and Directory Permissions Modification (2) Hide Artifacts (10) Hijack Execution Flow (12) Impair Defenses (2) Indicator Removal on Host (5) Indirect Command Execution Masquerading (7) Modify Authentication Process (3) Modify Cloud Compute Infrastructure (4) Modify Registry Modify System Image (2) Network Boundary Bridging (1) Obfuscated Files or Information (6) Plist File Modification Pre-OS Boot (5) Process Injection (12)	Adversary-in-the-Middle (3) Brute Force (4) Credentials from Password Stores (5) Exploitation for Credential Access Forced Authentication Forge Web Credentials (2) Input Capture (4) Modify Authentication Process (3) Multi-Factor Authentication Interception Multi-Factor Authentication Request Generation Network Sniffing OS Credential Dumping (3) Steal Application Access Token Steal or Forge Kerberos Tickets (4) Steal Web Session Cookie Unsecured Credentials (7)	Account Discovery (4) Application Window Discovery Browser Bookmark Discovery Cloud Infrastructure Discovery Cloud Service Dashboard Cloud Service Discovery Cloud Storage Object Discovery Container and Resource Discovery Debugger Evasion Domain Trust Discovery File and Directory Discovery Group Policy Discovery Network Service Discovery Network Share Discovery Network Sniffing Password Policy Discovery Peripheral Device Discovery Permission Groups Discovery (3) Process Discovery Query Registry Remote System Discovery Software Discovery (1) System Information Discovery System Location Discovery (1) System Network Configuration Discovery (1)	Exploitation of Remote Services Internal Spearphishing Lateral Tool Transfer Remote Service Session Hijacking (2) Remote Services (6) Replication Through Removable Media Software Deployment Tools Taint Shared Content Use Alternate Authentication Material (4)	Adversary-in-the-Middle (3) Archive Collected Data (3) Audio Capture Automated Collection Browser Session Hijacking Clipboard Data Data from Cloud Storage Object Data from Configuration Repository (2) Data from Information Repositories (3) Data from Local System Data from Network Shared Drive Data from Removable Media Data Staged (2) Email Collection (3) Input Capture (4) Screen Capture Video Capture	Application Layer Protocol (4) Communication Through Removable Media Data Encoding (2) Data Obfuscation (3) Dynamic Resolution (3) Encrypted Channel (2) Fallback Channels Ingress Tool Transfer Multi-Stage Channels Non-Application Layer Protocol Non-Standard Port Protocol Tunneling Proxy (4) Remote Access Software Traffic Signaling (1) Web Service (3)	Automated Exfiltration (1) Data Transfer Size Limits Exfiltration Over Alternative Protocol (3) Exfiltration Over C2 Channel Exfiltration Over Other Network Medium (1) Exfiltration Over Physical Medium (1) Exfiltration Over Web Service (2) Scheduled Transfer Transfer Data to Cloud Account	Account Access Removal Data Destruction Data Encrypted for Impact Data Manipulation (3) Defacement (2) Disk Wipe (2) Endpoint Denial of Service (4) Firmware Corruption Inhibit System Recovery Network Denial of Service (2) Resource Hijacking Service Stop System Shutdown/Reboot



MITRE ATT&CK
VS.
CYBER KILL CHAIN
VS.
DIAMOND MODEL

Please visit and register!



ATTA Centre, Riga, Latvia
Annual Conference, Expo & Workshops
OCTOBER 26, 2023



PLATINUM PARTNERS



SPONSORING AND SUPPORTING AUTHORITIES



CyberCommando's Meetup 2023 partners and participants



TOPICS

4+ parallel sessions and workshops

- { } Proactive Cybersecurity based on AI & Deep Learning
- { } DDoS, botnets and cyberwar
- { } CyberPsychology and hacker's mentality
- { } Zero Trust Principle and ZTNA
- { } SIEMs/SOARS/XDR's
- { } Cyber Security Technocentric Market
- { } EU NIS2 meets EU GDPR
- { } Data Classification and Data Leakage Prevention
- { } Automated Cybersecurity of Internet of Everything
- { } Continuous Cybersecurity Validation
- { } Whitebox/Blackbox and Greybox hacking

SPEAKERS



Franck Bernard
Logpoint



Mathias Widler
DeepInstinct



Michael Soukonnik
Radware



Steve Smith
Pentera



Arnis Puksts
GDPR



Andris Soroka
HeadTechnology



Andrejs Konstantinovs
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Egils Rupenheits
ESET



Richard Stenthon
IT Harvest



Valērijs Dombrovskis
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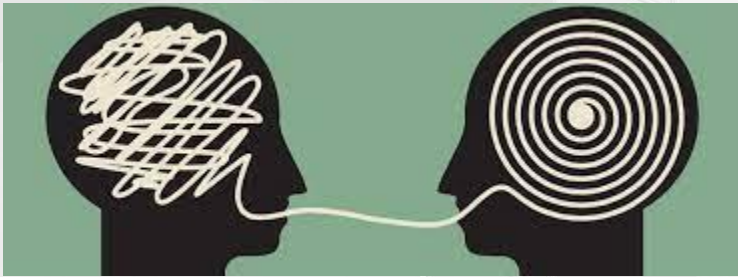
corporate
presentation

Thank You For Your Attention!



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